



2010–2011  
**COURSE  
CATALOG**



**FOOTHILL COLLEGE**

# 2010–2011 Academic Calendar

## Fall Quarter 2010

June 30	Admission Deadline for Overseas International Student Applicant on F-1 Visa (Separate Application Required)†
Sept. 20	Instruction Begins
Nov. 12	Veterans Day; Campus Closed
Nov. 25–26	Thanksgiving Recess; Campus Closed
Dec. 7–10	Final Examinations
Dec. 13–31	Winter Recess

## Winter Quarter 2011

Oct. 31	Admission Deadline for Overseas International Student Applicant on F-1 Visa (Separate Application Required)†
Jan. 3	Instruction Begins
Jan. 17	Martin Luther King Jr. Birthday; Campus Closed
Feb. 18	Lincoln's Birthday; Campus Closed
Feb. 21	Washington's Birthday; Campus Closed
March 22–25	Final Examinations
March 28–April 1	Spring Recess

## Spring Quarter 2011

Jan. 31	Admission Deadline for Overseas International Student Applicant on F-1 Visa (Separate Application Required)†
April 4	Instruction Begins
May 30	Memorial Day; Campus Closed
June 21–24	Final Examinations
June 24	Commencement Ceremony; 6 p.m.; Library Quad

## Summer Session 2011

June 27–Aug. 7	Six-Week Session
June 27–Aug. 21	Eight-Week Session

†Orientation is required for all new F-1 international students and takes place three to four weeks prior to the start of classes. For details, access [www.foothill.edu/international](http://www.foothill.edu/international).

†The Summer Session 2011 calendar is tentative and subject to a final collective bargaining agreement.

†For additional important deadlines and dates, review the college calendar at [www.foothill.edu](http://www.foothill.edu).





# FOOTHILL COLLEGE

A public two-year college of the  
Foothill-De Anza Community College District

## Main Campus

12345 El Monte Road  
Los Altos Hills, CA 94022-4599  
(650) 949-7777; (650) 948-6025, TDD

## Middlefield Campus

4000 Middlefield Road  
Palo Alto, CA 94303-4739  
(650) 949-6950

[www.foothill.edu](http://www.foothill.edu)

To request this publication in alternative media  
such as Braille or large print, call (650) 949-7673.

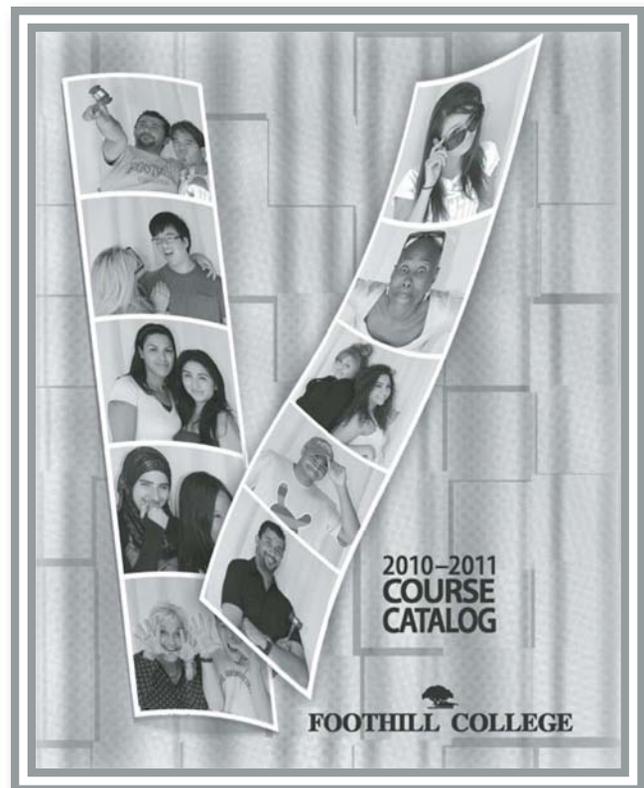
## This Catalog Is Your Key to Success

The information you need to succeed as a Foothill College student is in this catalog. The following pages contain a wealth of information about courses, campus resources, student services, program descriptions, degree requirements, and college policies and procedures. Use the catalog to:

- Plan your educational program;
- Review Foothill College policies and procedures;
- Learn about course and degree requirements; and
- Find important dates, phone numbers and locations.

## Rules & Policies May Change

The Foothill-De Anza Community College District and Foothill College have made every reasonable effort to determine that information in this catalog is accurate. Changes may result from California legislature statutes or rules and policies adopted by the Foothill-De Anza Community College District Board of Trustees, chancellor or institutional designee. Courses and programs offered, together with other matters contained herein, are subject to change without notice by the administration of the Foothill-De Anza Community College District or Foothill College for reasons related to student enrollment, level of financial support, or for any other reason, at the discretion of the district and college. The district and college further reserve the right to add, amend or repeal any of its rules, regulations, policies and procedures.



## On the Cover

Whether you want university-transfer preparation, career-training programs, basic skills improvement or professional development, you'll find that Foothill College is a lively center for outstanding instruction and enriching student activities. Lives change in powerful ways at Foothill College.

We also have fun! From student clubs that match your interests to social events, from student leadership classes to actual student government, from intercollegiate athletics and intramural games to fine arts exhibits and performing arts concerts, Foothill offers you the total college experience.

Our students, faculty and staff come from a variety of backgrounds and life-stories. These traits, combined with our majestic campus, make Foothill a leader in providing students with a comprehensive, high-quality education.

As part of the Foothill-De Anza Community College District, we excel at student success. We accomplish this by providing access to a dynamic learning environment that fosters excellence, opportunity and innovation in meeting the diverse educational and career goals of the students and communities we serve.

Located in the high-tech heart of Silicon Valley, Foothill College and its sister school, De Anza College, serves the communities of Cupertino, Los Altos, Los Altos Hills, Mountain View, Palo Alto, Stanford, Sunnyvale and portions of San Jose.

# W

elcome to the 2010–2011 academic year at Foothill College!

As a community of scholars dedicated to student success, we welcome you to Foothill College, an outstanding choice for higher education.

In this time of economic uncertainty, Foothill College is navigating the current fiscal challenges under the strong leadership of its faculty, classified staff, administration, board of trustees and chancellor. We are addressing the current challenges through strategic use of limited resources, addition and expansion of external partnerships, and cultivation of a campus climate that engenders innovation and creativity.

Our faculty continue to seek new ways to improve student learning, as evidenced by the emergence of successful new programs such as Math My Way, that have earned national attention for improving student success. Our instructors participate in many local and national organizations to expand and share their knowledge. Foothill College instructors Rosemary Arca (Reading, Composition, Academic Skills) and Kathy Perino (Mathematics) were recently invited to participate in the Global Skills for College Completion Project (GSCC), a developmental math and writing project, funded by the Bill and Melinda Gates Foundation. The goal of the GSCC online “think tank”—comprised of just 26 outstanding basic skills educators in 16 states on 13 community college campuses—is to try out new ideas, develop innovative resources and introduce fresh ways of teaching developmental math and writing to community college students that will consistently increase students’ pass rates.

As a new student, you will find many outstanding facilities here at Foothill, and notice we are in the process of renovating existing buildings and constructing new educational facilities. We are deeply grateful to our community for passing Measure C in 2006, which allows us to complete maintenance, renovation and construction projects and keep our technology and learning environments current.

In saving the best for last, let me reveal that the secret of our creativity and innovation at Foothill College is our people! Students, community supporters and employees come together to create a vibrant, welcoming place of



learning. Our community supporters contribute their time, money and good will, and they are an integral part of Foothill College’s achievements. Our beautiful facilities and grounds are cared for by colleagues who take great pride in a job well done. Our programs and services are delivered by dedicated individuals who are often local heroes and heroines, or state and national leaders in their fields, or winners of prestigious awards. Our students excel in academics, creative and performing arts, athletics, student government and community service. They are our *raison d’être* and they are our reason for joy!

Judy C. Miner, Ed.D.,  
President  
Foothill College

## Important Campus

### Phone Numbers Area Code 650 unless otherwise noted

<b>Emergency 911</b>	Lost & Found 949-7313
Adaptive Learning 949-7332	Marketing & Communications 949-7362
Admissions & Records 949-7325	Placement Testing 949-7650
Bookstore 949-7305	Prerequisites/ Matriculation Office 949-7512
Career Center 949-7229	Psychological Services 949-7910
Counseling Appointments 949-7423	Student Activities 949-7282
CTIS Computer Lab 949-7303	Theatre Box Office 949-7360
Disability Resource Center 949-7017	Transfer Center 949-7235
District Police (Non-emergency) 949-7313	TDD for Hearing Impaired 948-6025
English Writing Center 949-7290	Tutorial Center 949-7447
ESL Writing Center 949-7923	Veterans Office 949-7001
Evening/Weekend Programs 949-7711	Volunteer Center 949-7634
Extended Opportunity Program & Services (EOPS) 949-7207	■ ■ ■
Financial Aid 949-7245	<b>Middlefield Campus 949-6950</b>
Health Services 949-7243	Admissions 949-6980
Honors Institute 949-7638	Bookstore 949-6975
IDEA Lab 949-7137	Career & College Connections 949-6957
Internship Program Office 604-5560	Counseling 949-6959
Language Arts Lab 949-7452	The Hub (Student Services & Computer Lab) 949-6958
Library 949-7392	

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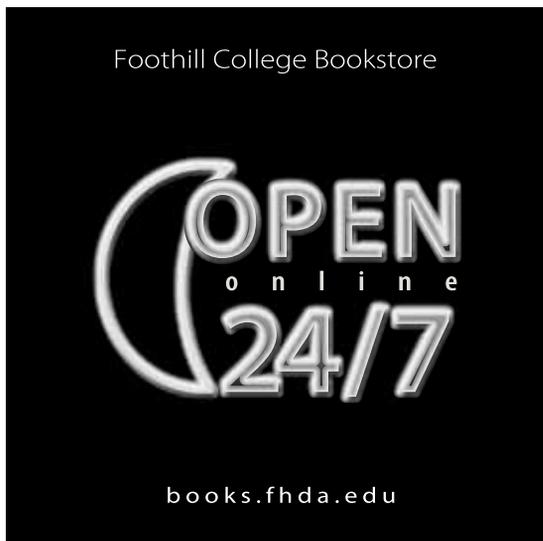
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*“I received a great deal of encouragement and broadened my learning experiences by participating in the Foothill Honors Institute. In addition to classroom lessons, there were a lot of life lessons and transferable skills that I learned at Foothill. Ultimately, I think Foothill College offers its students education, inspiration and opportunities.”*

*Ann Tai*

*Alumna, Foothill Honors Institute; earned the Foothill College Associate in Arts Degree in Sociology and transferred to the University of California, Berkeley, to pursue a bachelor’s degree in sociology.*

# College Profile

**Foothill-De Anza Community College District Mission**

**Foothill College Mission, Vision, Values & Purpose**

**Our History**

**Foothill: An Outstanding Community College**

**Committed to Our Community**

**We Celebrate Diversity**

**Accreditation**

**“The Most Beautiful Community College”**

**Measures C & E Campus Improvements**

**Campus Highlights**

**Public Events & Services**

# College Profile

## Foothill-De Anza Community College

### District Mission

The mission of the Foothill-De Anza Community College District is student success. We accomplish this by providing access to a dynamic learning environment that fosters excellence, opportunity and innovation in meeting the diverse educational and career goals of our students and communities.

## Foothill College

### Mission, Vision, Values & Purpose

#### Our Mission

A well-educated population being essential to sustaining and enhancing a democratic society, Foothill College commits itself to providing access to outstanding educational opportunities for all of our students. Whether through basic skills, career preparation, lifelong learning, or transfer, the members of the Foothill College community are dedicated to the achievement of learning and to the success of our students. We affirm that our unwavering dedication to this mission is critical to the prosperity of our community, our state, our nation, and the global community to which all people are members.

#### Our Vision

Foothill College envisions itself as a community of scholars where a diverse population of students, faculty and staff intersect and are engaged in the search for truth and meaning. We recognize that by necessity this search must be informed by a multiplicity of disciplinary modes of inquiry. In order to ensure that every student has the opportunity to share in this vision, Foothill College commits itself to providing students with the necessary student support services, outstanding instruction, and opportunities for leadership both within and outside the classroom. By enacting this vision, the college ensures that it remains the distinctive and innovative institution it has been since its inception.

#### Our Values

- Honesty
- Integrity
- Trust
- Openness
- Transparency
- Forgiveness
- Sustainability

### Our Purpose

To provide access to educational opportunity for all with innovation and distinction.

### Foothill College Offers:

- Associate in Arts and Associate in Science degrees, and certificates
- preparation for transfer to another college, university or postsecondary institution
- career education, training and services
- basic skills, English as a Second Language (ESL), leadership skills and student development
- student support services to promote student success

Foothill's success is measured by the following quality indicators:

1. Access: Educational Opportunity for All
2. Student Success: Completion of Student Goals
3. Pedagogy, Scholarship & Support of Learning
4. Climate for Learning
5. Fiscal & Enrollment Stability
6. Reputation: Innovation & Distinctiveness

### Our History

The Foothill-De Anza Community College District was formed Jan. 15, 1957, following several months of study by citizens groups and the California Department of Education. The district covers an area of about 105 square miles and includes the Palo Alto Unified School, Mountain View-Los Altos Union High School and Fremont Union High School districts.

On Sept. 15, 1958, we opened a temporary campus on El Camino Real in Mountain View. The Los Altos Hills Main Campus was completed and opened to students in September 1961.

In 1967, the district opened its second campus, De Anza College, in Cupertino. The two colleges coordinate programs and services, thereby providing our students with the flexibility to enroll in courses at both campuses.

### Foothill: An Outstanding Community College

Founded with the hallmark of educational opportunity for all, Foothill College is recognized internationally as one of the nation's most outstanding community colleges. Students of all ages enroll at Foothill for a single class, one- or two-year degree programs, or to



complete general education requirements for transfer to four-year universities. Our academic programs lead to Associate in Arts and Associate in Science degrees. They also meet freshman and sophomore requirements of University of California, California State University and private education systems. In addition, we offer many professional and technical programs for students seeking re-training or career advancement.

Foothill serves northern Santa Clara County, educating more than 18,000 day and evening students at the Main Campus, Middlefield Campus in Palo Alto, online, and many community and industry sites each quarter.

## Committed to Our Community

We are committed to community education. At Foothill College, we:

- Offer low-cost, quality education.
- Recognize that our students have different, changing educational needs.
- Strive to create a college community of students, faculty and other educational workers.

Our educational process should help you:

- Develop and recognize human dignity.
- Think for yourself, learn to learn, and practice creative arts and skills.
- Become a contributing community member.

We meet our commitments by providing:

- An academic program to help you transfer to a four-year college or university.

- Professional and technical programs to help you develop skills for job entry, re-entry and career upgrading.
- A general-education program to broaden educational and cultural experiences.
- Remedial and developmental education to bring basic skills up to full potential.
- Excellence in all academic programs, student services and community-outreach programs.
- Convenient community classrooms.
- Out-of-class activities so you can learn in less formal, more hands-on environments.
- A counseling and matriculation program to help you recognize your capabilities, and educational and life goals.
- Health services, psychological services, financial aid, job counseling and placement testing.
- Partnerships with social and educational agencies, business and industry to determine and serve our community's educational needs.
- Cultural programs, recreational activities, resources and facilities available to the general public.

## We Celebrate Diversity

We value the diversity of students on our campus and continually work to meet the needs of this entire population. Our faculty, staff and administrators believe that teaching a multicultural perspective is just as important as teaching reading, writing and technology in today's world.

## Accreditation

Foothill College is accredited by the Accrediting Commission for Community & Junior Colleges of the Western Association of Schools & Colleges. This organization is recognized by the Council on Higher Education Accreditation and the U.S. Department of Education.

Foothill College is also accredited by the American Veterinary Medical Association, American Dental Association Commission on Dental Accreditation, American Medical Association Council on Medical Education, and Commission on Accreditation of Allied Health Education Programs.

## “The Most Beautiful Community College”

The Foothill College campus is located on 122 acres in the rolling foothills of Los Altos Hills. The campus adjoins El Monte Road and Interstate 280, the scenic Junipero Serra Freeway.

The American Institute of Architects has honored Foothill for its outstanding design, and a *San Francisco Chronicle* architecture critic called our campus “the most beautiful community college ever built.” The distinctive Pacific-style architecture harmonizes with the surrounding hillside community, creating a beautiful and informal atmosphere conducive to college study.

## Measures C & E Campus Improvements

Measures C and E are plans to renovate existing college facilities as well as construct new facilities at Foothill College and De Anza College. Voters approved the passage of Measure E in 1999 and the passage of Measure C in 2006. Funding for Measure C and E projects is generated from general obligation bonds. These funds are not subject to state budget cuts and can only be used for facilities projects. To review Measures C and E projects at Foothill College, access [www.foothill.edu](http://www.foothill.edu).

## Campus Highlights

- All-Weather Track
- Appreciation Hall
- Bamboo Garden & Azumaya Meditation Pavilion
- Campus Center
- Chinese Heritage Room
- Choral Building
- Computer Centers
- Dental Health Clinic
- Football Stadium
- Golf Instruction Complex

- Hubert H. Semans Library & Instructional Support Center
- Interdisciplinary Electronic Arts (IDEA) Center
- Japanese Cultural Center
- Krause Center for Innovation
- Language Arts Lab
- Lohman Theatre
- Lower Campus Complex
- Math, Physics & Chemistry Center
- Middlefield Campus in Palo Alto
- Multimedia Arts IDEA Computer Lab
- Observatory
- Olympic-Size Swimming Pool
- Robert C. Smithwick Theatre
- Softball/Soccer Field
- Student-Operated KFJC-FM Radio Station
- Tutorial Center
- Veterinary Technology & Environmental Horticulture Complexes
- Wellness Center

## Public Events & Services

Performances: Foothill presents plays, concerts, gallery exhibits, films and lectures to enrich the cultural and educational experiences of community residents. Fine arts performances include music, dance, theater and special children’s programs. For information about upcoming events or to purchase tickets, call the Foothill Box Office at (650) 949-7360 or access [www.foothill.edu](http://www.foothill.edu).

Celebrity Forum: The highly successful Foothill College Celebrity Forum series, created by Dr. Richard Henning, brings high-profile speakers to Flint Center at De Anza College in Cupertino. For more information, call (650) 949-7176 or access [www.celebrityforum.net](http://www.celebrityforum.net).

## Facility Rental

Foothill classroom, conference, physical education and theatre facilities are available to the public when they are not being used for campus activities. Rental fees include rental, set-up, cleaning, necessary staff coverage and equipment.

If you are interested in renting a Foothill facility, contact the facilities coordinator to request an application. Visit the Physical Education Division, Room 2713, or call (650) 949-7380. To schedule an event in the Robert C. Smithwick Theatre or Appreciation Hall, call the Fine Arts & Communication Facilities Office at (650) 949-7252. To schedule an event at the Middlefield Campus facility, call (650) 949-6953.

“If I hadn’t had a community college in my backyard, there is no way I would have gone to college. This isn’t just my story; it’s true for thousands of Silicon Valley residents. Community colleges like Foothill provided me and annually more than one million Californians with solid academics, and enabled us to round out our college experience by pursuing leadership activities, athletics, performing arts and many other programs.”

—Richard L. Henning, Ed.D., Founder,  
*Foothill Celebrity Forum Speakers Series*

# Student Life

**Athletics**

**Campus Center**

**Campus Clubs**

**Campus Radio**

**Cheerleading & Dance Squad**

**College Hour**

**Community Service**

**Cultural Enrichment**

**Intramural Sports & Recreation Programs**

**Leadership**

**Student Activities Program**

# Student Life



## Athletics

Foothill is a member of the Coast Conference of the California Community College Athletic Association and NorCal Football Conference. Our men's intercollegiate teams compete in basketball, football, golf, soccer, tennis, swimming and water polo. Our women's intercollegiate teams compete in basketball, water polo, soccer, tennis, volleyball, softball and swimming. For more information, call the Physical Education & Athletics Division at (650) 949-7222.

## Campus Center

To enhance your college experience, Foothill has developed, designed and opened a state-of-the-art Campus Center. We invite you to use the new center for a meal or quick snack, take a break in the Hearthside Lounge, play an arcade game, and enjoy the breathtaking vistas from the center's outdoor plaza. You'll also find the following services and programs in the Campus Center:

- Altos Conference Room (Room 2019)
- Arcade & Recreation Area (Room 2149)
- ASFC Design Center (Room 2017)
- ASFC Smart Shop/OwlCard (Room 2016)
- Associated Students of Foothill College (ASFC) Student Government (Room 2011)
- Bookstore (Room 2301)
- Dean of Student Affairs & Activities (Room 2002)
- Dining Room (Room 2201)
- District Police (Room 2103)
- Health Services (Room 2126)
- Hearthside Lounge (Room 2313)
- Intramural Recreation Program (Room 2149)
- Middle College Program (Room 2152)
- Psychological Services (Room 2120)
- *The Sentinel* Newspaper (Room 2012)
- Service Learning Volunteer Center (Room 2014)
- Student Accounts (Room 2005)
- Student Activities Office (Room 2009)
- Toyon Conference Room (Room 2020)

## Campus Clubs

Campus clubs and organizations cater to a variety of student interests, including academic, athletic, cultural, social, political, religious, special interest and service groups.

We encourage student participation in extracurricular organizations and authorize clubs to develop from sufficient student interest. Each club must have a faculty or staff advisor. For more information, call the Student Activities Office at (650) 949-7282.

## Campus Radio

Foothill owns and operates KFJC-FM 89.7, a 250-watt educational radio station. If you are interested in technical operation or administration, and programming of educational and entertainment features, call the Fine Arts & Communication Division Office at (650) 949-7262.

## Cheerleading & Dance Squad

Foothill's Cheerleading & Dance Squad promotes college spirit throughout the year and allows participants to earn limited academic credit. Squad members serve as ambassadors of goodwill, school spirit, scholarship and leadership. For more information, call the Student Activities Office at (650) 949-7282.

## College Hour

College Hour spotlights student activities—speakers, workshops, cultural programs, volunteer fairs, Club Day, Career Fair, Health Fair and University Transfer Day, entertainment, music and political forums—**Wednesdays from noon to 1 p.m.** Most classes are not scheduled during this hour so you can participate. For more information, call the Student Activities Office at (650) 949-7282.

## Community Service

The Community Service Learning Program links Foothill students with non-profit community organizations in San Mateo and Santa Clara counties. Attend the on-campus Volunteer Fair, held in fall and spring, to learn more about opportunities to benefit youth, seniors, the environment, the homeless and many other worthy causes. For more information, call the Volunteer Center at (650) 949-7634.

## Cultural Enrichment

The Student Activities Office works with the Associated Students of Foothill College (ASFC), faculty, staff, academic divisions and community organizations to present lectures, seminars and forums highlighting art, music, drama, politics, athletics, journalism and current issues. The staff also helps students, campus clubs and other organizations plan and coordinate events.

Jewish Heritage Month, Black History Month, Women's History Month, Asian Pacific Islander Month, Latino Heritage Month and Gay & Lesbian Heritage Month are just a few of the popular events that have earned campus and community recognition. For more information, call the Student Activities Office at (650) 949-7282.

## Intramural Sports & Recreation Programs

Foothill's Intramural Program includes a range of sports leagues and inter-division competitions, College Bowl, recreation tournaments, fun runs and video-arcade tournaments. For more information, call the Intramural Office at (650) 949-7813.



## Leadership

Student government provides our student body the opportunity to self-govern and participate with faculty, staff and administration. You can participate and gain valuable training and experience in the following areas:

- Administration
- Advocacy
- Broadcast communication
- Budget development
- Decision making
- Event coordination
- and objectives
- Governance
- Group dynamics
- Leadership theory and styles
- Marketing
- Organizational development
- Parliamentary procedure
- Planning
- Policy development and implementation
- Problem solving and conflict resolution
- Speech communication
- Student rights and responsibilities
- Team building
- Time management

You can also apply to be a campus ambassador to help with events, hospitality, campus tours and outreach activities.

Practical leadership experience is also available through the Associated Students of Foothill College (ASFC) Campus Council and campus-governance committees. Elections are held during Spring Quarter. For more information, call the ASFC Office at (650) 949-7281.

## Student Activities Program

Foothill's Student Activities Program offers opportunities to develop and enhance leadership skills, prepare for civic responsibility, explore diverse cultures, and help build a strong sense of college community. For more information, call (650) 949-7282 or visit Room 2009.



“You are an institution of so many firsts—the first community college to seek and receive accreditation in its first year, and the first community college to be master-planned and built in one piece.

You’ve continued your tradition of innovation in more recent years when the district created the first official board policy to provide support to faculty members who want to create, use or improve open educational resources as substitutes for costly college textbooks.”

*U.S. Secretary of Education Arne Duncan,  
Speaking at Foothill College’s 50<sup>th</sup> Annual  
Commencement Ceremony, June 25, 2010.*

# Student Services & Programs

**Student Development Services**

**Admission & Placement Testing Services**

**Campus Support Centers**

**Personal Support Services**

**Special Assistance Services**

**Special Studies & Programs**

# Student Services & Programs

## Student Development Services

### Matriculation

Matriculation is a state-mandated agreement between you and Foothill College to help you reach your educational destination. Our responsibility is to provide:

- An admission process.
- Orientation to college programs, services and procedures.
- Pre-enrollment placement testing and counseling.
- Advice and counseling for course selection.
- A suitable curriculum or program of courses.
- Continuous follow up of your progress.
- Referrals to support services.
- A program of institutional research and evaluation.

Your responsibility is to:

- Express an educational intent at entrance.
- Declare a specific educational objective within a reasonable period of enrollment.
- Be diligent about class attendance and completing assigned coursework.
- Strive to complete courses and progress toward an educational goal according to Foothill and California standards.

### Orientation

#### *The CNSL 50: Introduction to College Course*

If you are a new student, new transfer or former student, you must enroll in the *CNSL 50: Introduction to College* course. Counseling staff will provide basic information about Foothill services and programs, and requirements for associate and bachelor's degrees, general education and specific majors. Orientation topics may also include time-management techniques, study skills, selecting a major, college success factors, and general education and university transfer requirements.

Placement test scores are used in the *CNSL 50* course as an advisory tool and to help you develop an educational plan for your skill levels. The course is offered each quarter and during Summer Session. See the Schedule of Classes *CNSL 50* listing. For more information, call (650) 949-7296.

### Counseling

Foothill counselors help students with class selection, registration procedures and personal issues. They use skills, techniques, interventions, logic and intuition to help you make decisions and set goals leading to successful college and life experiences. Counselors can help you:

- Make appropriate, successful educational decisions.
- Set realistic career goals.
- Adjust to changing roles in society.
- Resolve personal concerns that may interfere with your ability to succeed.

For a counseling appointment on the Main Campus or Middlefield Campus, call (650) 949-7423. Or, schedule an appointment online at [www.foothill.edu/counseling](http://www.foothill.edu/counseling).

### Career/Transfer Center

The Career/Transfer Center offers career and transfer resources, workshops and advice. The career coordinator provides information on job-hunting, resume writing, interview techniques, and career exploration. If you are interested in transferring to a four-year college, the transfer coordinator can help with transfer information, completing applications and essays, and choosing the best college.

The Career/Transfer Center offers many services, including a resource of library of books, publications and videos, current college catalogs, EUREKA (computerized career-guidance software), job binders, transfer newsletter, and Internet access for career/transfer-related research.

Throughout the year, the center hosts representatives from the University of California and California State University campuses, and numerous private colleges and universities. These representatives meet one to one with students who plan to transfer. You must sign up in advance to meet with a representative. In Fall Quarter, college representatives visit the campus for Transfer Day to meet with students. In Spring Quarter, the center presents the Career & Job Fair at which more than 50 recruiters attend, ready to hire students for full- and part-time jobs and internships.

Each quarter, the Career/Transfer Center compiles a comprehensive calendar of workshops, events and campus tours. Transfer workshops include transfer admission agreements, essay writing for college applications, choosing a college, UC applications, and preparing to transfer to a private university. For more information, call (650) 949-7235. Career workshops include resume writing basics, resume writing critique, interviewing tips, choosing a college major, job search strategies, internships and salary negotiation. For more information, call (650) 949-7229.

To pick up a copy of the calendar, visit the Career/Transfer Center in Room 8329 or access [www.foothill.edu/transfer](http://www.foothill.edu/transfer) and [www.foothill.edu/career](http://www.foothill.edu/career).

## Admission & Placement Testing Services

### Student Classifications

To understand Foothill admission and placement testing procedures, you need to know your student classification:

- **CONTINUING STUDENT:** You were enrolled at Foothill last quarter.
- **FORMER STUDENT:** You've attended Foothill, but were not enrolled during the previous quarter (Summer Session does not apply).
- **FRESHMAN:** You've completed fewer than 45 units of college credit.
- **FULL-TIME STUDENT:** You're enrolled in 12 or more units this quarter. Or you're enrolled in 6 units during Summer Session.
- **INTERNATIONAL STUDENT:** You have applied and been accepted to the Foothill College International Students Program.
- **NEW STUDENT:** You've never enrolled at any college.
- **NEW TRANSFER STUDENT:** You have attended a college other than Foothill.
- **NON-RESIDENT STUDENT:** You have not met California residency requirements and must pay non-resident tuition.
- **SOPHOMORE:** You've completed 45 or more units of college credit and haven't earned a degree.

### Placement Tests

Testing is required for students enrolling in *CHEM 1A*, *25* and *30A*; *ENGL 1A* or *110*; all *ESLL* (except *134*, *136*, *137*); and all mathematics courses except *MATH 230*, *231* and *250*. Placement testing is offered on a computer. Testing is conducted by appointment. To schedule an appointment at the Main Campus, access [www.foothill.edu/placement](http://www.foothill.edu/placement) and follow the instructions or call (650) 949-7230. To schedule an appointment at the Middlefield Campus, call (650) 949-6958.

If you have successfully completed college-level math, chemistry and English courses, you may be placed by a counselor. Bring your transcript to an appointment with a counselor. To schedule an appointment, call (650) 949-7423.

If you have placement test scores from another college, you may fax them to the Testing Office at (650) 949-7024. You may enroll in the following courses without placement testing: *ENGL 100*, *ESL 134*, *136*, *137* and *MATH 230* and *231*.

If you have successfully completed an ESL course at another California community college, you can request that your transcript be evaluated by calling (650) 949-7250.

We also offer ability-to-benefit placement testing for students lacking a high school diploma and requesting federal financial aid. For details, access [www.foothill.edu/placement](http://www.foothill.edu/placement) or call (650) 949-7286.

If you have a verified disability, call the Disability Resource Center, (650) 949-7017 (voice) or (650) 948-6025 (TDD) to make accommodation arrangements.

For more information on placement testing services, access [www.foothill.edu/placement](http://www.foothill.edu/placement).

## Campus Support Centers

### CTIS Computer Centers

CTIS computer labs are open for all students. If you are enrolled in CTIS courses, you receive priority access and printing capabilities. For more information, call (650) 949-7303, Main Campus; or (650) 949-6958, Middlefield Campus.

### Krause Center for Innovation

Located in Building 4000, the KCI provides open access to a variety of multimedia resources and an open computing lab with Windows and Macintosh workstations. Students can use the lab for online research, papers or other class assignments. Hours for the 2010–2011 academic year are Mondays through Fridays, 7:30 a.m.–8:30 p.m., and Saturdays, 9 a.m.–5 p.m. For more information, call (650) 949-7680.

### Language Arts Laboratory

Located in Room 6308, the Language Arts Lab offers a series of self-paced, individualized text-based and computerized courses on a credit/no-credit, non-transferable basis. The lab also has software to supplement ESL and foreign language instruction as well as a drop-in computer lab. For more information, call (650) 949-7452.

### Library Services

The Hubert H. Semans Library has more than 90,000 books, periodicals, newspapers and a variety of multimedia resources. You can browse the best-seller reading collection or take a self-paced course to learn how to use a modern library. Our online catalog helps you locate books by subject, title or author. Various computer databases make it easy to find articles in periodicals. You can also access the Internet and search various databases and Web sites. For more information, call (650) 949-7086, hours; (650) 949-7608, reference desk; (650) 949-7611, circulation.

## Math, Physics & Chemistry (PSME) Center

If you need help with math, physics or chemistry, we encourage you to visit the Math, Physics & Chemistry (PSME) Center. The center is staffed by Foothill's physical sciences, mathematics and engineering faculty and graduate students who can spend time assisting you in a supportive environment. The center also has numerous computers with the latest math, chemistry and physics software applications. The PSME Center is located in Room 4213, and is open Monday through Friday. For information, call (650) 949-7042.

## Media Center

Located in Building 3600, the Media Center provides access to a variety of multimedia resources, including non-print materials, audiovisual workstations, and an open computing lab with Macintosh and Windows workstations. Currently enrolled students can use the lab for online research, papers or other class assignments. For hours or more information, call (650) 949-7445.

## Foothill Observatory

Operated by the Peninsula Astronomical Society, the Foothill Observatory offers weekly public programs. These programs allow Foothill students and the public to view the day and evening sky with the observatory's large astronomical telescope. The observatory is adjacent to Building 4000. For hours of operation, call (650) 949-7334.

## Tutorial Center

As a Foothill student, you have access to free tutoring in the Tutorial Center during day and evening hours. Visit the center in Room 3526 for assistance in a variety of subject areas. The Tutorial Center is home to drop-in tutoring, appointment tutoring and EOPS tutoring. Macintosh, PC and Internet access are also available. For hours, directions, tutor schedules or more information, call (650) 949-7444 or access [www.foothill.edu/tutor](http://www.foothill.edu/tutor). EOPS students should access [www.foothill.edu/services/eops](http://www.foothill.edu/services/eops).

## Writing Centers

### English

Writing Center consultants are available to give you advice for writing assignments, job and college applications, and essay examinations. If you are enrolled in composition courses *ENGL 110, 1A* or *1B*, you are strongly encouraged to use the center. The center accepts appointments and drop-ins. Visit Room 3612 or call (650) 949-7290.

## English as a Second Language

ESL Writing Center consultants are available to give you advice for writing assignments and essay examinations. If you are enrolled in *ESL 167, 25* and *26*, you are encouraged to use the center. The center accepts appointments and drop-ins. Visit Room 6301 or call (650) 949-7923.

## Personal Support Services

### Health Services

The Health Services Office provides confidential health care services to students. Direct services include basic primary care appointments, vaccinations, physicals, blood-pressure checks, emergency first aid, smoking cessation counseling and acupuncture massage. The office also sponsors speakers, presentations and conferences on health topics throughout the year as well as consultations with a registered dietician. Services are available by appointment only.

Planned Parenthood reproductive health-care services, pregnancy testing, birth control, and STD- and HIV-testing are available on a sliding-scale fee basis. For more information, visit Room 2126 or call (650) 949-7243.

### Psychological Services

Licensed mental health professionals, counselors and graduate interns offer short-term, confidential, no-fee personal counseling to you and your dependents. Services include individual, couple, family and group counseling. Services are provided in the Psychological Services Office. For psychological services appointments or information, visit Room 2120 or call (650) 949-7910.

### Housing

Foothill has no dormitory facilities, but the Student Activities Office maintains a rental-listing resource binder. Foothill College does not supervise, recommend or assume responsibility for any housing facility. To list available housing, call (650) 949-7282. To review the resource binder, visit Room 2009.

## Special Assistance Services

### Disabled Student Programs & Services Adaptive Learning Division

The Adaptive Learning Division offers courses and services on the campus and in the community for physically, communicatively, learning, developmentally and psychologically disabled adults. Consult the *Schedule of Classes* for sites and courses under Adaptive Learning.

The Disability Resource Center, located in Room 5801, provides disability access information, academic support, computer training, counseling, on-campus shuttle and other services. Extended-time placement testing is available to qualifying students.

For on-campus service and disability accommodation information, call (650) 949-7017 or 949-7332, voice; or (650) 949-6025, TDD for hearing-impaired. For deaf services e-mail Brenda Davis at [DavisBrenda@foothill.edu](mailto:DavisBrenda@foothill.edu). For community-based program information, call (650) 949-7321.

To request this publication in alternative media such as electronic text, Braille or large print, contact Alternative Media Specialist Steven Sum, (650) 949-7673; [SumSteven@foothill.edu](mailto:SumSteven@foothill.edu).

Foothill offers an alternative path for the student with verified disability who requests academic modifications and does not want to participate in Disabled Student Program & Services. For more information, call or schedule an appointment with Rose Myers, Foothill College ADA/504 coordinator and vice president of Student Development & Instruction, in Room 7228 or call (650) 949-7228.

### **EOPS/CARE for Disadvantaged Students**

Extended Opportunity Program & Services (EOPS) and Cooperative Agencies Resources for Education (CARE) assist academically disadvantaged and low-income students.

In addition to offering financial aid (detailed in the financial aid section of this catalog), EOPS and CARE offer counseling/advising, private tutoring, workshops, peer advising and transfer assistance. Staff and peer advisors provide useful insights because they have varied backgrounds and have experienced similar challenges.

The EOPS and CARE offices are located in the Student Development Center in Room 8202. For program-entry requirements, call (650) 949-7207, or access [www.foothill.edu/services/eops](http://www.foothill.edu/services/eops).

### **Veterans Assistance & Services**

The Admissions & Records Office and Counseling Division assist veterans in planning their educational goals while on the new Montgomery G.I. Bill, Veterans Educational Assistance Program or Selected Reserve Education Assistance Program. Foothill accepts credit from institutions accredited by one of the six regional accrediting associations or follow the recommendations of the American Council on Education. Assistance for dependents who qualify for educational benefits is also available.

According to policies of the United States Veterans Administration, students receiving VA educational benefits (veterans, reservists, dependents) must maintain satisfactory progress. Students receiving VA benefits who fall below a 2.0 grade point average (GPA) will be placed on academic probation. If unsatisfactory progress continues for two consecutive quarters, students will have benefits suspended until GPA returns to satisfactory progress of 2.0 GPA or better.

For more information, call the Foothill Veterans Office at (650) 949-7001 or e-mail [XuerebCarmela@foothill.edu](mailto:XuerebCarmela@foothill.edu).



## Refunds & Grading Options for Students Called to Active Military Service

If you are called to military duty before completing your term of study, you may choose from the following options.

- **REFUND:** Petition for an official withdrawal with a full refund of enrollment fees, student fees and non-resident tuition, if applicable. You'll receive a full refund for all books and materials purchased from the college bookstore.
- **CREDIT:** Petition for an official withdrawal with credit for enrollment fees, student fees and non-resident tuition, if applicable, toward future enrollment. You may later opt to receive a refund.
- **GRADE OF INCOMPLETE:** Request a grade of I (Incomplete) from the instructor. Regulations require you to complete the course within one year, but you can request an extension in special circumstances.

Forms for these services are available in the Admissions & Records Office in Room 8101.

## Special Studies & Programs

### Professional & Work Force Development

The Professional & Workforce Development Program for the Foothill-De Anza Community College District works to provide training and professional development opportunities for those in or entering the Silicon Valley workforce. The program contracts with employers to train employees on site at their workplace and develops new programs that have the goal of preparing the workforce for emerging fields. Programs under its auspices include the Center for Applied Competitive Technologies, which serves the technology and manufacturing sectors with in-demand consulting and training services in process improvement and other areas. For more information, visit the program office in Room 4057, call (650) 949-7797 or access [SiliconValleyTraining.fhda.edu](http://SiliconValleyTraining.fhda.edu).

### Campus Abroad Program

Study in France, Ecuador, England, Italy, Spain, Costa Rica, Ireland, West Africa or Vietnam and earn Foothill course credit through our Campus Abroad Program. You'll enjoy a unique opportunity to immerse yourself in international culture. Field trips enhance coursework taught by Foothill-De Anza faculty at our campus sites abroad. Foreign language proficiency is not required, although we encourage you to investigate Foothill foreign-language courses.

Program fees include cultural and social activities; housing; medical, baggage and fee-refund insurance; meal plans; and transportation at some sites.

For more information, call the Campus Abroad Program Office at (650) 949-7614.

## Cooperative Work Experience Program

Foothill offers credit for both general and occupational work experience education through the Cooperative Work Experience (CWE) Program. The CWE Program is designed to help students enhance their academics and build work-related skills. College credit may be earned by those students who work (full or part time) or for those who volunteer their services at approved agencies. Both Foothill and De Anza colleges have coordinated classroom instruction and work experience with a number of employers in business, industry, government and other professions. CWE Program participation information, employment and eligibility criteria are available at the CWE Office in Room 4128. For more information, call (650) 949-7205.

## Evening College

If you work during the day or would prefer to take classes in the late afternoon, evening or weekend, Foothill's Evening College offers hundreds of classes each quarter. The Evening College Office, located in Room 1910. For more information, visit or call (650) 949-7711.

## Foothill Global Access (Distance Learning Program)

Foothill Global Access (FGA) features online courses including lectures, discussion, assignments and tests delivered via the Internet with regular opportunities for electronic interaction with the instructor and other students. To enroll in online classes you must have access to a computer and an e-mail account.

For more Foothill Global Access information, visit [www.foothill.edu/fga](http://www.foothill.edu/fga) or call (650) 949-7446.

## International Programs

Establishing an international presence is a Foothill priority. Foothill College has a long history of educating international students since its opening in 1957, and its graduates hail from many diverse corners of the world, from Tonga and Ivory Coast to Kyrgyzstan, Nepal and Latvia.

The International Programs Office caters specifically to international students on F-1 visas. We provide counseling and assistance to more than 800 F-1 students from more than 70 different countries. F-1 status is available to foreign citizens who commit to study full time in the United States in programs leading to an associate degree or bachelor's degree at a four-year university through Foothill's transfer pathways. Admission to Foothill is flexible, convenient and personalized: Applications are accepted three times a year for Fall, Winter and Spring

quarters. For admissions requirements and application procedure, access the admissions section at [www.foothill.edu/international](http://www.foothill.edu/international).

Foothill also hosts international students on other visa types, such as J-1, H-1B, H-4, L-2 or F-2. The college has approximately 1,200 international students on all visa types, earning Foothill a #11 spot in the U.S. on the *Institute of International Education's Open Doors Report* ranking associate institutions with the largest and most diverse international student populations. Applicants who do not hold or intend to apply for an F-1 status are considered domestic students for application purposes and should apply as non-residents by completing the *Domestic Student Application Form* at [www.foothill.edu](http://www.foothill.edu).

Foothill's International Programs Office provides some informational support to overseas applicants who are permanent residents, dual citizens or hold a U.S. visa other than F-1. A special orientation session is offered once a quarter for non-F-1 visa holders with international backgrounds. For more information, call the Foothill Outreach Office at (650) 949-7511 or e-mail [foothilloutreach@foothill.edu](mailto:foothilloutreach@foothill.edu).

The International Programs Office features a team of caring multilingual professionals who ensure that students have an outstanding educational experience at Foothill and in the U.S. Our services include a new student orientation program with comprehensive academic, immigration and cultural counseling; regular immigration advising and seminars by a dedicated advisor regarding regulations that affect F-1 student status from passports, visas, employment, travel and academic issues; CINTAX tax-filing assistance program; medical insurance program; and publication of the *I-NEWS* monthly newsletter.

Additionally, the office creates programs and initiatives that support international students as they adjust to the campus and community, expand their horizons and share their unique heritage and cultural backgrounds. Special activities include monthly coffee hours, free tickets to Celebrity Forum, field trips to Bay Area attractions, Thanksgiving dinner, ice-skating trip and International Student Connection Club. The office also coordinates large-scale programming initiatives aimed at internationalizing the Foothill campus, such as the annual International Film Festival, International Night and Lunar New Year celebrations.

For information about admissions, call (650) 949-7293 or e-mail [fhinternational@fhda.edu](mailto:fhinternational@fhda.edu). For information about international marketing and activities, call (650) 949-7159 or e-mail [fhinternational@fhda.edu](mailto:fhinternational@fhda.edu).

## Internship Program

The Foothill-De Anza Community College District Internship Program offers a unique opportunity to gain valuable experience under the mentorship of a professional at a major Silicon Valley corporation or public agency. Internships enhance your university transfer application as well as your future employment prospects. As an intern, you'll work 20 hours per week during the academic year and 40 hours per week during Summer Session.

Foothill College offers one-year paid internships for students in most majors such as psychology, business, engineering, computer science, graphic arts, physical and biological sciences, office administration, multimedia and many other majors. Internships are sponsored by job sites such as NASA Ames Research Center, Apple Computer, TiVo, SETI, Computer History Museum, Foothill College and many other corporations and public agencies. U.S. citizenship is required at some internship job sites.

To get started, attend the program's on-campus information sessions, access [internships.fhda.edu](http://internships.fhda.edu), e-mail [internships@fhda.edu](mailto:internships@fhda.edu) or call (650) 604-5560.

## Middle College: The High School Alternative

Foothill Middle College Program coordinators understand that not all students fit the mold of the traditional high-school student. This alternative program works with at-risk students to rekindle the enthusiasm for learning.

This program offers a serious learning environment where you must take control of your own learning, explore individual interests through more diversified course offerings, and complete high school graduation requirements. Middle College is based at the Main Campus. For an application or more information, call (650) 949-7168.

## Middlefield Campus & Off-Campus Programs

Foothill has offered classes at community sites for more than two decades. Today, approximately 4,000 of our students enroll in classes at Foothill's Middlefield Campus and more than 50 other convenient community locations. The Middlefield Campus, located at the Cubberley Community Center in Palo Alto, is a full-service campus. It offers computer labs, an art lab, student lounge, gyms, weight room and classrooms. The Middlefield Campus is also home to the Foothill Child Development, REACH Post-Stroke, Paramedic, EMT and Pharmacy Technician programs. A variety of support services are available at the Middlefield Campus, including counseling, financial-aid assistance, open PC and Mac computer labs, OwlCard distribution and photo station, and placement testing

services. We can process all admissions and registration transactions at either the Middlefield Campus or Main Campus.

For Middlefield Campus/Off-Campus programs information, call (650) 949-6950. For Middlefield Campus Student Services, call (650) 949-6958.

### Occupational Training Institute

The FHDA Occupational Training Institute (OTI) provides job training and employment services at no cost for eligible residents of Santa Clara County. You may qualify if you are unemployed due to a company layoff, line or division closure, or you are economically disadvantaged. A variety of short-term training programs are available. OTI pays for college fees, books and required class materials for qualified students. Job preparation classes, placement assistance, retention and customized follow-up services are offered at no cost to candidates and employers. Additional support services include referrals to child care providers, transportation, financial aid and tutorial services. OTI is located in Room 5004. For more information, call (650) 949-7601.

OTI also serves as liaison for CalWORKs, offered to Santa Clara or San Mateo county residents who receive or have applied for Temporary Assistance for Needy Families (TANF). A variety of services are available to CalWORKs recipients enrolled in the program. For more information, call (650) 949-7465.

### Project Veterans Program

Foothill College offers veterans and active duty personnel the unique opportunity to learn new skills, adapt their military skills to civilian life, and earn a college degree or career certificate. Project Veterans is dedicated to helping you identify and pursue comprehensive academic and career-training programs that meet your personal and professional goals. We help armed services personnel achieve their educational goals by addressing their specialized needs in a college setting. We encourage veterans interested in pursuing a vocational goal, college degree, apprenticeship program, or taking courses for personal enrichment to begin their educational experience through Foothill's Project Veterans Program.

For more information, e-mail Project Veterans Coordinator Charlie McKellar at [McKellarCharlie@foothill.edu](mailto:McKellarCharlie@foothill.edu) or call (650) 949-6955.

### Short Courses & Non-Credit Courses

Foothill and De Anza colleges offer approximately 150 non-credit, fee-based short courses each quarter. Nearly 12,000 students enroll in these courses each year.

The Short Courses Office is located at De Anza College in the Student and Community Services Building. In accordance with the Civic Center Act, the college is only designated as a place for community groups when there is no interference with the regular educational program. For more information, call (408) 864-8817.

Foothill College also offers a variety of non-credit courses at its Middlefield Campus and other off-campus locations. There are no fees for these non-credit classes and there are no residency requirements. Non-credit class offerings include job and employment preparedness; short career-training and vocational courses; parenting education; and college skills and Bridge to College classes. For more information, call Foothill's Middlefield Campus Career & College Connections at (650) 949-6959.



“To get the most out of Foothill College you must be ready to take advantage of opportunity. This strategy paid off for me. With the few hours that I spent applying for financial aid and scholarships I’ve been able to completely pay my way through college. This is especially important for me because growing up with little money, higher education was never talked about in my family. I never thought it possible that I would be where I’m today, and if it was not for financial aid resources, I know my story would have turned out very differently.”

*Julie A. Berkovatz*

*attended Foothill College for three years and completed the Associate in Arts Degree in Graphic & Interactive Design in 2009. She then transferred to San Jose State University to further pursue the study of graphic design.*

# Financial Planning & College Costs

**Student Fees**

**Instructional Materials Fees**

**Estimated Annual Cost of Attending Foothill College**

**2010–2011 Cost of Attendance**

**Examples of Additional Costs**

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**Financial Aid**

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**Other Aid**

**Textbooks & Supplies**

# Financial Planning & College Costs



## Student Fees

If you're a California resident, you'll pay \$17 per unit<sup>1</sup>. The non-resident tuition fee is \$119 per unit, and the foreign student tuition fee is \$130 per unit.

Foothill charges additional fees for Campus Center use, on-campus parking, lab courses, student-body activities (voluntary) and health services. International F-1 Visa students are required to purchase comprehensive health insurance for \$390 each quarter.

All fees, which are posted online at [www.foothill.edu](http://www.foothill.edu) and listed in the quarterly *Schedule of Classes* publication, are subject to change. Tuition and fees may be refunded under certain circumstances; the specific refund policy is posted online and listed in the *Schedule of Classes*. Direct questions about tuition and fees to the Admissions & Records Office in Building 8100 or call (650) 949-7325.

<sup>1</sup> Fees are subject to change by California legislative action.

## Instructional Materials Fees

In some courses, there will be an instructional materials fee. These fees, detailed in the *Schedule of Classes*, reflect the actual cost for materials, meaning the cost is usually lower than if you purchased the same items separately. Unless there's an issue of health or safety, you can either pay the fees to the college or provide your own materials of equal quality. Your instructor will provide a list of required materials.

## Estimated Annual Cost of Attending Foothill College

It's important for you to financially plan your education. The following cost estimates are calculated for a student attending Foothill College full time (enrolled in 15 units) for nine months.

## 2010–2011 Cost of Attendance

California Resident (9 months)	Reside At Home No Dependents	All Others
Fees	\$855 <sup>[§]</sup>	\$855 <sup>[§]</sup>
Books / Supplies	\$1,728	\$1,728
Room / Board	\$4,338	\$10,872
Transportation	\$1,170	\$1,170
Misc. / Personal	\$2,826	\$2,826
<b>Total</b>	<b>\$10,917</b>	<b>\$17,451</b>

[§] Based on institutional average  
 $15 \text{ units} \times \$17^* \text{ per unit} = \$255 + \$30 \text{ Basic Fee} \times 3 \text{ Quarters} = \$855$ .  
*\*Fees are subject to change; excludes cost of textbooks.*

### Additional Fees

- Materials Fee: amount varies.
- Non-Resident Tuition Fee: \$119 per unit per quarter.

### Examples of Additional Costs

For students enrolled in allied health programs (primary care associate, dental hygiene, etc.), special fees, lab fees, tooling, and other related costs may be added to the normal cost of attendance. Study Abroad Programs have additional costs that may be added to a student's normal budget. Student loan fees are added. Expenses for dependent care and disability-related costs may also be considered with documentation.

## Refunds & Repayments

### Refunds

The college maintains a refund policy for tuition and fees at the Admissions Office, and book purchases at the bookstore. In most cases, a student can request a refund for classes dropped during the first two weeks of classes. The Admissions & Records Office and Bookstore can provide the most current policies for obtaining a refund.

### Repayment

The student who withdraws from the college on or before 60 percent of the quarter is completed, may be required to repay Title IV funds. The funds are repaid to the Financial Aid Office and must be returned within 30 days after the college's determination that the student has withdrawn.

## Financial Aid

### Are You Eligible?

Financial aid eligibility is based on need—the difference between what you and your family can provide and college expenses.

Your financial need is determined by the information you and your family provide through the *Free Application for Federal Student Aid* (FAFSA) and any Foothill College

additional paperwork. Regardless as to whether the application shows unmet need or not, we may be able to help. The total amount offered cannot exceed your documented financial need, and the monies must be used solely to meet cost of attendance at Foothill (refer to chart at left).

If you are in default on a loan, or owe an overpayment on a grant or loan, you will not be eligible for financial aid until the situation is satisfactorily resolved.

Eligibility requirements are generally established once you've shown, through a completed application, that you:

- Have applied for admission.
- Have enrolled in an academic program that requires 24 units or more to complete.
- Maintain satisfactory academic progress.
- Demonstrate verifiable financial need. Some exceptions may apply. Consult the Financial Aid Office for details.
- Show academic major/goals and units of enrollment that can be applied to an educational plan.
- Have a high-school diploma, GED, have passed an independently administered examination approved by the Department of Education, or have shown the ability to benefit through prior unit completion.
- Are a U.S. citizen, permanent resident or other eligible non-citizen.
- Have a valid Social Security Number.
- Register with Selective Service if required.
- Not owe a refund on any grant or be in default on any student loan.

### Academic Competitiveness Grant (ACG)

The federal Academic Competitiveness Grant will provide up to \$750 for the first year of undergraduate study and up to \$1,300 for the second year of undergraduate study to the full-time student who is eligible for a Federal Pell Grant, and who has successfully completed a rigorous high-school program, as determined by the state or local education agency and recognized by the U.S. Secretary of Education. The half- or three-quarter-time student will have awards prorated. The second-year student must also have maintained a cumulative grade point average of at least 3.0.

### Federal Pell Grant

Federal Pell Grants are awarded to undergraduates based on financial need. They range from \$555 to \$5,550.

### Federal Supplemental Educational Opportunity Grant (FSEOG)

This federal program may be an option if you have exceptional financial need and would be unable to continue your education without a Pell Grant. The FSEOG Award is up to \$600 per academic year at Foothill College.

## Federal Work Study (FWS)

If you have financial need and want to earn a part of your educational expenses through employment, Federal Work Study (FWS) may be an option. You can work up to 25 hours per week while classes are in session and 40 hours during school vacations, however you must be enrolled in a minimum of six units to be eligible for FWS. If you receive an FWS award, it is your responsibility to schedule an interview with the Financial Aid Office for FWS placement assistance.

## Federal Direct Perkins Loan

Borrow up to \$3,975 a year at a lower-division undergraduate level from this campus-based program with limited funding. You will begin repaying the loan nine months after you graduate or drop below half-time enrollment. During the repayment period (up to 10 years), you'll be charged 5 percent interest on the unpaid balance.

## Federal Direct Subsidized & Unsubsidized Student Loan

Federal Direct Loans are made by the U.S. Department of Education. As a first-year undergraduate, you can borrow up to \$3,500 subsidized per year. As a second-year undergraduate, you can borrow up to \$4,500 subsidized per year. Additional Unsubsidized Stafford may also be available annually.

Federal Direct Loan totals may not exceed \$31,000 for dependent undergraduates and \$57,500 for independent undergraduates (no more than \$23,000 can be subsidized). You begin repayment six months after you graduate or drop below half-time enrollment. During the repayment period, and upon receipt of funds for unsubsidized loans, you will be charged a fixed interest rate that is capped at 8.5 percent on the unpaid balance and adjusted for new loans each July 1. As of July 1, 2010, the interest rate will be 4.5 percent.

## Federal Direct PLUS Loan for Parents

Federal Direct PLUS Loans are made by the U.S. Department of Education. Parents of dependent undergraduate students may borrow up to the maximum of the amount determined to be unmet educational expenses.

A determination of need must be made, but Federal Direct PLUS eligibility is based on unmet educational expenses. Interest charges begin upon receipt of the loan.

## State Aid Extended Opportunity Program & Services (EOPS)

This state-funded program has been designed to help colleges to recruit and retain those students affected by language, social and economic disadvantages who otherwise might not attend college. EOPS offers a staff of trained professionals eager to assist these students to achieve academic, career, and personal goals. Full-time enrollment (12 units) is required.

## CAL Grants

To be eligible, in addition to federal aid requirements, a student must:

- be a U.S. resident or eligible non-citizen, and
- be a California resident, and
- not have a bachelor's or professional degree (except extended Cal Grant A or B awards for a teaching program or other five-year program), and
- file a completed FAFSA and Cal Grant GPA Verification Form by the annual **March 2 deadline**.

**CAL GRANT A:** Covers fees at the UCs, CSUs, and private institutions in California. This award may not be used to pay for community college fees. Funding for students who are enrolled at community colleges may be held in reserve for up to three years.

**CAL GRANT B:** Is for high-potential students from disadvantaged or low-income families who otherwise would not be able to pursue a higher education. California community college awards are up to \$1,551 per year.

**ENTITLEMENT AWARD:** Every graduating high school senior who has a grade point average of at least 2.0, meets the Cal Grant financial and eligibility requirements and applies by March 2 within one year of graduation is guaranteed this award.

**COMPETITIVE AWARD:** The student who will enroll at a California community college, although strongly encouraged to apply by **March 2**, has a second **annual deadline of Sept. 2**. Other students who meet the basic Cal Grant eligibility requirements and who have at least a 2.0 grade point average may compete for this award.

**CAL GRANT C:** Helps vocationally oriented students acquire marketable job skills within a short time. Full- or half-time training must be for at least four months and lead to a recognized occupational goal—diploma, associate degree, license qualification or certificate. Funding is available for up to two years, depending on the length of the program, as long as academic progress is acceptable. Awards for California community college students are limited to up to \$576 in training related costs.

## California Chafee Grant

This federal program, administered by the California Student Aid Commission, offers college and vocational school financial aid to youth aging out of a foster care program. For up to \$5,000, the student must demonstrate financial need, meet basic eligibility requirements, complete the FAFSA and the *Chafee Grant Application* available at [www.csac.ca.gov](http://www.csac.ca.gov).

## Board of Governors Fee Waiver (BOGW)

While state law requires that students attending California community colleges pay an enrollment fee, the California Community Colleges offer the BOGW. This grant program waives enrollment fees for the academic year and Summer Session.

If you are a California resident, you qualify for a BOGW if any one of the following statements applies to your current status:

- You have qualified for financial aid and your need hasn't been met;
- You or your family are receiving TANF/CalWORKS, Supplemental Security Income (SSI) or General Assistance/General Relief;
- You have received certification from the California Department of Veterans Affairs or the California National Guard Adjutant General that you are eligible for a dependent's fee waiver; or
- You meet income standards; year specific
- You have documentation that you are a recipient or the child of a recipient of the Congressional Medal of Honor.
- You have documentation that you are a surviving dependent of any individual killed in the Sept. 11, 2001 terrorist attack.
- You have documentation that you are a dependent of a deceased law enforcement/fire suppression personnel killed in the line of duty.

## Applying for BOGW

- You are required to submit a completed *BOGW Application Form* each academic year. Print the form online at [www.foothill.edu/aid](http://www.foothill.edu/aid) or pick up the form in the Financial Aid Office or
- You must submit a completed FAFSA each academic year at [www.fafsa.gov](http://www.fafsa.gov).
- Only one application is required per year (July 1–June 30).
- Applications are accepted until the end of each quarter. It is not possible to process applications for prior quarters.
- Because the BOGW is not tied to any other financial aid program, the BOGW form can be processed quickly and you can register immediately.
- You do not have to be enrolled in a specific number of courses to apply for the BOGW.

## Other Aid Emergency Loans

If you face an unexpected educational emergency, Foothill offers short-term loans up to \$200. To qualify, you must be enrolled full time (12 units), purchase a Foothill College OwlCard and meet satisfactory academic progress requirements. These 30-day loans are interest-free. An overdue loan may be subject to additional late fees, registration holds, and assignment to collection services. Emergency loans are administered through the Financial Aid Office. For information, call (650) 949-7245.

## Employment

If you're interested in working to help defray the cost of attending college, consider a part-time, on-campus position. Most of these jobs pay from \$8 to \$14/hour. Jobs that are not based on financial need are called "district" employment, and you must be enrolled in a minimum of six units to be eligible for these jobs. For information, call (650) 949-7245.

## Scholarships

Several hundred thousand dollars in campus and local scholarships are awarded annually to Foothill students. Scholarships, which vary in amount, are considered academic gifts and need not be repaid. They're generally based on academic standing, financial need, potential progress in major fields of study, and college or community activities. Scholarships are computed as resources for students receiving financial assistance.

A listing of current scholarships is available in the Financial Aid Office and at [www.foothill.edu/aid](http://www.foothill.edu/aid).

## Textbook Assistance

If you're eligible for Extended Opportunity Program & Services (EOPS), you may also qualify for the Textbook Assistance Program. For more information, call the EOPS Office at (650) 949-7207.

## Financial Aid Answers

The goal of the Foothill Financial Aid Office is to make college accessible to all students. We feel no one should be denied an educational experience due to lack of funds. If you have questions or want more information about financial aid options, please contact:

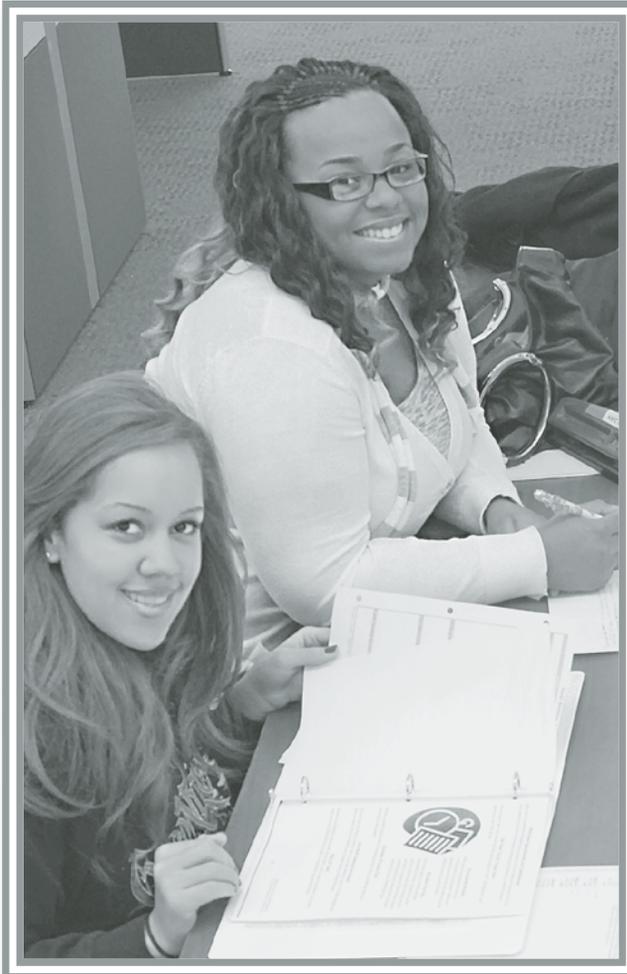
Financial Aid Office (in Room 8202 of Building 8200)  
Foothill College  
12345 El Monte Road  
Los Altos Hills, CA 94022-4599  
(650) 949-7245  
[fhfinancialaidoffice@foothill.edu](mailto:fhfinancialaidoffice@foothill.edu)

## Textbooks & Supplies

You are responsible for purchasing textbooks and supplies, including course syllabi, bibliographies and other printed materials in excess of five pages. Some courses require that you purchase additional supplies. The Foothill Bookstore sells all course texts and other items.

## Textbook Accessibility

Foothill College recognizes that textbook affordability directly impacts student access and successful learning. Textbook information, including the International Standard Book Number (ISBN) is included in the college's online schedule of classes at [www.foothill.edu/schedule/schedule.php](http://www.foothill.edu/schedule/schedule.php) as well as on the website for the college's bookstore at [books.fhda.edu](http://books.fhda.edu). Foothill College makes every reasonable effort to determine that the textbook information listed in the online schedule is accurate, however, textbook editions and ISBNs are subject to change without notice by either the instructor or publisher. The Foothill College Bookstore is not responsible for subsequent textbook changes if the student purchases them from another source.



## Textbook Options

As a student and consumer, be aware that the college offers you several options that can reduce the cost of textbooks, including the following choices. As with any consumer purchase, you are responsible for understanding the vendor's refund/return policies.

**PURCHASE USED TEXTBOOKS:** The Foothill College Bookstore continues to provide a large selection of used textbooks at up to 25-percent off the new textbook price. Look for used textbooks both online and in store. Review available used titles as well as policies and restrictions at [books.fhda.edu](http://books.fhda.edu). Used textbooks may also be available at other retail bookstores;

**RENT TEXTBOOKS:** With a valid OwlCard, you can rent textbooks from the Foothill College Bookstore. Review available rental titles as well as policies and restrictions at [books.fhda.edu](http://books.fhda.edu);

**BUY E-BOOKS:** The Foothill College Bookstore offers textbooks in electronic form via [www.cengagebrain.com](http://www.cengagebrain.com). Review available e-book titles, policies and restrictions at [books.fhda.edu](http://books.fhda.edu);

**SWAP BOOKS:** Buy and sell your used books directly with other students. Listings for the student-run book exchange are free to review. Review available titles, instructions and policies at [www.foothill.edu/books](http://www.foothill.edu/books);

**USE TEXTBOOKS THAT HAVE BEEN PLACED ON RESERVE IN THE FOOTHILL COLLEGE LIBRARY:** Be aware that some books on reserve cannot be checked out. Review more library reserve instructions and policies at [www.foothill.edu/library](http://www.foothill.edu/library); and

**SELL YOUR BOOKS DURING BOOK-BUYBACK:** The Foothill College Bookstore buys back titles that instructors have requested for the following quarter at up to 50 percent of the new price. Thousands of other titles may be bought back each quarter for wholesale value, up to 40-percent cash back. Buyback operates on a first-come, first-served basis. The quantity being bought back by the Foothill College Bookstore is limited and may be reached at any time. The price paid during buyback is subject to the condition of the book and may change without notice. Review more buyback information, dates and policies at [books.fhda.edu](http://books.fhda.edu).

## Additional Textbook Resources

Textbooks and course materials are now eligible for a tax credit under the American Recovery & Reinvestment Act's (ARRA) newly created American Opportunity Tax Credit. To learn more about this option as well as how to claim the tax credit, review the IRS instructions posted online at [www.textbookaid.org](http://www.textbookaid.org).

## **Academic Divisions**

Adaptive Learning & Disability Services  
(650) 949-7332

Biological & Health Sciences  
(650) 949-7249

Business & Social Sciences  
(650) 949-7322

Computers, Technology &  
Information Systems  
(650) 949-7236

Counseling & Student Services  
(650) 949-7296

Fine Arts & Communication  
(650) 949-7262

Instructional Services & Libraries  
(650) 949-7086

Language Arts  
(650) 949-7250

Physical Education  
(650) 949-7742

Physical Sciences,  
Mathematics & Engineering  
(650) 949-7259

# **Programs of Study**

**Academic Divisions**

**Build Your Foundation:  
General Education Coursework**

**Select a Major**

**Certificate Programs**

**Two-Year Career Programs**

**Curriculum Advisory Committees**

**Grade Requirements for  
Specified Career Program Courses**

**Professional & Technical Programs  
Leading to a Career Upon Completion**

**Apprenticeship Programs**

**Degrees & Certificates Offered at Foothill College**

# Programs of Study

## Build Your Foundation:

### General Education Coursework

The primary objective of general education is to provide students with the depth and breadth required to interact successfully with others as knowledgeable members of our diverse society. A general education helps students clarify and present their personal views. It should also instill values and ideas that will enrich the personal lives of students and help them understand their own abilities, feelings and motives.

At Foothill College, the general education curriculum is designed to help students understand relationships among various disciplines and appreciate and evaluate past experiences that form our cultural and physical heritage. This academic program is designed to help individuals reach their full potential as global citizens and lifelong learners.

Foothill general education requirements are described under Associate Degrees/Graduation Requirements on page 59. The Intersegmental General Education Transfer Curriculum (IGETC) for transfer from a community college to either the California State University or University of California system is listed on page 60. CSU General Education requirements are listed on page 61.

## Select a Major

Selecting a college major is an important step—one that establishes your career goals and determines where you should direct your academic efforts.

Majors within career and transfer programs are described within the following pages. The chart on pages 30–34 summarizes degrees and certificates available as of Fall Quarter 2010. Consult curriculum sheets located on the Web site and available in the Counseling Center, Room 8301, for the most current degree and certificate information. You can also consult with a Foothill counselor to develop a strategy for selecting your college major. To schedule a consultation, call (650) 949-7423.

## Certificate Programs

Foothill offers the following types of certificate programs:

- Career Certificate
- Certificate of Achievement
- Certificate of Completion
- Certificate of Proficiency
- Certificate of Specialization
- Skills Certificate
- Other division certificates

For information about certificates, contact the division office for unit requirements, course sequences and major requirements. Foothill awards these certificates when you satisfactorily complete certain specialized programs requiring fewer than two years of full-time study. Some certificate programs comprise (1) a complete curriculum pattern or (2) major and related courses selected from an Associate in Arts or Associate in Science degree curriculum at the recommendation of an advisory committee.

The following state requirements apply to Certificate of Achievement programs:

- A minimum of 27 units that follow a prescribed course pattern;
- A minimum GPA of 2.0 for these units;
- A maximum of 12 transfer quarter units from other institutions of higher education; and
- Proficiency in mathematics and English as evidenced by examinations or completion of college courses.

Certain Foothill College departments also offer certificates of completion, proficiency, specialization, career and skills. These certificates will not appear on the student's transcript. General requirements include the prescribed coursework and a GPA of at least 2.0 in these courses.



More information on specific requirements is available in the division office offering the certificate or from a Foothill counselor.

## Two-Year Career Programs

### Associate in Arts & Associate in Science Degrees

Most professional and technical programs require two academic years of full-time enrollment and a minimum of 90 units of credit. All two-year programs lead to an Associate in Arts or Associate in Science degree. Although these programs are intended primarily to develop personal and technical competencies for employment, many four-year colleges accept the units earned in the two-year curriculum for certain lower-division requirements. We strongly recommend that you consult with a Foothill counselor to discuss degree and transfer requirements. To schedule a consultation, call (650) 949-7423.

### Curriculum Advisory Committees

At Foothill, we strive to ensure that our career education curriculum meets the needs of business, industry and government. This is why we invite a number of occupational leaders to advise us on:

- new courses and course content;
- facilities and equipment;
- nature and extent of employment needs;
- how to evaluate the appropriateness of contents of existing courses; and
- how to evaluate student performance.

We constantly implement the recommendations of more than 30 occupational advisory committees. A campus advisory committee for vocational education also meets periodically to review and make recommendations for career education. For information on specific courses, consult your counselor or review the program's curriculum sheet online at [www.foothill.edu](http://www.foothill.edu).

## Apprenticeship Programs

Call the numbers listed for more information about apprenticeship programs.

- **ELECTRICIAN/RESIDENTIAL ELECTRICIAN:** San Jose, (408) 453-1022; San Francisco, (415) 587-2500
- **ELEVATOR CONSTRUCTION:** San Francisco, (415) 285-2900
- **IRONWORKING:** Fresno, (559) 497-1295
- **PLUMBING/PIPEFITTING:** Monterey, (831) 633-6312; Sacramento, (916) 383-1102; San Jose, (408) 453-6330
- **REFRIGERATION/HEATING & AIR CONDITIONING:** San Jose, (408) 453-6330; Sacramento, (916) 383-1102
- **SHEET METAL:** Castroville, (831) 633-6151; Petaluma, (707) 762-0181; San Francisco, (415) 431-1676; San Jose, (408) 263-1712; San Leandro, (510) 483-9035; San Mateo, (650) 652-9672
- **SOUND & COMMUNICATION:** San Jose, (408) 453-3101; San Francisco, (415) 431-5853.

## Grade Requirements for Specified Career Program Courses

A grade of C or better in certain career courses is required before you can enroll in the next program course:

- Biotechnology
- CTIS Division Majors
- Dental Assisting
- Dental Hygiene
- Diagnostic Medical Sonography
- Paramedic
- Pharmacy Technician
- Primary Care Associate
- Radiologic Technology
- Respiratory Therapy
- Veterinary Technology

## Professional & Technical Programs Leading to a Career Upon Completion

- Accounting
- Adaptive Fitness Therapy
- Business Technology
- Child Development
- Computer Software Development
- Database & Management
- Dental Assisting
- Dental Hygiene
- Diagnostic Medical Sonography
- Enterprise Networking
- Environmental Horticulture & Design
- Geographic Information Systems
- Graphics & Interactive Design
- Help Desk/Tech Support
- Informatics
- Interactive & Multimedia Technologies
- Internet Technology
- Music Technology
- Office Administration
- Nanotechnology
- Paramedic
- Pharmacy Technician
- Photography
- Primary Care Associate
- Radio Broadcasting
- Radiologic Technology
- Real Estate
- Respiratory Therapy
- Small Business Administration
- Special Education
- Theatre Technology
- Viticulture & Enology
- Veterinary Technology

## Degrees & Certificates Offered at Foothill College

Curriculum sheets describing general education and career training courses required for these programs are located in the Counseling Center in Room 8301 and online at [www.foothill.edu](http://www.foothill.edu). The *Schedule of Classes* lists each program alphabetically, the courses offered each quarter and the current contact phone number.

PROGRAM	COMPLETION AWARD
Accounting	AA, CA
Bookkeeping Specialist	CP
Enrolled Agent Preparation	CP
Financial Accounting	CCC
Payroll Preparation	CP
Tax Accounting	CCC
Tax Specialist	CP
Adaptive Aquatics	CCC
Adaptive Fitness Therapy	AA, CA
American Studies	AA
Anthropology	AA
Archaeology	CP
Cultural Anthropology	CP
Medical Anthropology	CP
Physical Anthropology	CP
Apprenticeship	CA, CS, CCC
Elevator Constructors	CCC
Pipe Trades	CCC
Sheetmetal	CA, CS, CCC
Sound & Communication	CCC
Art-General	AA, CA
Ceramics	CS
Painting	CS
Two-Dimensional Art	CS
Art History	AA, CA, CS
Art-Studio	AA, CA
Athletic Injury Care	AS
Biological Sciences	AS
Business Administration	AA
Basic Financial Literacy	CCC
Business Management	CCC
Dispute Resolution	CS
E-Commerce & Electronic Business	CCC
Entrepreneurship	CCC
Marketing	CCC
Small Business	CCC

### LEGEND

- AA** Complete this program in approximately two years and earn the Associate in Arts Degree. *See a counselor and refer to page 59 for requirements.*
- AS** Complete this program in approximately two years and earn the Associate in Science Degree. *See a counselor and refer to page 59 for requirements.*
- CA** Complete this program and earn the Certificate of Achievement. *See division office for requirements.*
- CC** Complete this program and earn the Certificate of Completion. Non-transcriptable. *See division office for requirements.*
- CCC** Complete this program and earn the Career Certificate. Non-transcriptable. *See division office for requirements.*
- CP** Complete this program and earn the Certificate of Proficiency. Non-transcriptable. *See division office for requirements.*
- CS** Complete this program and earn the Certificate of Specialization. Non-transcriptable. *See division office for requirements.*
- SC** Complete this program and earn the Skills Certificate. Non-transcriptable. *See division office for requirements.*

Review official curriculum sheets for career opportunities and course listings. Curriculum sheets are available in the division office, Counseling Center (Room 8301) and online at [www.foothill.edu](http://www.foothill.edu).



## Degrees & Certificates Offered at Foothill College

PROGRAM	COMPLETION AWARD
Business International Studies	AA, CA
International Business Strategy	CCC
Business Technology: Help Desk/Tech Support	AS, CA
A+ Preparation	SC
Level I	CCC
Level II	CA
Business Technology: Office Administration	AS, CA
Accounting/Spreadsheets	CA
Business Communication	SC
Database/SQL	CA
General Office	CA
Internet/Electronic Commerce	CA
Office Computing	CA
Word Processing/Desktop Publishing	CA
Chemistry	AS
Child Development	AA
Child Development Teacher	CA
Early Childhood Education	CA
Inclusion & Children with Special Needs	CS
Infant Toddler Development	CS
Program Supervision & Mentoring	CA
School-Age Child Care	CS
Chinese	AA, CS, CCC
Chinese Conversation	CS
Communication Studies	AA, CP, CS, CCC
Computer Science	AS
Computer Software Development	AS, CA
Linux/UNIX	SC
Linux/UNIX System Operation & Administration	CA
Microsoft Certified Application Developer #C	SC
Object-Oriented Software Using C++	CA
Object-Oriented Software Using Java	CCC
Creative Writing	AA
Fiction	CS
Genres	CS
Poetry	CS
Reading & Writing: Poetry	CS
Reading & Writing: Fiction	CS

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## Degrees & Certificates Offered at Foothill College

PROGRAM	COMPLETION AWARD
Database Management	AS
Microsoft Certified IT Professional (MCITP) Database Administration	SC
Open Source Database	CP
Oracle Database Administration	CA, SC
Oracle Database Developer	CA, SC
Dental Assisting	AS, CA
Dental Hygiene	AS
Diagnostic Medical Sonography	AS*, CA
Economics	AA
Emergency Medical Technician	CCC
Engineering	AS
English	AA
American Literature	CS
British Literature	CS
Linguistics	CS
Literary Genres	CS
Multicultural Literature	CS
Written Communication	CS
Enterprise Networking	AS
MCITP Server Administrator	CP
MCIPT Enterprise Administrator	CP
Network Security	CP
Cisco Academy CCNA	CP
Cisco Academy CCNP	CP
Wireless Networking	CP
Microsoft Certified Desktop Support Technician	CP
Environmental Horticulture & Design	AS, CA, SC
General Electrician	AS, CCC
General Studies: Humanities	AA
General Studies: Science	AS
General Studies: Social Science	AA
Geography	AA
Geographic Information Systems	CA, CCC
Gerontology	CCC
Graphic & Interactive Design	AA, CA
Book Arts	SC
Garment Printing	SC
Graphic Design	SC
Illustration	SC

\* Pending state approval.

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## Degrees & Certificates Offered at Foothill College

PROGRAM	COMPLETION AWARD
Motion Graphics	SC
Printmaking	SC
Software	SC
Video Design	SC
Web Design	SC
History	AA
Informatics	AS, CA, SC
Interactive & Multimedia Technologies	AS, CA, SC
Web-Based Multimedia	SC
Internet Technology	AS, CA
AJAX	CP
Web-Based Multimedia	SC
Web Publishing: Dreamweaver	CP
Web Development	CP, SC
Electronic Business	SC
Japanese	AA, CCC
Japanese Conversation & Culture	CS
Japanese Tutoring	CCC
Law & Society (Pre-Law)	AA
Leadership & Service	CP
Mathematics	AS
Music General	AA
Music Technology	AA, CA
Pro Tools	CA
Nanoscience	AS, CA
Characterization & Modeling	CP
Nanobiotechnology	CP
Nanofabrication	CP
Non-Credit Geriatric Home Aide	CC
Non-Credit Job Readiness	CC
Non-Credit Mathematical Foundations	CC
Paramedic	AS, CA
Pharmacy Technician	AS, CA
Philosophy	AA
Photography	AA, CA
Digital Imaging	CA
Photo Criticism	SC
Photographic Laboratory Technician	SC
Traditional Photography	CA
Physical Education	AA
Physics	AS

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## Degrees & Certificates Offered at Foothill College

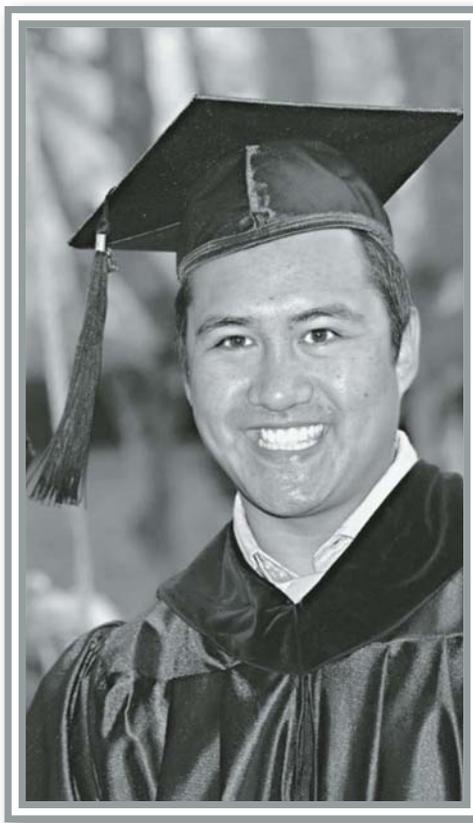
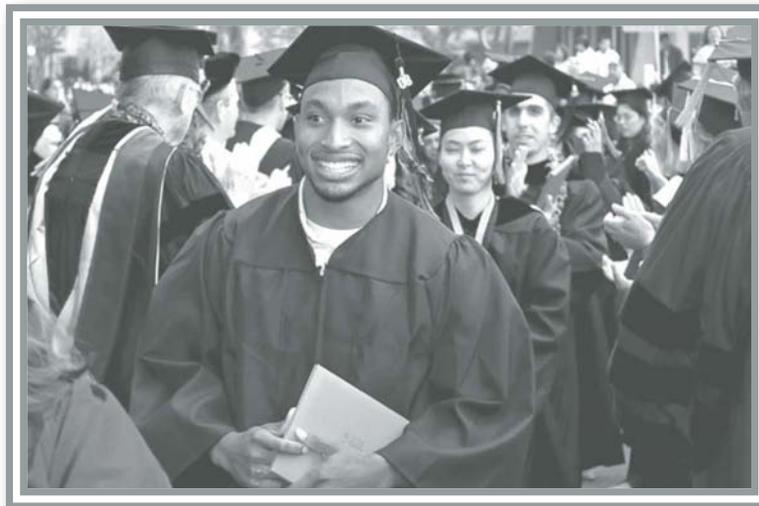
PROGRAM	COMPLETION AWARD
Political Science	AA
Popular Culture	CP
Primary Care Associate	AS, CA
Psychology	AA
Radio Broadcasting	AA, CA, SC
Broadcast Business Sales	SC
Radiologic Technology	AS
Real Estate	AA, CA
Real Estate Salesperson	CCC
Respiratory Therapy	AS
Sociology	AA, CS
Social Welfare	CS
Spanish	AA, CS, CCC
Spanish Conversation	CP
Special Education	AA
Special Education Paraprofessional	CA
Theatre Arts	AA
Theatre Conservatory	CP
Theatre Technology	AA, CA, CCC
Transfer Studies-CSU GE	CA
Transfer Studies-IGETC	CA
Veterinary Technology	AS
Online Veterinary Assisting	CCC
Viticulture & Enology	AS*, CA*
Vineyard Management	CA
Winemaking	CA
Women's Studies	AA

\* Pending state approval.

### LEGEND

- AA** Complete this program in approximately two years and earn the Associate in Arts Degree. *See a counselor and refer to page 59 for requirements.*
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- CC** Complete this program and earn the Certificate of Completion. Non-transcriptable. *See division office for requirements.*
- CCC** Complete this program and earn the Career Certificate. Non-transcriptable. *See division office for requirements.*
- CP** Complete this program and earn the Certificate of Proficiency. Non-transcriptable. *See division office for requirements.*
- CS** Complete this program and earn the Certificate of Specialization. Non-transcriptable. *See division office for requirements.*
- SC** Complete this program and earn the Skills Certificate. Non-transcriptable. *See division office for requirements.*

Review official curriculum sheets for career opportunities and course listings. Curriculum sheets are available in the division office, Counseling Center (Room 8301) and online at [www.foothill.edu](http://www.foothill.edu).



“When I first came to the U.S., I felt that my chances of getting into an Ivy League school were small. Foothill College gave me the hope and strength to reach my dream, and earn a degree from Harvard University.”

*A native of Indonesia, Adrian Rahardja attended Foothill College and participated in its popular International Students Program. He earned the Foothill associate degree and transferred to Harvard and completed a master’s degree.*

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# Academic Policies

## Revision of College Policies

Any policy adopted by the college administration shall supersede any ruling on the same subject that appears in this catalog or in other official publications once the revised regulation is posted on a campus bulletin board or printed in the *Schedule of Classes*.

## Admission & Enrollment Policies

### Academic Prerequisites, Credit & Placement

Many courses require that you complete prerequisites in order to enroll. These prerequisites are listed under each course description in this catalog and the *Schedule of Classes*.

All courses listed with a prerequisite have a registration block. If you have completed a course to fulfill the prerequisite requirement at another college, you must first provide a transcript and consult with a Foothill College counselor. To schedule a consultation, call (650) 949-7423.

Before registering, you must call the Matriculation Office at (650) 949-7512 to verify you have satisfied necessary prerequisites for *CHEM 1A, 1B, 25, 30A; ENGL 1A, 110; ESLL 25, 26, 226, 227, 236, 237; MATH 1A, 10, 49, 51, 101, 102, 103, 105* and 200 courses.

It is important that you call the Matriculation Office before you enroll. If you delay calling for prerequisite verification, there may not be sufficient time before registration to clear you for the class in which you want to enroll. The college has the authority to drop you from any course if you have not met the necessary prerequisites. For refund policies, contact the Admissions & Records Office in Room 8101.

If you submit written or performance evidence showing you have sufficient competence in the area of study due to previous training or experience, you may be able to enroll in a course without completing the listed prerequisites. You can only do this, however, if your counselor, instructor or division dean provides authorization.

### Admission Guidelines

Foothill has an open-door admission policy for all high-school graduates and non-graduates who are 18 years of age or older. Students enrolled in the junior and senior year of high school may attend Foothill College with written parental and school permission. Forms

for parental and school permission are available in the Admissions & Records Office (Room 8101), Middlefield Campus and at [www.foothill.edu](http://www.foothill.edu).

Special admission procedures such as additional testing, application forms and counseling sessions are required for admission to a number of career programs. Some of these programs begin only in the Fall Quarter. You must complete all special admission requirements in the preceding Spring Quarter. Programs in this category include dental assisting, dental hygiene, primary care associate, radiation science, diagnostic medical sonography (ultrasound), radiologic technology, respiratory therapy and veterinary technology.

### Challenging Prerequisites

You may challenge prerequisites and corequisites if you can demonstrate that:

- You have the knowledge or ability to succeed in the course without the prerequisite or corequisite.
- You will be subject to undue delay in attaining your educational goal because the prerequisite or corequisite has not been made reasonably available.
- The prerequisite or corequisite is unlawfully discriminatory or is being applied in an unlawfully discriminatory manner.
- The prerequisite or corequisite has been established in an arbitrary manner.

To challenge a prerequisite, see your counselor and complete a *Prerequisite Challenge Petition* prior to the first day of the quarter. Advisories, when made, are listed as recommendations following prerequisites and are published in this catalog, *Schedule of Classes* and at [www.foothill.edu](http://www.foothill.edu). To schedule a counseling appointment, call (650) 949-7423.

### Open Course Policy

It is the policy of the Foothill-De Anza Community College District that, unless specifically exempted by statute or regulation, every course, course section or class reported for state aid, wherever offered and maintained by the district, shall be fully open to enrollment and participation by any person who has been admitted to the college and who meets such prerequisites as may be established pursuant to regulations contained in California Administrative Code Title V commencing with Section 55200.

## Enrolled Student Classifications

You are a matriculated student if you have filed an *Application for Admission*, enrolled at Foothill and have done **one** of the following:

- Submitted high school and other transcripts;
- Met with a Foothill College counselor, counseling associate or career advisor to examine educational opportunities;
- Announced an intention to study for a degree or certificate;
- Begun a series of introductory, general education or special courses; or
- Begun a series of special courses leading to a certificate or degree.

## Exceptions to Admissions & Registration Policies

To request an exception to a published policy, you must file an exception petition. These forms are available in the Admissions & Records Office in Room 8101, at the Middlefield Campus Administration Building and online at [www.foothill.edu](http://www.foothill.edu).

## General Program Requirements

All beginning freshmen must enroll in the *CNSL 50: Introduction to College* course, or demonstrate proof that they have completed an equivalent course. If you are eligible for *ENGL 1A*, you should complete this course by the end of the third quarter of enrollment; you may take a speech course first. If you are eligible for *ENGL 110* or *100*, you should complete these courses during the first or second quarter.

You may receive up to 10 quarter units of credit for each score of 5, 4 or 3 on College Entrance Board Advanced Placement Tests. Your Foothill transcript will show units but will not indicate grades. The Evaluation Office, located in the Counseling Center, Room 8301, provides information on how the advanced placement scores are marked on transcripts and the equivalencies for the University of California and California State University.

You may receive up to nine quarter units for each of five general CLEP tests completed with a score of at least 500. Your Foothill transcript will show elective unit credit for each successful test score. These units may also be used to fulfill certain general education requirements.

If you want to transfer credit from an armed services school or other special institution, you may apply through a counselor. It's possible these credits will be accepted toward the Associate in Arts or Associate in Science degree once you have successfully completed a minimum of 15 units at Foothill.

## General Registration Information

If you are a new or former student, you must submit the *Application for Admission* by the quarterly deadline published in the *Schedule of Classes* and at [www.foothill.edu](http://www.foothill.edu). We encourage you to complete the application, complete the placement testing process and submit necessary transcripts as early as possible.

Students planning to transfer to Foothill are advised to submit transcripts from high schools and colleges previously attended.

If you plan to receive veterans benefits, apply for financial aid or earn a degree or certificate, you must submit transcripts. Request previous institutions to send your transcripts directly to the Foothill College Admissions & Records Office, 12345 El Monte Road, Los Altos Hills, CA, 94022-4599.

International students on F-1 visas must follow specific admissions requirements. For more information, review [www.foothill.edu/international](http://www.foothill.edu/international).

To register for Foothill College classes, follow the online registration instructions published in the *Schedule of Classes* and on the college website at [www.foothill.edu](http://www.foothill.edu). The *Schedule of Classes* for the current academic year is posted online. Online information is subject to change. We encourage you to review the website frequently. For more information, call the Admissions & Records Office at (650) 949-7325.

## Residency Requirements

Foothill College generally serves the communities of Palo Alto, Mountain View, Los Altos and Los Altos Hills, and our sister school, De Anza College, generally serves the cities of Cupertino and Sunnyvale. Both colleges, however, accept students from outside these cities.

If you are an out-of-state student, you are considered a non-resident until you have satisfied current California residency requirements. This rule applies to visa-holding, non-citizens eligible to establish residency. Non-resident tuition is required of all students in this category. The student who has had a change in residency, and was initially charged out-of-state fees in error, may request a refund within the academic year (prior to June 30) of the documented residency change.

If you are an international student with an F-1 visa, you are not eligible for California residency.

## Unit Limitation

An average class load is 15 units per quarter. The maximum number of allowable units per quarter without a counselor's approval is 20 units. If you intend to enroll in more than 20 units, you must obtain a counselor's approval and submit a petition to the Academic Council. The maximum number of allowable units for Summer Session is 12 units. High school juniors and seniors are limited to enroll in no more than six units for Summer Session. To complete the petition process, schedule a consultation with a Foothill counselor by calling (650) 949-7423.

## Academic Disqualification, Course Substitutions & Graduation Requirements

Make an appointment with your counselor to resolve problems such as disqualification and readmission, course substitutions, and exceptions to graduation requirements. To schedule an appointment, visit Counseling Appointments in the Counseling Center, Room 8301, or call (650) 949-7423.

## Disqualification

You may be dismissed from Foothill College if you are on probation for three consecutive quarters. If you are disqualified, you will receive notice of dismissal by mail the following quarter. Dismissal will be reviewed by the Academic Council at your request. You may be readmitted after a one-quarter absence (excluding Summer Session). Consult with a Foothill counselor for readmission policies and procedures.

## Academic In-Class Issues

If you have academic complaints, including treatment in a course or program, you should seek to resolve the problem by speaking with these people, in this order:

1. Course instructor;
2. Division dean (make an appointment through the division administrative assistant);
3. Division dean's supervisor;
4. Vice president, Student Development & Instruction; Room 8104 (Room 1029 after 9/1/10); (650) 949-7228.

## Academic Regulations

The Academic Council is responsible for academic regulation evaluation, enforcement, interpretation and exceptions. You can obtain petitions from the Evaluations Office in the Counseling Center, Room 8301, or call (650) 949-7231.

## Academic Renewal

The academic renewal process permits students the opportunity to request the exclusion of entire quarters of coursework from the Foothill College grade point average up to a maximum of 45 units. Eligibility for academic renewal requires that you meet specific criteria. Consult your counselor for more information.

## Add/Drop Date

You are responsible for initiating the drop process and for notifying both the instructor and Admissions & Records Office.

The last day to add classes without petitioning is the end of the second week of instruction. The last day to drop a class without a **W** grade is the end of the fourth week of the quarter for Fall, Winter and Spring quarters. Between the fifth and eighth weeks, all drops will receive a **W** grade. You cannot drop after the eighth week. You may receive no more than four **W** marks in any one course. For Summer Session class drop dates, consult the current *Schedule of Classes* or online college calendar at [www.foothill.edu](http://www.foothill.edu).

## Probation

There are two types of probation: academic and progress probation.

- Academic probation occurs when your grade point average is below 2.0.
- Progress probation occurs when after attempting 12 units, at least half of the units received are **W** (withdrawal), **I** (incomplete) or **NP** (no pass).

Correcting these situations will result in removal from probation. If you're placed on probation, you must consult a counselor for academic and procedural advice. You will be notified of probation by mail the following quarter.

## Assignments & Examinations Regulations

As a Foothill student, you're expected to do your own work on examinations and course assignments. Each instructor will enforce certain regulations to ensure honesty. If you violate these regulations, you will be dropped from the class, and the circumstances may be entered in your permanent record. Further difficulty in this respect may result in disqualification from Foothill College. See page 43 of this catalog and/or obtain the *Honor Code Booklet*, available from the Student Affairs & Activities Office, Room 2002.

## Attendance

Regular and punctual attendance is an integral part of the learning process. As a Foothill student, you are expected to attend all scheduled classes in which you are enrolled. An instructor has the authority to drop a student who

violates written attendance policies. Instructors are not obligated to hold seats for students who are enrolled but do not attend the first class meeting.

### Audit Request Procedures

A number of Foothill classes are available for audit. To be eligible, you must have already taken and completed the class at Foothill the number of times permitted, and received a grade of **C** or better. Audit requests must have the signature of the instructor before you submit the request to the Admissions & Records Office. Auditors are admitted on a space-available basis.

The audit fee is \$10 per unit. If you're currently enrolled in 10 or more units, fees for the first three audit units are waived. Approved audit requests will be accepted beginning the second week of class.

### Cancellation of Classes

Classes may be canceled when enrollments are lower than planned. Foothill College has the authority to change or cancel courses and programs as circumstances require.

### Class Preparation/Progress

After prior notification, an instructor may drop students who demonstrate insufficient preparation/prerequisites. In addition, any instructor may drop students who persistently neglect class assignments or demonstrate inadequate progress.



### Class Size & Frequency

Minimum class-size guidelines apply to all lecture, lecture/lab and laboratory classes at Foothill. While a minimum class size is generally required, special circumstances may necessitate continuing a class that does not meet these guidelines.

Exceptions are based on program needs such as second-quarter, third-quarter or second-year sequential courses; courses required for an identified major or career; combined courses meeting at the same hour with the same instructor; and one-of-a-kind offerings needed for graduation or transfer. Exceptions may also be based on the following:

- Limited classroom or laboratory facilities; or
- Statutory and state regulations mandating class size, independent study, special projects and cooperative education.

Other circumstances that warrant exception are made by the Educational Resources & Instruction Office.

### Course Repetition

Unless exceptions are specifically indicated in course descriptions in this catalog, you cannot repeat a course that you completed with a grade of **C** or better. State law allows students to repeat a class only once to remove a substandard grade (**D**, **F** or **NP**). There is no limit on the number of times the student may enroll in courses designed to meet a legally mandated training requirement as a condition of continued paid or volunteer employment. You may receive no more than four **W** marks in any one course.

Some Foothill College programs require that the student complete a sequential program of study without a break in attendance. When a student is enrolled in one of these programs and has a break in enrollment, he/she will be required to re-take coursework that has previously been completed with a passing grade.

### Credit by Examination (Challenge)

As an enrolled Foothill student, you may be able to obtain credit by examination in subject matters or fields for which you are especially qualified through training or experience, but for which you have not received credit or advanced placement. Unit credits for courses successfully challenged will not be awarded until you have successfully completed 15 units of additional work at Foothill.

You can only challenge courses recommended by the division and approved by the dean. There are special limitations for challenging foreign language courses, courses that depend on laboratory or activity experiences, or courses in a sequence. You may not challenge a course at a lower level than one you have successfully completed in the same department.

The examination may include written, oral or skill tests, or a combination of all three. It will determine whether you have essentially the same knowledge and skills as students who successfully complete the course. You are not permitted to obtain credit by examination unless you are enrolled in the course and the instructor has fully informed you about the requirements for successful completion. The grade you receive on the exam will be entered on your permanent record.

No course may be challenged after the class has met for two weeks, or during Summer Session. If you have failed a course, you cannot receive credit by examination in that course. Units of credit received through this procedure may not apply toward the minimum of 24 resident units required at Foothill for the Associate in Arts or Associate in Science degrees. A maximum of 20 units of credit may be earned by examination.

Although the University of California and California State University systems accept, within certain limitations, appropriate credits obtained by examination, Foothill College cannot guarantee that other institutions will do so.

You can obtain petitions for credit from your counselor during the first week of classes. The examination will normally be completed by the end of the second week. Units earned under credit by examination will be identified on your transcript.

### Transfer Credit from Another Institution

Foothill College accepts credit for lower-division coursework previously completed at a college accredited by one of the six regional accrediting associations. Students must have official transcripts sent to the Foothill College Admissions & Records Office. To be official, transcripts must be sent from college to college or hand-delivered in a sealed, unopened college envelope.

**FOREIGN COLLEGES:** Students who want to use coursework completed at foreign institution must have their transcripts evaluated by a foreign evaluation service. Students should meet with their counselors to petition to use any of this coursework toward the associate degree. Coursework from a foreign institution cannot be used for certification to a four-year institution. Students should contact the school to which they want to transfer to determine if any credit will be awarded from the foreign institution.

**NON-REGIONALLY ACCREDITED COLLEGES:** Students may petition for individual courses taken at a non-regionally accredited college to be accepted for major requirements. The credit is non-transferable toward a bachelor's degree. Students must have official transcripts sent to the Foothill

College Admissions & Records Office. To be official, transcripts must be sent from college to college or hand-delivered in a sealed, unopened college envelope.

### Final Examinations

Foothill gives final examinations in all courses except physical education, *CNSL 50*, cooperative education and tutoring courses. We make special arrangements for self-paced courses and classes that only meet once a week. Final examinations normally will not be given in advance of the scheduled time.

You are responsible for taking all assigned final examinations. Failure to take the final examination results in an **F** grade. If you miss a final examination for a legitimate reason, communicate with your instructor immediately.

At Foothill, we strive to minimize student activities during the week before final examinations. However, classes and instruction continue as usual. During this period, instructors may assign coursework or have students complete part of the final examination.

### Course Grading Categories

Foothill offers course grades in these five categories:

1. Courses in which all students are graded on a 4.0 scale of **A, B, C, D, F**.
2. Courses in which all students are graded on a Pass/No Pass (**P/NP**) basis.
3. You who enroll in a class as a Pass/No Pass option instead of a letter grade must submit a *Pass/No Pass Card* signed by the student within the first four weeks of the quarter. The form must be submitted to the Admissions Office.
  - a. You may choose to apply to the associate degree no more than 16 units of **P**-graded courses from this category. Students transferring to a four-year school should consult with a counselor.
  - b. in your major must be taken for a letter grade.
4. No grades are recorded for non-credit courses with course numbers ranging from 400–499.
5. In calculating the student's degree-applicable grade point average, grades earned in non-degree-applicable courses shall not be included. Courses that are non-degree-applicable are noted in both the *Schedule of Classes* and *Course Catalog*.

## Grading Scale

Grade definitions are as follows:

Evaluative Symbols	Grade Points
A+*	Excellent 4.0; see note below
A	Excellent 4.0
A-	Excellent 3.7
B+	Good 3.3
B	Good 3.0
B-	Good 2.7
C+	Satisfactory 2.3
C	Satisfactory 2.0
C-**	See note below
D+	Passing, less than satisfactory 1.3
D	Passing, less than satisfactory 1.0
D-	Passing, less than satisfactory 0.7
F	Failing 0.0
P	Pass (at least satisfactory; units awarded not counted in GPA).
NP	No Pass (less than satisfactory, or failing; units not counted in GPA). Not attaining course objectives.

P and NP are assigned to those courses in which student achievement is evaluated on a pass/no pass basis rather than a letter grade (A, B, C, etc.). Pass/No Pass courses are so designated in the announcement of courses section of the catalog.

\*In the plus/minus grading system, the A+ grade is calculated the same as the A grade.

\*\*In the plus/minus grading system, the C- grade is not permitted under Title V law.

## Incomplete

For a justifiable, approved reason (serious illness, emergency, etc.), you may ask your instructor for more time to complete coursework. After the end of the eighth week and before the end of the quarter, you must request that the instructor assign a grade of Incomplete (I). The instructor files an *Incomplete Contract* that explains the reason and precisely outlines the work due, procedure required, and due date for you to complete the work. You should sign and keep a copy of the contract.

We do not assign an incomplete because a student is slow or negligent in submitting required work. If you meet the course requirements within one calendar year, the I grade may be changed; otherwise it may be listed as F.

## Withdraw from College

To withdraw from college after the eighth week, you must consult with a counselor and petition the Academic Council to obtain an approved dismissal. This is for your protection, since you may receive an F in all classes after

the eighth week if you do not follow these guidelines. The petition must have the instructor's approval signature for each class.

## Transcripts

The Admissions & Records Office forwards transcripts at your request. Transcripts to educational institutions will be sent directly to those institutions. Transcripts given directly to you may be classified as unofficial.

Transcript costs and procedures for requesting transcripts are published at [www.foothill.edu](http://www.foothill.edu) and in the printed *Schedule of Classes*.

Foothill reserves the right to withhold transcripts from students under certain circumstances, such as defaulting on a loan, outstanding balance due on an account or until all obligations to the college are cleared.

## Transcript/Grade Changes

Section 76224 of the California State Education Code states, "The determination of the student's grade by the instructor shall be final in the absence of mistake, fraud, bad faith or incompetency." By law, instructors are the only people who can change grades.

If you believe corrections should be made within the above restriction, you should first talk to your instructor. Corrections must be initiated within two years after the grade was earned. If an error has been made, and a correction is necessary prior to the two-year period, you may request a review of the records at the Admissions & Records Office.

Grades received prior to 1983 may not be changed. Exceptions to this policy include a bona fide error in grading; and a course in which an unsatisfactory grade was given is repeated for a satisfactory grade.

## High School Credits at Foothill

Although Foothill College cannot grant a high school diploma, many local high schools recommend that students who are age 19 or older complete high school requirements by taking college courses. If you choose to earn a high school diploma this way, you should obtain a statement from your high school principal or counselor indicating:

- The subjects necessary to complete graduation requirements, and the number of quarter credits in each;
- Suggestions for Foothill courses to satisfy these requirements;
- The total number of quarter credits required, including electives; and
- Acceptance of credit for courses taken at Foothill.

When you complete the college courses, request that the Foothill College registrar send a college transcript to your high school. The diploma will be issued in accordance with your school's procedures.

All credit courses taken at Foothill count as college credit, whether or not they count toward high school requirements.

## Honors Institute

If you have strong academic motivation and demonstrated potential, Foothill offers honors courses. To qualify, you must satisfy a combination of prerequisites that include grade point average and English writing skills. For details and the program application, access [www.foothill.edu/hon](http://www.foothill.edu/hon).

The Honors Institute features courses and co-curricular activities that challenge you and help prepare you for transfer to four-year colleges and universities; registration priority to assure better access to desired classes; discussions and projects to stimulate intellectual development; complimentary tickets to cultural events; small seminars; transcript notation of honors scholar; recognition at commencement; scholarship opportunities; and other benefits. The Foothill Honors Institute is one of a select few programs at Northern California community colleges that is approved for the UCLA Preferred Admission Transfer Alliance Program. For more information, access [www.foothill.edu/hon](http://www.foothill.edu/hon) or call (650) 949-7638.

## Off-Campus Trips & Activities

Some programs require off-campus field trips and activities. Transportation is usually the responsibility of the individual student or a travel agency. The district is not liable for occurrences when participants are not under a faculty or staff member's direct, scheduled supervision.

## Open-Entry/Open-Exit Classes

Foothill offers several open-entry/open-exit courses, allowing you to work at your own pace. You may generally enroll in these courses at any time, through the end of the seventh week of the quarter. Many of these courses are offered in the off-campus centers, ISC, Fine Arts and Language Arts laboratories and PSME Center. Lists of courses with unusual start times are available in these facilities and in the *Schedule of Classes*.

Independent/flexible study classes and cooperative work study classes are not open-entry/open-exit classes. You must enroll in these classes by the end of the second week of instruction.

## Scholastic Honors

Foothill commends students who earn the associate degree, complete a minimum of 24 Foothill units and meet the following criteria by awarding:

- **HIGHEST HONORS:** 4.0 GPA in all Foothill College coursework.
- **HIGH HONORS:** at least 3.5 GPA in all Foothill College coursework.
- **HONORS:** at least 3.3 GPA in all Foothill College coursework.

Additional scholastic honors are awarded to eligible students on the following basis:

- **DEAN'S LIST:** Awarded on a quarterly basis to full-time students completing 12 or more Foothill units in one quarter with at least a 3.5 GPA; and part-time students completing a minimum of 12 cumulative units at Foothill College with an overall and quarter Foothill GPA of at least 3.5.
- **PRESIDENT'S MEDAL:** Awarded at the annual commencement ceremony to first-time degree recipients with a 4.0 GPA in all college coursework applicable toward the associate degree, including 60 resident units at Foothill College. To qualify for this award, the student must petition for graduation by May 1, and must attend the commencement ceremony in June.

## Student Access to Education Records

The Family Education Rights & Privacy Act, also called FERPA (Section 438, Public Law 93380), requires educational institutions to provide student access to official education records directly related to the student. The act also says you have the right to challenge such records on the grounds that they are inaccurate, misleading or otherwise inappropriate.

Your written consent is required before the college will release personal information from your records to other than a specified list of persons and agencies. These rights extend to present and former Foothill students.

- Education records generally include documents related to admissions, enrollment in classes, grades and related academic information. These records are filed in the Admissions & Records Office.
- The registrar is the college's designated records officer.
- Personal education records will be made available for inspection and review during normal business hours to currently and formerly enrolled students, within 45 days following completion and filing of a written request with the records officer.

- The college may release certain types of directory information unless you notify the records officer that certain or all information cannot be released without personal consent. Directory information may include (1) student name and city of residence, (2) date and place of birth, (3) participation in recognized activities and sports, (4) dates of attendance, (5) degrees and awards received, and (6) the most recent previous educational agency or institution attended, and (7) height and weight of members of athletic teams, which may be released only by the appropriate athletic staff member or athletic director. Objection to the release of this information must be made in writing to the Admissions & Records Office prior to the first day of instruction of any quarter or Summer Session.

## College & District Policies

### Academic Honor Code

As a student at Foothill College, you join a community of scholars who are committed to excellence in the teaching and learning process.

We assume that students will pursue their studies with integrity and honesty; however, all students should know that incidents of academic dishonesty are taken very seriously.

When students are caught cheating or plagiarizing, a process is begun that may result in severe consequences.

It is vitally important to your academic success that you know what constitutes academic dishonesty at Foothill College.

### What Is Academic Dishonesty?

The two most common kinds of academic dishonesty are *cheating* and *plagiarism*.

- Cheating is the act of obtaining or attempting to obtain credit for academic work through the use of dishonest, deceptive or fraudulent means.
- Plagiarism is representing the work of someone else as your own and submitting it for any purpose.

It is your responsibility to know what constitutes academic dishonesty. Interpretations of academic dishonesty may differ among individuals and groups. However, as a student at Foothill, you are expected to refrain from the behavior outlined herein. If you are unclear about a specific situation, speak to your instructor.

The following list exemplifies some of the activities defined as academic dishonesty:

### Cheating

1. Copying, in part or in whole, from someone else's test;
2. Submitting work presented previously in another course, if contrary to the rules of either course;
3. Altering or interfering with grading;
4. Using or consulting, during an examination, any sources, consulting others, use of electronic equipment, including cell phones and PDAs, or use of materials not authorized by the instructor; or
5. Committing other acts that defraud or misrepresent.

### Plagiarism

1. Incorporating the ideas, words, sentences, paragraphs or parts of another person's writings, without giving appropriate credit, and representing the product as your own;
2. Representing another's artistic or scholarly works such as musical compositions, computer programs, photographs, paintings, drawings or sculptures as your own;
3. Submitting a paper purchased from a research or term paper service, including the Internet; or
4. Undocumented Web source usage.

### Other Specific Examples of Academic Dishonesty

1. Purposely allowing another student to copy from your paper during a test;
2. Giving your homework, term paper or other academic work to another student to plagiarize;
3. Having another person submit any work in your name;
4. Lying to an instructor or college official to improve your grade;
5. Altering a graded work after it has been returned, then submitting the work for re-grading;
6. Stealing tests;
7. Forging signatures on drop/add cards or other college documents; or
8. Collaboration without permission of instructor.

### Consequences of Academic Dishonesty

Academic and/or administrative sanctions may be applied in cases of academic dishonesty.

#### Academic consequences may include:

1. Receive a failing grade on the test, paper or exam;
2. Have your course grade lowered;
3. Receive a grade of **F** in the course;

#### Administrative consequences may include:

1. Be placed on disciplinary probation;
2. Be placed on disciplinary suspension; or
3. Be expelled.

The Student Affairs & Activities Office maintains a record of students who have engaged in academic dishonesty. This information is used to identify and discipline students reported for academic dishonesty more than once. A copy of the *Foothill College Student Conduct, Discipline & Due Process Procedure* is printed in the handbook for each of these groups, and copies are available in the Student Affairs & Activities Office in Room 2002. We thank the San Jose State University Student Affairs Vice President's Office for many of the statements in this section. The Foothill College Academic Honor Code was developed and approved by the college's Academic Senate in 2004.

### **Americans With Disabilities Act (ADA)**

The Foothill-De Anza Community College District Board of Trustees uphold that, for persons with disabilities, improving the access to educational and employment opportunities must be a priority. The board directs the Foothill College administration to take the necessary actions to implement the requirements of the Americans with Disabilities Act (ADA) and Section 504 of the Rehabilitation Act.

The Foothill-De Anza Community College District shall not discriminate against a qualified individual with a disability because of the disability with regard to employment or with regard to the provision of district programs, services and activities.

A person who is otherwise qualified may request accommodation related to his/her disability, provided that accommodation does not impose an undue hardship on the district.

To receive a copy of Foothill College disability access information and procedures for requesting accommodations, call Margo Dobbins, Foothill College Disability Resource Center (DRC) coordinator at **(650) 949-7332**, voice; **(650) 948-6025**, TDD. Disability access information is also available in the DRC, located in Room 5801; or in the Foothill College President's Office in the Administration Building.

To appeal a DRC accommodation decision, schedule a meeting with Vice President of Student Development & Instruction Rose Myers, who is the institution's designated ADA/504 coordinator, by visiting Room 8104 (Room 1920 after 9/1/10) or calling **(650) 949-7228**.

### **Non-Discrimination Policy**

Foothill does not discriminate against any person in the provision of any program or service based on race, color, national or ethnic origin, age, gender, religion, sexual orientation, marital status or physical/mental disability.

Complaints of discrimination filed by an employee of the district against another employee or student, or a student against an employee of the district shall

be referred and handled pursuant to the district *Administrative Procedures: Resolve Complaints-Harassment & Discrimination (AP 4640)*. Such complaints should be directed to Foothill's dean of Student Affairs & Activities, located in Room 2002; or call **(650) 949-7241** to schedule an appointment.

Complaints of discrimination filed by a student against another student, or student against the criteria of a program, shall also be referred and handled pursuant to the district *Administrative Procedures: Resolve Complaints-Harassment & Discrimination (AP 4640)*. Such complaints should be directed to Foothill's dean of Student Affairs & Activities, located in Room 2002; or call **(650) 949-7241** to schedule an appointment.

To report discrimination on the basis of disability, schedule a meeting with Vice President of Student Development & Instruction Rose Myers, the institution's ADA/504 coordinator, by visiting Room 8104 (Room 1920 after 9/1/10) or calling **(650) 949-7228**.

### **Limited English Skills Policy**

Prospective students are advised that a lack of English language skills will not be a barrier to admission to, or participation in vocational education programs at Foothill College as long as other, if any, program admission standards are met.

This notice is a requirement of the *Guidelines for Eliminating Discrimination & Denial of Services on the Basis of Race, Color, National Origin, Sex & Handicap (Federal Register; Vol. 44, No 56)*.

### **Reglamento sobre Limitaciones en el Idioma Inglés**

Se le aconseja a posibles estudiantes que la carencia del idioma Inglés no será una barrera para la admisión, o participación en programas de educación vocacional en Foothill College, siempre y cuando todos los otros, si existieran, criterios de admisión del programa sean completados.

Esta nota es un requisito de la *Guía para la Eliminación de la Discriminación y Rechazo de Servicios en Base a la Raza, Color, Nacionalidad de Origen, Sexo e Impedimento (Registro Federal; Vol. 44, No. 56)*.

### **Reglamento de la No-Discriminación**

Foothill College no discrimina en contra de ninguna persona en la prohibición de algún programa o servicio basado en la raza, color, nacionalidad u origen étnico, edad, sexo, religión, orientación sexual, estado civil, o impedimento físico or mental.

## Sexual Harassment Protection Policy

Members of a college community—students, faculty, staff and visitors—must be able to study and work in an atmosphere of mutual respect and trust. It is the policy of the Foothill-De Anza Community College District to provide an educational, employment and business environment free of unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct or communications constituting sexual harassment, as defined and otherwise prohibited by federal and state law.

Sexual harassment may include, but is not limited to:

- Conduct of a sexual nature that is explicitly or implicitly made a term or condition of an individual's employment or education;
- A decision based on the submission to or rejection of a sexual advance; or
- Verbal or physical conduct of a sexual nature that interferes with an individual's performance or creates an intimidating work or educational environment.

Immediate action shall be taken against individuals determined to be in violation of this policy. Any individual who believes that he or she has been a victim of sexual harassment may file a complaint within one year of the date on which the complainant knew or should have known of the facts of the sexual harassment incident.

Complaints of sexual harassment filed by an employee of the district against another employee or student, or a student against an employee of the district, shall be referred and handled pursuant to the district's *Administrative Procedures: Resolve Complaints-Harassment & Discrimination (AP 4640)*. Such complaints should be directed to Vice President of Student Development & Instruction Rose Myers in Room 8104 (Room 1920 after 9/1/10), or call (650) 949-7228.

Complaints of sexual harassment filed by a student against another student, or student against the criteria of a program, shall be referred and handled pursuant to the district's *Procedures to Resolve Student Complaints of Sexual Harassment & Discrimination*. Such complaints should be directed to Vice President of Student Development & Instruction Rose Myers in Room 8104 (Room 1920 after 9/1/10), or call (650) 949-7228.

## Title IX Procedural Requirements

Title IX is a comprehensive federal law that prohibits discrimination on the basis of sex in any federally funded education program or activity. In addition to traditional educational institutions, Title IX also applies to any education or training program operated by a recipient of federal financial assistance. Many of these education programs became subject to Title IX regulations in 2000. Foothill College has responsibilities to ensure that students and employees comply with the non-

discrimination mandate of Title IX and its procedural requirements. Foothill College has established a method for receiving and resolving sex-based discrimination complaints. At Foothill College, the vice president of Instruction & Institutional Research is the institution's designated Title IX coordinator. For information, call (650) 949-7209 or visit Room 1954.

## Mutual Respect Policy

Foothill College takes all steps necessary to provide a positive educational and employment environment that encourages equal educational opportunities. The college actively seeks to educate staff and students on the deleterious effects of expressions of hatred or contempt based on race, color, national or ethnic origin, age, gender, religion, sexual orientation, or physical or mental disability; and promotes equality and mutual respect among all groups and individuals. Standards of conduct for students and the applicable sanctions for violating the standards of student conduct are contained in the Academic Policies section in the *Course Catalog, Schedule of Classes* and *Student Handbook*. The handbook is available from the Student Activities Office, Room 2009.

Decisions regarding discipline of employees will be made in accordance with applicable legal and contractual provisions and procedures, and may range from reprimand to dismissal.

## Complaints & Grievance Process

Foothill College has an established procedure for grievances and complaints in order to provide a means for resolving alleged unfair or improper action by any member of the academic community. Procedures and forms are available on campus in the Student Affairs & Activities Office, located in Room 2002. A copy of the *Foothill-De Anza Community College District (FHDA) Board Policy & Administrative Procedures* is available for review from the FHDA District Human Resources Office as well as online at [www.fhda.edu/about\\_us/board/policy](http://www.fhda.edu/about_us/board/policy). For more information, visit the Student Affairs & Activities Office or call (650) 949-7241.

## Drug-Free Campus Policy

The unlawful possession, use or distribution of any illicit drug or alcohol by students on district property or at district activities or events is prohibited.

The use of drugs and alcohol may pose significant health risks. The Psychological Services and Health Services offices at Foothill College offer additional information on the risks associated with the use of drugs and alcohol. You can also receive referral information for drug or alcohol counseling, treatment and rehabilitation programs. For more information, call (650) 949-7243.

Employees and students may be suspended or expelled for the unlawful possession, use or distribution of illicit drugs or alcohol. Appropriate disciplinary action may also include requiring the completion of a rehabilitation program. The standards of conduct for students and the applicable sanctions for violating the standards are published in the *Foothill Student Handbook* and *Board Policy #4500*.

## No-Smoking Policy

To provide a safe learning and working environment for students and employees, smoking is prohibited in all indoor and outdoor campus locations, with the exception of designated parking lots. Smoking is prohibited in district vehicles.

This policy relies on the consideration and cooperation of smokers and non-smokers. It is the responsibility of all members of the district to observe and follow the guidelines. This policy shall be communicated to all employees annually and published in the colleges' *Schedule of Classes*, handbooks, websites, and other appropriate locations. (Santa Clara County Ordinance No. 625.4; City of Cupertino Ordinance No. 1647; Labor Code 6404.5; Approved 1/8/96; Amended 8/16/99, 12/2/02, 6/20/05)

The Foothill College Health Services Office provides a variety of smoking cessation aids. To learn more about these services, visit the Health Center in Room 2126 or call (650) 949-7243.

## Parking Citations & Traffic Violations

Parking tickets and traffic violations issued at Foothill College by district police are legal citations that cannot be canceled by the college administration. To make a payment or contest a parking citation, write to Parking Violations, P.O. Box 1113, San Jose, CA 95108-1113; or call (800) 818-1832. To make a payment or contest a citation for a traffic violation, write to the Palo Alto Superior Court, 270 Grant Avenue, Palo Alto, CA 94306-1911; or call (650) 324-0373.

## Police Conduct

Direct concerns about an individual officer first to the officer and then to the chief of police, located in Room 2103; or call (650) 949-7313.

## Student Grievance Procedures

So that you are fully aware of student rights and responsibilities, you should also review the *Foothill College Student Conduct & Due Process Booklet*. The administrative and board policies referred to in this section are also available online at [www.fhda.edu](http://www.fhda.edu). Printed versions of both booklets are available in the Student Affairs &

Activities Office in Room 2002 and the Foothill-De Anza Community College District Chancellor's Office located on the Foothill College campus.

## Purpose

The purpose of this procedure is to provide a prompt and equitable means of resolving student grievances. This procedure is for student grievances only. Faculty and staff with complaints regarding students should refer to *Administrative Procedure 5510: Student Code of Conduct* and *Administrative Procedure 5520: Student Due Process & Discipline*. The student grievance procedures shall be available to any student who reasonably believes a college decision or action has adversely affected his or her status, rights or privileges as a student. The procedures shall include grievances regarding:

- Course grades, to the extent permitted by Education Code Section 76224(a), which provides: "When grades are given for any course of instruction taught in a community college district, the grade given to each student shall be the grade determined by the instructor of the course and the determination of the student's grade by the instructor, in the absence of mistake, fraud, bad faith, or incompetence, shall be final."
- Act or threat of intimidation or harassment. These procedures do not apply to sexual harassment or illegal discrimination. Sexual harassment or complaints on the basis of race, color, national or ethnic origin, age, gender, sexual orientation, marital status, or physical or mental disability should be directed to the dean of Student Affairs & Activities at Foothill College, the dean of Student Development & EOPS at De Anza College or the Foothill-De Anza Community College District Human Resources Office.
- Act or threat of physical aggression.
- Arbitrary action or imposition of sanctions without proper regard to academic due process specified in the college procedures, unrelated to disciplinary actions.
- The exercise of rights of free expression protected by state and federal constitutions and Education Code Section 76120.

This procedure does not apply to:

- Student disciplinary actions, which are covered under separate board policies and administrative procedures. (See *Administrative Procedure 5520: Student Due Process & Discipline*.)
- Police citations (i.e. "tickets"). Complaints about citations must be directed to the Santa Clara County Superior Court Parking Violations Office in the same way as any traffic violation.
- Sexual harassment. Complaints of sexual harassment should be directed to the dean of Student Affairs & Activities at Foothill College or the dean of Student Development & EOPS at De Anza College.

- **Illegal discrimination.** Complaints of discrimination on the basis of race, color, national or ethnic origin, age, gender, sexual orientation, marital status, or physical or mental disability filed against an employee of the district should be directed to the dean of Student Affairs & Activities at Foothill College or the dean of Student Development & EOPS at De Anza College.
- **Residence determination.** Student should contact the associate registrar at Foothill College or the director of Admissions & Records at De Anza College.
- **Dismissal from college for academic reasons.** Student should consult a Foothill counselor. If there are extenuating circumstances, the student may appeal the dismissal to the Academic Council after consulting a Foothill counselor.
- **Informal meetings and discussion between persons directly involved in a grievance are essential at the outset of a dispute and should be encouraged at all stages.** An equitable solution should be sought before persons directly involved in the case have stated official or public positions that might tend to polarize the dispute and render a solution more difficult. At no time shall any of the persons directly or indirectly involved in the case use the fact of such informal discussion, the fact that a grievance has been filed, or the character of the informal discussion for the purpose of strengthening the case for or against persons directly involved in the dispute or for any purpose other than the settlement of the grievance.
- **Any student who believes he or she has a grievance shall file a *Statement of Grievance Form* with the grievance officer within 30 calendar days of the incident on which the grievance is based, or 30 calendar days after the student could have reasonably discovered the basis for the grievance, whichever is later. The *Statement of Grievance Form* must be filed whether or not the student has already initiated efforts at informal resolution, if the student wishes the grievance to become official. Within two work days following receipt of the *Statement of Grievance Form*, the grievance officer shall advise the student of his or her rights and responsibilities under these procedures, and assist the student, if necessary, in the final preparation of the *Statement of Grievance Form*.**
- **If at the end of 10 work days following the student's first meeting with the grievance officer, there is no informal resolution of the complaint which is satisfactory to the student, the student shall have the right to request a grievance hearing.**

### Definitions

**GRIEVANT:** A student alleging that a college decision or action has adversely affected his or her status, rights or privileges as a student, or alleges that another student has violated the student's rights.

**PARTY:** The student, or any persons claimed to have been responsible for the student's alleged grievance, together with their representatives. "Party" shall not include the grievance hearing committee or the college grievance officer.

**PRESIDENT:** The college president or a designated representative of the college president.

**STUDENT:** A currently enrolled student, a person who has filed an application for admission to the college, or a former student. A grievance by an applicant shall be limited to a complaint regarding denial of admission.

**RESPONDENT:** Any person claimed by a grievant to be responsible for the alleged grievance.

**WORK DAY:** A work day shall mean days during which the district is in session and regular classes are held, excluding Saturdays and Sundays. All time deadlines shall be measured by work day, unless otherwise specified as calendar days.

### Informal Resolution of Grievances

Each student who has a grievance shall make a reasonable effort to resolve the matter on an informal basis prior to requesting a grievance hearing, and shall attempt to solve the problem with the person with whom the student has the grievance, that person's immediate supervisor, or the vice president who oversees that division.

- The college president has appointed an employee who shall assist students in seeking resolution by informal means. This person shall be called the grievance officer.

### Steps in the Informal Process Involving College Employees

1. The student shall confer with the faculty member, administrator or classified staff person directly involved in the facts giving rise to the grievance.
2. If unresolved after Step 1, the student shall confer with the faculty member's division dean, or the supervisor of the administrator or classified staff person.
3. If unresolved after Step 2, the student shall confer with the vice president of that dean's or supervisor's division.
4. Within the 30-calendar-day time limit as previously outlined, if the student does not feel that the matter can be resolved after completing Steps 1, 2 and 3, an official *Statement of Grievance Form* may be filed with the grievance officer. The grievance officer will advise the student of his/her rights and assist the student, if necessary, in the final preparation of the *Statement of Grievance Form*.

5. If after 10 work days from the first meeting with the grievance officer there is no informal resolution, the student may request a grievance hearing.

If the complaint involves a grievance against another student, grievant shall confer directly with the grievance officer, who will advise the grievant of his/her rights and assist the grievant in preparing the *Statement of Grievance Form*.

## Formal Grievance Process

### Grievance Hearing Committee

- The college president or his/her designee shall at the beginning of each quarter, including any summer session, establish a standing panel of members of the college community, including faculty members and administrators, from which one or more grievance hearing committees may be appointed. The panel will be established with the advice and assistance of the Academic Senate, who shall submit names to the president or his/her designee for inclusion on the panel. A grievance hearing committee shall include three members from the panel described above. The administrator on the hearing panel shall serve as chair.
- No person shall serve as a member of a grievance hearing committee if that person has been personally involved in any matter giving rise to the grievance, has made any statement on the matters at issue, or could otherwise not act in a neutral manner.
- The grievance officer shall sit with the grievance hearing committee but shall not serve as a member nor vote. The grievance officer shall coordinate all scheduling of hearings, shall serve to assist all parties and the hearing committee to facilitate a full, fair and efficient resolution of the grievance, and shall avoid an adversary role.

### Request for Grievance Hearing

Any request for a grievance hearing shall be filed on a *Request for a Grievance Hearing Form* in writing within 30 calendar days after discovery of the grievable action and after completing steps 1–3 of the informal process previously outlined.

- Within 10 work days following receipt of the *Request for Grievance Hearing Form*, the grievance officer shall convene a grievance hearing committee as described above, and the grievance hearing committee shall meet in private and without the parties present to determine on the basis of the Statement of Grievance whether it presents sufficient grounds for a hearing.
- The determination that the Statement of Grievance presents sufficient grounds for a hearing shall be made if the following are found to be true:

1. The statement contains facts, which, if true, would constitute a grievance under these procedures;
2. The grievant is a student as defined in these procedures, which include applicants and former students;
3. The grievant is personally and directly affected by the alleged grievance;
4. The grievance was filed in a timely manner
5. The grievance is not clearly frivolous, clearly without foundation, or clearly filed for purposes of harassment.

If the grievance does not meet each of the requirements, the hearing committee chair shall notify the student in writing of the rejection of the Request for a Grievance Hearing, together with the specific reasons for the rejection and the procedures for appeal. This notice will be provided within seven work days of the date the decision is made by the grievance hearing committee.

- If the Request for Grievance Hearing satisfies each of the requirements, the college grievance officer shall schedule a grievance hearing. The hearing will begin within 30 calendar days following the decision to grant a grievance hearing. All parties to the grievance shall be given not less than 10 work days notice of the date, time and place of the hearing.

### Hearing Procedure

The grievance hearing committee chair is responsible for making sure that administrative procedures are followed and for maintaining decorum at the hearing.

- The members of the grievance hearing committee shall be provided with a copy of the grievance and any written response provided by the respondent before the hearing begins.
- party to the grievance may call witnesses and introduce oral and written testimony relevant to the issues of the matter.
- Formal rules of evidence shall not apply. Any relevant evidence shall be admitted.
- Unless the grievance hearing committee determines to proceed otherwise, each party to the grievance shall be permitted to make an opening statement. Thereafter, the grievant or grievants shall make the first presentation, followed by the respondent or respondents. The grievant(s) may present rebuttal evidence after the respondent(s)' evidence. The burden shall be on the grievant or grievants to prove by substantial evidence that the facts alleged are true and that a grievance has been established as specified above.
- Each party to the grievance may represent himself or herself, and may also have the right to be represented by a person of his or her choice; except that a party

shall not be represented by an attorney unless, in the judgment of the grievance hearing committee, complex legal issues are involved. If a party wishes to be represented by an attorney, a request must be presented not less than 10 work days prior to the date of the hearing. If one party is permitted to be represented by an attorney, any other party shall have the right to be represented by an attorney. The hearing committee may also request legal assistance; any legal advisor provided to the hearing committee may sit with it in an advisory capacity to provide legal counsel but shall not be a member of the panel nor vote with it.

- Hearings shall be closed and confidential unless all parties request that it be open to the public. Any such request must be made no less than five work days prior to the date of the hearing. In a closed hearing, witnesses shall not be present at the hearing when not testifying, unless all parties and the committee agree to the contrary.
- The hearing shall be recorded by the grievance officer either by tape recording or stenographic recording, and shall be the only recording made. No witness who refuses to be recorded may be permitted to give testimony. In the event the recording is by tape recording, the grievance hearing committee chair shall, at the beginning of the hearing, ask each person present to identify themselves by name, and thereafter shall ask witnesses to identify themselves by name. The tape recording shall remain in the custody of the district, either at the college or the district office, at all times, unless released to a professional transcribing service. Any party may request a copy of the tape recording.
- All testimony shall be taken under oath; the oath shall be administered by the grievance hearing committee chair. Written statements of witnesses under penalty of perjury shall not be used unless the witness is unavailable to testify. A witness who refuses to be tape-recorded shall be considered to be unavailable.
- The grievance hearing committee shall prepare and send a decision to the grievance officer. The decision will be forwarded by the grievance officer to the grievant within 14 work days. The decision shall include specific factual findings regarding the grievance, and shall include specific conclusions regarding whether a grievance has been established as defined above. The decision shall also include a specific recommendation regarding the relief to be afforded the grievant, if any. The decision shall be based only on the record of the hearing, and not on matter outside of that record. The record consists of the original grievance, any written response, and the oral and written evidence produced at the hearing.

### **Appeal & President's Decision**

A student prejudiced by a decision of the grievance hearing committee shall be entitled to appeal that decision to the college president. The appeal shall be made in writing to the college president within 30 calendar days of receipt of the grievance hearing committee's decision. The college president shall review the appeal and the grievance hearing committee's findings and conclusions, and will render a decision. Within seven work days following the receipt of the request for appeal, the college president shall prepare and send a decision to the grievant. The decision of the college president shall be final.

### **Time Limits**

Any times specified in these procedures may be shortened or lengthened if there is mutual concurrence by all parties.

## **Illegal Distribution of Copyrighted Materials**

Foothill College students are prohibited from using the Foothill-De Anza (FHDA) Community College District information network to illegally download or share music, video and all other copyrighted intellectual property. Foothill College supports the Higher Education Opportunity Act and Digital Millennium Copyright Act, including efforts to eliminate the illegal distribution of copyrighted material. Under the law, college administrators may be obligated to provide copyright holders with information about users of the FHDA information network who have violated the law.

Be aware that illegal forms of downloading and file sharing as well as the unauthorized distribution of copyrighted materials are violations of the law and may subject you to academic sanctions from the college as well as criminal and civil penalties, including a lawsuit against you by the Recording Industry Association of America (RIAA). Learn more at [www.campusdownloading.com](http://www.campusdownloading.com).

In addition to being illegal, file sharing drains the FHDA network's bandwidth, which slows computer connections for students and employees who are using the network for legitimate academic purposes and ultimately costs the college money.

The college has developed policies and consequences to ensure that students respect music and other forms of intellectual property as well as conduct responsible use of the Internet. Review these policies at [www.foothill.fhda.edu/services/studentright.php#misuse](http://www.foothill.fhda.edu/services/studentright.php#misuse).

There are plenty of easy, affordable ways to get music online legally. To protect their intellectual property, companies have licensed hundreds of digital partners that offer a range of legal downloading options, including download and subscription services, legitimate peer-to-peer

services, video-on-demand, podcasts and CD kiosks. For a list of sources that offer legal downloading sites, access [www.riaa.com](http://www.riaa.com).

## Summary of Civil & Criminal Penalties for Violation of Federal Copyright Laws

Copyright infringement is the act of exercising, without permission or legal authority, one or more of the exclusive rights granted to the copyright owner under the Copyright Act. These rights include the right to reproduce or distribute a copyrighted work. In the file-sharing context, downloading and/or uploading substantial parts of a copyrighted work without authority constitutes an infringement. For details, review *U.S. Code Title 17; Section 106*.

Civil and criminal penalties are applicable for copyright infringement. In general, anyone found liable for civil copyright infringement may be ordered to pay either actual damages or statutory damages affixed at not less than \$750 and not more than \$30,000 per work infringed. For willful infringement, a court may award up to \$150,000 per work infringed. A court can also assess related costs and attorneys' fees. Willful copyright infringement can also result in criminal penalties, including imprisonment of up to five years and fines of up to \$250,000 per offense. For details, review *U.S. Code Title 17; Sections 504–505*.

For more information, review the U.S. Copyright Office website at [www.copyright.gov](http://www.copyright.gov), especially the FAQ at [www.copyright.gov/help/faq](http://www.copyright.gov/help/faq).

## Misuse of Computer Information & Resources Policy

This administrative procedure implements *FHDA Board Policy 3250: Procedures Regarding Misuse of Computer Information*.

Abuse of computing, networking or information resources contained in or part of the district network may result in the loss of computing privileges. Additionally, abuse can be prosecuted under applicable statutes. Users may be held accountable for their conduct under any applicable district or college policies, procedures, or collective bargaining agreements. Complaints alleging abuse of the district network will be directed to those responsible for taking appropriate disciplinary action. Illegal reproduction of material protected by U.S. Copyright Law is subject to civil damages and criminal penalties, including fines and imprisonment.

Examples of behaviors constituting abuse which violate *District Board Policy 3250* include, but are not limited to, the following activities:

## System Abuse

- Using a computer account that one is not authorized to use.
- Obtaining a password for a computer account that one is not authorized to have.
- Using the district network to gain unauthorized access to any computer systems.
- Knowingly performing an act which will interfere with the normal operation of computers, terminals, peripherals or networks.
- Knowingly running or installing on any computer system or network, or giving to another user, a program intended to damage or to place excessive load on a computer system or network. This includes but is not limited to programs known as computer viruses, Trojan horses and worms.
- Knowingly or carelessly allowing someone else to use your account who engages in any misuse in violation of District Board Policy 3250.
- Forging e-mail messages.
- Attempting to circumvent data-protection schemes or uncover or exploit security loopholes.
- Masking the identity of an account or machine.
- Deliberately wasting computing resources.
- Downloading, displaying uploading or transmitting obscenity or pornography, as legally defined.
- Attempting without district authorization to monitor or tamper with another user's electronic communications, or changing, or deleting another user's files or software without the explicit agreement of the owner, or any activity which is illegal under California computer crime laws.
- Personal use which is excessive or interferes with the user's or others' performance of job duties, or otherwise burdens the intended use of the district network.

## Harassment

- Using the telephone, e-mail or voice mail to harass or threaten others.
- Knowingly downloading, displaying or transmitting by use of the district network, communications, pictures, drawings or depictions that contain ethnic slurs, racial epithets, or anything that may be construed as harassment or disparagement of others based on their race, national origin, gender, sexual orientation, age, disability, or religious or political belief.
- Knowingly downloading, displaying or transmitting by use of the district network sexually explicit images, messages, pictures, or cartoons when done to harass or for the purposes of harassment.

- Knowingly downloading, displaying or transmitting by use of the district network sexually harassing images or text in a public computer facility, or location that can potentially be in view of other individuals.
- Posting on electronic bulletin boards material that violates existing laws or the colleges' codes of conduct.
- Using the district network to publish false or defamatory information about another person.

## Commercial Use

- Using the district network for any commercial activity without written authorization from the district. "Commercial activity" means for financial remuneration or designed to lead to financial remuneration.

## Copyright

- Violating terms of applicable software licensing agreements or copyright laws.
- Publishing copyrighted material without the consent of the owner on district Web sites in violation of copyright laws.

## Exceptions

Activities by technical staff, as authorized by appropriate district or college officials, to take action for security, enforcement, technical support, troubleshooting or performance testing purposes will not be considered abuse of the network.

Although personal use is not an intended use, the district recognizes that the network will be used for incidental personal activities and will take no disciplinary action provided that such use is within reason and provided that such usage is ordinarily on an employee's own time; is occasional; and does not interfere with or burden the district's operation. Likewise, the district will not purposefully monitor or punish reasonable use of the network for union business-related communication between employees and their unions Approved 11/17/97; Reviewed by FHDA Board 8/16/99, 7/7/03.

## Code of Conduct for *etudes*<sup>™</sup>

### Internet-Based Courses

As a student at Foothill College, your conduct in the classroom and online (Internet classes) will be expected to conform to those acceptable standards for all students as described in this publication. Unacceptable behavior includes, but is not limited to the following:

- Use of threatening, harassing, sexually explicit language or discriminatory language or conduct that violates state and federal law and the Foothill-De Anza Community College District policy on sexual harassment or discrimination;
- Unauthorized posting or transmitting sexually explicit images or other content that is deemed by *etudes*<sup>™</sup>, the licensee, or any administrator, supervisor or instructor of a course published utilizing *etudes*<sup>™</sup> or other online software to be offensive;
- Conduct that constitutes fraudulent behavior as enumerated in state and federal statutes;
- Disruptive behavior online or off-line;
- Vandalism, or any other violation of FHDA Community College District Board Policy. Particular attention should be given to college policy on academic dishonesty, which includes plagiarism or otherwise representing others' work as your own.

All Foothill College students are subject to the same consequences for violations of college policy. They include sanctions and consequences for infractions that are outlined in the student handbook, *Course Catalog* and at [www.foothill.edu](http://www.foothill.edu) under Student Rights & Responsibilities.

All Foothill College students are hereby notified that these documents, available online and in print, serve to alert them to their rights and responsibilities, and the college's obligations.

There are specific requirements of students using *etude* software, or other commercial software, and they are detailed in the *Terms of Service Agreement*. All students are advised to refer to this document and are informed that violations may result in suspension and/or expulsion from the class and/or college, other board sanctions and termination of your password, account or use of the software. The *Terms of Service Agreement* include the college's limitation of liability, indemnification, waivers, intellectual property rights, confidentiality and registration information.

Referenced sources include *Beyond the Classroom: Foothill College Student Handbook & Planner, Student Rights & Responsibilities; Foothill College Academic Honor Code; Foothill-De Anza Community College District Policies & Administrative Procedures on Sexual Harassment & Discrimination; and etudes systems*<sup>™</sup> *Terms of Service-Agreement* ([www.courseserve.com/termsofservice.html](http://www.courseserve.com/termsofservice.html)). March 1, 2000.

Students can obtain a copy of *Student Conduct & Due Process* from the Student Affairs & Activities Office, Room 2002; (650) 949-7241.

## Crime Awareness & Campus Security Summary Report

In compliance with Section 201 Public Law 101-542 as amended by Public Law 102-26, Foothill College provides the following Crime Awareness & Campus Security Act Summary Report for students, faculty and staff:

Crime / Year	2009	2008	2007
Aggravated Assault	0	1	0
Arson	0	0	0
Burglary	2	6	5
Homicide	0	0	0
Vehicle Theft	1	3	0
Rape	0	0	0
Robbery	0	0	0
Arrests / Year	2009	2008	2007
Alcohol Violations	0	0	0
Drug Violations	3	3	4
Warrants/Other	0	0	2

## Student Right-to-Know Summary Report

In compliance with the federal government, Foothill College provides the following summary of first-time, full-time, degree-seeking students entering Foothill College in Fall Quarter 2006:<sup>1</sup>

Students completing A.A./A.S./Certificate: . . . . .47.67 percent  
 Students who transferred out:<sup>2</sup> . . . . . 20.50 percent  
 Total completers/transfers:<sup>3</sup> . . . . .68.17 percent

## Use of Photography

Foothill College, a non-profit California community college, reserves the right to use photographs, motion pictures and electronic images of students and visitors, age 18 and older, taken on college property and at college-sponsored events, for marketing and promotional purposes.

Occasionally, the college will conduct media production activities for marketing purposes. The results of such photography and recording may be broadcast throughout the world. If you do not wish to be identified, photographed or recorded, please avoid areas where camera technicians and photographers are working.

Objection to the use of an individual's photograph may be made in writing to the Marketing Office, Room 5931.

- 1 The cohort is made up of students entering college for the first time in the fall term, who in the fall term declared a goal of transfer, associate degree or certificate and completed one or more college-level credit courses in the fall term.
- 2 The term *transferred out* is defined as the student who transferred to a University of California campus, or California State University campus, or another California community college campus.
- 3 *Completers* are students who within a degree-year period completed the requirements for an associate degree, certificate, or transferred out of the college, or were prepared to transfer which is defined as successfully completing 84 or more transferable units and achieving a grade point average equal to or greater than 2.0 (out of a possible 4.0).



“After high school, I didn’t know which four-year university I wanted to attend or what major I wanted to study. I enrolled at Foothill College, and little did I know that my decision was the turning point of my life.

“I worked hard, stayed focused and was rewarded with unimaginable opportunities. I met my future wife at Foothill, transferred to and graduated from Santa Clara University’s prestigious business school, had a wonderful career in consulting, strategic planning, management and marketing. And, I retired at age 40!

“Foothill has a unique portfolio of caring and challenging teachers, great class sizes, and comprehensive financial aid and counseling resources. Reach out and take advantage of these incredible assets and you’ll be greeted by options and opportunities that you too couldn’t have imagined.”

—William Yee, B.S.,  
transferred from Foothill College to Santa  
Clara University. His most recent—and  
last—job was at Yahoo!

# Requirements

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# Requirements

## Associate in Arts & Associate in Science Degree Graduation Requirements

Requirements for the Associate in Arts and Associate in Science degrees are listed on page 59 and include completion of all the following:

- A minimum of 90 units in prescribed courses;
- A minimum of 24 units taken at Foothill College;
- A GPA of 2.0 or better in all college courses including Foothill courses;
- A major of at least 27 units in a curriculum approved by the Foothill College Curriculum Committee;
- The general education requirements are listed in the charts on pages 59–60. If you plan to transfer to a four-year college or university, you should also review the specific requirements of those institutions;
- English Proficiency: *ENGL 1A* or *ESLL 26*;
- Math Proficiency: *MATH 105*; and
- The student may apply only one English or ESLL course below transferable freshman composition toward the associate degree.

One course is required from Area I through Area VI. Two courses (a minimum of four units from two disciplines) are required in Area VII. Courses may only be used in one area.

## General Education Reciprocity

The Foothill-De Anza Community College District has entered into a mutual General Education (GE) Reciprocity Agreement with other community colleges to accept the general education courses of these colleges “as completed.” In addition to Foothill, participating institutions include De Anza, Evergreen Valley, Gavilan, Mission, Ohlone, San Jose City and West Valley colleges. Other community colleges do not participate in the agreement at this time.

The reciprocity agreement allows students who obtain a certification of completion of associate degree GE requirements at one of the participating colleges to transfer both the GE coursework and graduation proficiencies to any of the other participating colleges. Additional GE coursework will not be required if the official certification is presented. Students will still be required to complete all courses or prerequisites needed for a major. The agreement also means that the other participating colleges will accept the Foothill GE pattern when presented with official certification.

Students seeking an official general education certification for use by a reciprocity institution are encouraged to review their records with a counselor

prior to submitting the *General Education Certification Request*. Students who have completed courses at other colleges and universities must have official transcripts on file prior to submitting the request. Requests for AA/AS general education certification may be submitted to the Evaluations Office in Room 8301.

## Transfer Studies Preparation Degree

Foothill’s associate degree for individual transfer preparation offers maximum flexibility for students who intend to transfer to a four-year college or university. Completion of this degree does not guarantee complete satisfaction of general education and lower-division major preparation for all majors. Review specific degree requirements on pages 107–108 or [www.foothill.edu](http://www.foothill.edu).

For more information, consult a Foothill College counselor. To schedule a counseling appointment, call (650) 949-7243.

## Petition for Graduation

Upon completion of required coursework, you may request to receive the Associate in Arts or Associate in Science degree from Foothill College. You must complete a petition for graduation. The petition should be filed no later than the beginning of the quarter during which you plan to complete graduation requirements. Foothill confers degrees every quarter, and the annual commencement ceremony is presented in June. For more information, schedule a consultation with a counselor at (650) 949-7423.

## Catalog Rights/Requirements for Graduation

The *Course Catalog* serves as an agreement between the student and the college to identify courses that the student must complete in order to qualify for a degree or certificate. The student has the right to select the course requirements for a degree or certificate from any catalog as long as continuous enrollment has been maintained.

Allied health programs reserve the right to change catalog rights by modifying program requirements based upon state and federal accreditation standards.

## Continuous Enrollment

Continuous enrollment is important in deciding which catalog a student may select to determine degree or certificate requirements. A continuously enrolled student is defined as one who attended Foothill or De Anza colleges at least two quarters each academic year, excluding Summer Session. A single W grade in a term qualifies as an attended term.

## Currency of Major/ Certificate Requirements

In certain Foothill College programs, currency of course content is essential. The Foothill College Curriculum Committee reserves the right to determine an acceptable level of currency of any course in any major or certificate. This means that a course may only be used toward fulfilling a certificate or degree for a prescribed number of years. Students should check certificate and major requirements for courses that are noted as having currency levels.

## Online Degrees

The Foothill Global Access (FGA) Program offers online educational opportunities and services comparable to those available to on-site students. FGA offers students a variety of distance learning courses that meet the same high academic standards as traditional classes.

The program also offers several associate degree programs entirely online, including anthropology, database management, art history, economics, general studies/social science, geography, history, computer software development, music technology, psychology and sociology as well as general education requirements. These degrees are fully transferable and can be completed online. A few courses, such as speech, English and math, may require occasional meetings or proctored exams. For more information, access [www.foothill.edu/fga](http://www.foothill.edu/fga).

## Discontinued Degrees

A discontinued degree is one that was once offered by Foothill College but which is no longer offered. To be considered for an associate degree in a discontinued program, the student who has maintained continuous enrollment may file to graduate from Foothill College within seven years of the time that a program is discontinued.

## Non-Transcriptable Certificates

Certificate completion will not appear on the student's transcript.

## Course Numbering System

Most Foothill courses are baccalaureate in level and can be transferred to four-year institutions.

In general, courses at Foothill College are numbered using the following guidelines:

NUMBER	INSTITUTION
1-49	Transferable to the University of California.
1-99	Transferable to the California State University.
1-199	Foothill AA/AS degree-applicable.
200-299	Prerequisites for required courses that lead to the AA/AS degree* and non-degree applicable credit courses.
300-399	Workshops, review and other courses offered to meet special collegiate needs of a community nature.
400-499	Non-credit, non-graded courses in consumer education, senior education, adaptive learning or other areas that do not apply to the AA/AS degree.

All courses numbered 200 and above are non-degree applicable. Grades earned in these courses shall not be included in the student's degree-applicable grade point average.

There are exceptions to this numbering system.

Consult the course listings in this catalog to determine which courses between 1-199 are non-degree applicable. Students should consult a counselor to determine course transferability. A list of transferable courses may be viewed at [www.assist.org](http://www.assist.org).

### \*Basic Skills: Limitations & Waivers

Enrollment in basic skills courses is limited to no more than 45 quarter units at Foothill College. ESL and learning disabled students are exempt from this limitation. Waivers may be available for other students who show significant progress, but these waivers are only for a specified period of time or number of units.

Visit the Counseling Office for copies of the Foothill Associate Degree/ Graduation Requirements; CSU GE/Breadth Requirements; and IGETC listings; or access them online at [www.foothill.edu](http://www.foothill.edu).

For help deciding which general education plan to follow, consult a Foothill counselor.

## Certification of General Education for Transfer

Foothill College will certify completion of up to 58 units of the 72-unit general education requirement for graduation from the CSU (See chart on page 61). IGETC Certification for CSU or UC requires full certification of Areas 1 through 5. (See chart on page 60). You may request certification by completing the official certification form or transcript request form available from the Admissions & Records Office in Room 8101 or Evaluations Office in Room 8301.

You are encouraged to consult with a counselor for help in selecting courses. We encourage all students to check each quarter for new course requirements.

## Four-Year Institution Requirements

### Articulation Agreements

Articulation is the process of negotiating and approving Foothill courses with other institutions. Foothill has course-to-course and major-preparation articulation agreements with nearly every UC and CSU campus, and many four-year colleges and universities. This information is available to you through your counselor or via the Internet. To review online information, access these Web sites:

- [www.foothill.edu](http://www.foothill.edu)
- [www.assist.org](http://www.assist.org)
- Web site of the specific college of interest

### Transfer Admission Guarantees

If you complete a Transfer Admission Guarantee (TAG), you'll be given first consideration for admission to selected colleges and universities. You must complete agreed-upon general education courses, as well as major courses, with a specified minimum grade point average. Work with a counselor to develop a TAG. The TAG must be prepared before transfer. The TAG ensures acceptance and smooth transfer to the chosen college or university. The Transfer Center, Room 8329, has additional information regarding deadlines for TAGs.

The following institutions offer Transfer Admission Guarantees for Foothill students:

- Cornell University\*
- CSU Monterey Bay
- CSU East Bay
- Golden Gate University
- Menlo College
- National Hispanic University
- Notre Dame de Namur University
- Palo Alto University
- Santa Clara University
- UC Davis
- UC Irvine
- UC Merced
- UC Riverside
- UC San Diego
- UC Santa Barbara
- UC Santa Cruz
- University of San Francisco
- University of the Pacific

\*Applies to School of Civil & Environmental Engineering.

This list increases each year. Verify current TAG availability in the Transfer Center, Room 8329.

Additional transfer agreements are also available through the Foothill Honors Institute, including the Transfer Alliance Program with the University of California, Los Angeles (UCLA). To verify current honors agreements, visit the Honors Institute (Room 5426).

## University of California

### Breadth General Education Requirements

The University of California (UC) has campuses at Berkeley, Davis, Irvine, Los Angeles, Merced, Riverside, San Diego, San Francisco, Santa Barbara and Santa Cruz.

UC campuses have uniform basic eligibility requirements. Each campus is distinctive, however, and not all majors are offered at every campus. Each school and college at a specific UC campus has outlined major requirements that prepare you for the academic discipline.

Foothill's counselors and Career/Transfer Center staff can advise you regarding the courses acceptable for credit at UC campuses as well as those meeting the breadth requirements for specific UC colleges and schools. You can also review this information on the Internet at [www.assist.org](http://www.assist.org). The Foothill College website at [www.foothill.edu](http://www.foothill.edu) includes the *Transfer Course Agreement Listing* for all Foothill courses that are transferable to all UC campuses. You should explore all undergraduate colleges, schools and majors to determine which campuses will best satisfy your educational needs. We encourage you to discuss the advantages of each major and campus with a counselor.

### Preparation for Transfer to Four-Year Colleges & Universities

Each year, hundreds of Foothill College students transfer to a four-year college or university after completing lower-division major preparatory and general education requirements. The secret of our students' success is that they understand which transferable courses are required for:

- Admission to the college/university of their choice;
- Major preparation; and
- Completion of general education requirements.

Counselors are an excellent resource for transfer information. Understanding these requirements ensures that students can transfer in a timely manner to earn their bachelor's degree without delay.

These requirements often change annually; therefore, students should meet with a counselor every year. Many of the courses offered at Foothill College are similar to courses offered in the lower division, or first two years, at four-year colleges and universities. Because requirements often vary significantly from campus to campus, it is recommended that you decide on your major and transfer institution as soon as possible. In addition to offering counselors to help you with this decision, Foothill College offers Counseling (CNSL) and Career Life Planning (CRLP) courses to help you explore and evaluate options.

## Transfer to the California State University

To be eligible for transfer, students must complete at least 90 transferable quarter units with a cumulative 2.0 grade point average in all transferable courses as well as satisfy minimum admission requirements.

### Lower-Division Transfer

At some universities, students who were eligible for CSU admission when they graduated from high school may apply for transfer admission before completing 84 transferable units. Meeting with a counselor can help students decide on the best transfer plan. Occasionally, students elect to transfer at the lower-division level. Such students must have a minimum 2.0 grade point average, be in good standing at the last college or university attended, and meet the minimum admission requirements for first-time freshmen. For these students, high school deficiencies must be completed. SAT or ACT test scores are also required for these applicants.

### Upper-Division Transfer

Students who have completed a minimum of 90 transferable units with a grade point average of 2.0 or better in all transferable courses may be eligible for transfer if they complete at least 45 quarter units with a grade of C or better in selected general education courses. These units must include:

- At least 12 quarter units to include written communication, oral communication and critical thinking; and
- At least one course from the approved list of mathematics courses.

### Major Requirements

Students are encouraged to complete as many lower-division major preparatory requirements as possible prior to transfer. Many majors, especially in highly selective programs, have supplemental requirements that must be met prior to transfer. Consult with a counselor for additional information. These requirements may also be viewed at [www.assist.org](http://www.assist.org). *Some oversubscribed programs may require supplemental courses or information for admission.*

## Transfer to the University of California

With thoughtful planning, transferring to the University of California need not be complicated. Students should be aware that both the major and general education requirements vary from campus to campus; therefore, it is advisable to meet with a counselor as early as possible to develop an effective educational plan. To be eligible to transfer as a junior, students must complete a minimum of 90 transferable quarter units with a minimum 2.4 transferable grade point average. The University of California generally does not permit lower-division transfers. ***Admission to most UC campuses is competitive; therefore, a grade point average higher than the minimum is necessary to be a viable applicant.*** Selection is based largely upon completion of the prescribed list of lower-division major requirements and explanation of career goals as outlined in the application essay. These requirements may be obtained from a counselor or by viewing the articulation agreements posted at [www.assist.org](http://www.assist.org). The Transfer Center in Room 8329 offers both application essay-writing workshops and transfer coaching.

### Oversubscribed Programs

Impacted or oversubscribed programs vary from year to year; however, in recent years, the following majors have been highly selective:

- UC BERKELEY: Admission to most majors is selective;
- UC DAVIS: Biological sciences, engineering, computer science, psychology;
- UC IRVINE: Biological sciences, computer science, engineering;
- UCLA: Communication, economics, engineering, life sciences, motion picture;
- UC RIVERSIDE: Business administration, engineering;
- UC SAN DIEGO: Biological sciences, engineering;
- UC SANTA BARBARA: Biological sciences, computer science, engineering; and
- UC SANTA CRUZ: Art, environmental studies, psychology.

## Minimum Admission Requirements

To qualify for admission to the University of California, students must meet one of the three sets of criteria that follow:

1. Students who were eligible for admission to the University of California when they graduated from high school are eligible to apply for transfer if they have maintained a cumulative grade point average of at least 2.0 in all UC-transferable courses. **Consult a counselor for information regarding the specific subject, scholarship and examination requirements.**
2. Students who met the scholarship requirement upon graduation from high school, but who did not satisfy the subject requirement must take transferable college courses in the missing subjects to be eligible for transfer. Students must earn a grade of C or better in each of these courses as well as maintain a cumulative grade point average of at least 2.0 in all UC-transferable work.  
Students who met the scholarship requirement but who did not meet the examination requirement must complete a minimum of 18 quarter units of transferable work with an overall grade point average of 2.0 in all transferable college work completed.
3. Students who were not eligible for admission to the University of California upon high school graduation must:
  - A. Complete a minimum of 90 quarter units of UC-transferable college credit with a grade point average of at least 2.4.
  - B. Complete the following course pattern, earning a C or better in each course:
    - Two UC-transferable college courses (minimum 4.5 quarter units each) in English composition; and
    - One UC-transferable college course (minimum 4.5 quarter units) in mathematical concepts and quantitative reasoning; and
    - Four UC-transferable college courses (minimum 4.5 quarter units each) chosen from at least two of the following subject areas: arts and humanities, social and behavioral sciences, and physical and biological sciences.

*Eligibility for transfer does not guarantee admission. To present a competitive application, students are encouraged to exceed minimum requirements.*

## Priority Application Filing Period

Students are encouraged to apply during the following application periods:

APPLICATION ACCEPTED FOR	CSU	UC
Fall	Oct. 1–Nov. 30	Nov. 1–30
Winter	June 1–30	July 1–31
Spring	Aug. 1–31	Oct. 1–31
Summer	Feb. 1–28	

*While all campuses accept students for fall admission, many do not accept for spring or winter. Consult a counselor for details about a specific campus.*



# A.A./A.S. Degree & General Education Requirements

The requirements for the Associate in Art or Associate in Science degree include completion of (1) a minimum of 90 units in prescribed courses; (2) a minimum of 24 units taken at Foothill College; (3) a grade-point average of 2.0 or better in all college courses including Foothill courses; (4) a major of at least 27 units in a curriculum approved by the Foothill College Curriculum Committee; and (5) the seven general education requirements listed below. If you plan to transfer to a four-year college or university, you should also consult with a Foothill College counselor for the specific requirements of those institutions.

You must successfully complete a minimum of 30-35 units from the courses listed below with at least one course in Humanities, English, Natural Sciences (with lab), Social and Behavioral Sciences, Communication and Analytical Thinking, United States Cultures and Communities, and two courses in Lifelong Learning from two different academic departments. **Courses may only be used in one area.**

## Area I—Humanities

**Arts:** ART 1, 2A, 2AH, 2B, 2BH, 2C, 2CH, 2D, 2E, 4A with 4AX, 5A with 5AX, 11, 14, 36, 45A with 45AX; F A 1; GID 1; MUS 1, 2A, 2B, 2C, 3A, 3B, 3C, 7, 7D, 7E, 8, 8H, 10, 11A, 11B, 85A, 85B; PHOT 1, 5, 8, 8H, 10, 10H, 11; THTR 1, 5B, 20A, 20B, 20C, 20D, 24; VART 2A, 2B, 2C; WMN 15.

**Letters:** CHIN 1, 2, 3, 4, 5, 6, 13A, 13B, 14A, 14B, 25A, 25B; COMM 24; CRWR 6, 39A, 39B, 40, 41A, 41B, 60; ENGL 5, 8, 11, 12, 14, 17, 22, 23, 25, 25H, 26, 31, 42A, 42B, 42C, 46A, 46B, 46C, 48A, 48B, 48C; GERM 1, 2, 3, 39; HIST 4A, 4B, 4C, 4CH; HUMN 1A, 1B; JAPN 1, 2, 3, 4, 5, 6, 13A, 13B, 25A, 25B, 33; LING 23, 25, 25H, 26; PHIL 2, 4, 8, 11, 20A, 22, 24, 25; SPAN 1, 2, 3, 4, 5, 6, 13A, 13B, 14A, 14B, 25A, 25B; THTR 2A, 2B, 2C, 8.

## Area II—English

ENGL 1A, 1AH or ESLL 26.

## Area III—Natural Sciences (with laboratory)

ASTR 10A with 10L, 10B with 10L, 10BH with 10L; BIOL 9 with 9L, 10, 13, 14, 15, 41; CHEM 1A, 25, 30A; GEOG 1; HORT 10; PHYS 2A, 4A.

## Area IV—Social & Behavioral Sciences

ANTH 1, 2A, 2B, 3, 4, 5, 6, 8, 12; BUSI 22, 53; CHLD 55; ECON 1A, 1B, 9, 25; GEOG 1, 2, 5, 9, 10; GERM 8; HIST 4A, 4B, 4C, 4CH, 8, 9, 9H, 10, 15, 16, 16H, 17A, 17B, 17C, 18, 20; POLI 1, 2, 2H, 3, 3H, 9, 15, 15H; PSYC 1, 4, 10, 14, 21, 22, 25, 30, 33, 40, 49, 55; SOC 1, 10, 11, 15, 19, 20, 21, 23, 30, 40; SOSC 20; WMN 5, 11, 21.

## Area V—Communication & Analytical Thinking

CIS 12A, 15A, 18, 25A; COMM 1A, 1B, 2, 3, 4, 12, 24, 30, 46, 55; ENGL 1B, 1BH, 4; MATH 1A, 1B, 1C, 2A, 2B, 10, 11, 12, 22, 44, 49, 51; PHIL 1, 7, 8, 50.

\*Intermediate algebra or equivalent means MATH 105, or mathematics placement test score indicating eligibility for a mathematics course beyond the level of MATH 105, or completion of a higher level course with a grade of “C” or better, or completion of a bachelor’s degree or higher from an accredited U.S. college or university.

For the most current list of requirements, access [www.foothill.edu](http://www.foothill.edu).

## Area VI—United States Cultures & Communities

ANTH 4; ART 2D; BIOL 14; CHLD 11; COMM 10, 12; ENGL 5, 8, 12, 31, 41, 48A, 48B, 48C; F A 2; HIST 9, 9H, 10; MUS 8, 8H; PHIL 22; PHOT 8, 8H; PSYC 22; SOC 8, 23; SOSC 20; SPED 61; THTR 8; WMN 5, 11.

## Area VII—Lifelong Learning

You must successfully complete a total of four units or more in Lifelong Learning from two different academic departments. For the purpose of this area, ALAP, DANC and PHED will be considered one academic department and COIN and CIS will be considered one academic department. Physical activity courses may be taken for up to two units.

BIOL 8, 9, 45; BUSI 91L; CIS 2, 50A, 60; COIN 51; CNSL 1, 2, 72, 90; COMM 2, 10, 12; CRLP 55, 70; DANC 1A, 1B, 2, 3A, 3B, 4, 5, 6, 7; HLTH 21; PHED 4; any physical activity course (PHED) or ALAP 60, 60X, 61, 61X, 62, 62X, 63, 63X, 64, 64X, 66, 66X, 70, 70X, 71, 71X, 80, 80X; LIBR 71; SOC 19, 40; SOSC 20; SPED 52, 61, 72.

## Petition for Graduation

Upon completion of a majority of major and general education courses, consult with a counselor for information regarding Foothill College graduation procedures. The graduation petition must be filed in the quarter preceding the quarter in which you will complete the requirements for graduation.

**Minimum proficiency:** ENGL 1A or ESLL 26 and MATH 105\* completed with a letter grade of “C” or better.

Effective Summer 2010

# Intersegmental General Education Transfer Curriculum (IGETC)

IGETC is a pattern of Foothill College courses that fulfills lower-division general education requirements for transfer to California State University and University of California. IGETC is an alternative to the CSU and local UC General Education-Breadth Requirements. Many private universities also recognize IGETC for fulfillment of general education requirements.

IGETC is a good option for the student who intends to transfer but is undecided about a major and/or unsure about attending CSU or UC. Some majors require extensive lower-division preparation, therefore, IGETC may not be the best choice for general education. Some universities do not accept IGETC. Always consult a counselor when developing an educational plan.

Course requirements for all areas of IGETC must be completed with a grade of **C** or better and certified by Foothill College for university credit. Submit a request for IGETC certification at the Counseling Center or Admissions Office.

For updated information, consult your counselor or access [www.assist.org](http://www.assist.org). **Completion of IGETC requirements also qualifies students for a Foothill College Certificate of Achievement in Transfer Studies.**

## Area 1—English Communication

**CSU:** Three courses required, one from Group A, B and C.

**UC:** Two courses required, one each Group A & B.

**Group A:** English Composition, one course: 4–5 quarter units ENGL 1A, 1AH

**Group B:** Critical Thinking-English Composition, one course: 4–5 quarter units ENGL 1B, 1BH, 1C, 1CH, PHIL 1

**Group C:** Oral Communication (CSU requirement only) one course: 4–5 quarter units COMM 1A, 1AH, 1B, 1BH, 2, 3, 4

## Area 2—Mathematical Concepts & Quantitative Reasoning

One course: 4–5 quarter units CIS 18, MATH 1A, 1B, 1C, 1D, 2A, 2B, 10, 11, 12, 22, 44, 49.

## Area 3—Arts & Humanities

At least three courses, with at least one course from Arts and one course from Humanities—9 semester; 12–15 quarter units.

**Arts:** ART 1, 2A, 2AH, 2B, 2BH, 2C, 2CH, 2D, 2E, 3, 11, 12, 13, 14; DANC 10; ENGL 42A, 42B, 42C; MUS 1, 2A, 2B, 2C, 2D, 3A, 3B, 3C, 7, 7D, 7E, 8, 8H, 10, 11A, 11B, 11C, 27, 85A, 85B; PHIL 11; PHOT 8, 8H, 10, 10H, 11; THTR 1, 2A, 2B, 2C, 8; VART 1, 2A, 2B, 2C, 3; WMN 15

**Humanities:** CHIN 4, 5, 25A, 25B; ENGL 5, 7, 7H, 8, 11, 11H, 12, 14, 17, 22, 25, 25H, 26, 31, 40, 40H, 41, 42A, 42B, 42C, 46A, 46B, 46C, 48A, 48B, 48C; FA 1, 2; HIST 4A, 4B, 4C, 4CH; HUMN 1A, 1B; JAPN 4, 5, 6, 25A, 25B, 33; LING 25, 25H, 26; PHIL 2, 4, 8, 20A, 20B, 20C, 22, 24, 25; SPAN 4, 5, 6, 25A, 25B; THTR 2A, 2B, 2C.

## Area 4—Social & Behavioral Sciences

\*(CSU transfers see note re: History & Institutions) At least three courses from at least two disciplines or an interdisciplinary sequence: 12–15 quarter units.

ANTH 2A, 2B, 3, 4, 5, 6, 8; ART 2E; CHLD 55; COMM 10, 12; ECON 1A, 1B, 9, 25; GEOG 2, 5, 9, 10; GERM 8; HIST 4A, 4B, 4C, 4CH, 8, 9, 9H, 10, 15, 16, 16H, 17A, 17B, 17C, 18, 20; PHED 2; PHOT 8, 8H; POLI 1, 2, 2H, 3, 3H, 9, 9H, 15, 15H, 24; PSYC 1, 4, 10, 14, 21, 22, 25, 30, 33, 40, 49; SOC 1, 8, 10, 11, 15, 20, 21, 23, 30, 40; SOSC 20; WMN 5, 11, 15, 21

## Area 5—Physical & Biological Sciences

At least two courses, one Physical Science course and one Biological Science course; at least one must include a laboratory (underlined courses include lab): 9–12 quarter units  
**Physical Sciences:** ASTR 10A, 10L, 10B, 10BH; CHEM 1A, 1B, 1C, 12A, 12B, 12C, 25, 30A, 30B; GEOG 1; PHYS 2A, 2B, 2C, 4A, 4B, 4C, 4D, 6, 12

**Biological Sciences:** ANTH 1, 1L; BIOL 1A, 1B, 1C, 1D, 9, 9L, 10, 12, 13, 14, 15, 17, 40A, 40B, 40C, 41, 45; HORT 10

## Area 6—Language Other Than English

(UC Requirement Only) Proficiency equivalent to two years of high school study in the same language. Transcripts must be on file with Foothill College.

CHIN 2, 3, 4, 5, 6; GERM 2, 3; JAPN 2, 3, 4, 5, 6; SPAN 2, 3, 4, 5, 6,

## \*CSU Graduation Requirement in U.S. History, Constitution & American Ideals

This CSU requirement is not a part of IGETC. CSU transfer students completing IGETC must complete this requirement prior to graduation from CSU. Courses used to fulfill IGETC may not be double-counted toward this requirement.

In order to complete this requirement prior to transfer, students must complete one course from Group One and one course from Group Two:

**Group One:** POLI 1 or 7

**Group Two:** HIST 17A, 17B or 17C

Courses used to meet this requirement may not be used to satisfy requirements for IGETC.

For updated information, access [www.assist.org](http://www.assist.org)

Effective Fall 2010.

# California State University General Education Breadth Requirements\*

Foothill College will certify completion of up to 58 quarter units of the 70-unit general education requirement for graduation from the CSU for the student who meets the following course patterns. A minimum of 45 units in GE, including all of Area A and B-4 (Math) *must be completed prior to transfer*. For updated information, consult your counselor or access [www.assist.org](http://www.assist.org). **Completion of the CSU GE requirements also qualifies students for a Foothill College Certificate of Achievement in Transfer Studies.**

## Area A—English Language & Critical Thinking

12–15 quarter units are required for admission and must be completed with a grade of C or better.

**A-1 Oral Communication:** (select one course) COMM 1A, 1AH, 1B, 1BH, 2, 3 or 4

**A-2 Written Communication:** ENGL 1A, 1AH, 1B, 1BH or ESLL 26;

**A-3 Critical Thinking:** (select one course) PHIL 1, 7, 50; ENGL 1B, 1BH, 1C, 1CH

## Area B—Scientific Inquiry & Quantitative Reasoning

12–15 quarter units. Choose one course from B-1 and one course from B-2. One course must include a laboratory. Laboratory courses are indicated with an asterisk (\*).

Complete one course from B-4.

**B-1 Physical Science:** ASTR 10A, 10B, 10BH, 10L\*; CHEM 1A\*, 1B\*, 1C\*, 12A\*, 12B\*, 12C\*, 25\*, 30A\*, 30B\*; GEOG 1\*; PHYS 2A\*, 2B\*, 2C\*, 4A\*, 4B\*, 4C\*, 4D\*, 6, 12

**B-2 Life Science (Biological):** ANTH 1, 1L\*; BIOL 1A\*, 1B\*, 1C\*, 1D, 9, 9L\*, 10\*, 12, 13\*, 14\*, 15\*, 17, 40A\*, 40B\*, 40C\*, 41\*, 45; BTEC 10; HORT 10\*

**B-4 Mathematics/Quantitative Reasoning:** (Grade C or better) CIS 18; MATH 1A, 1B, 1C, 1D, 2A, 2B, 10, 11, 12, 22, 44, 49, 51 (required for admission to CSU)

## Area C—Arts & Humanities

Complete 12–15 quarter units, including a minimum of one course from Area C-1 and one course from Area C-2. *Note: ENGL 1B is strongly recommended for students who completed PHIL 1 in Area A-3.*

**C-1 Arts (Art, Dance, Music, Theatre):** ART 1, 2A, 2AH, 2B, 2BH, 2C, 2CH, 2D, 2E, 3, 4A with 4AX, 4C with 4CX, 6, 11, 12, 13, 14, 45A with 45AX, 80; COMM 24, 30, 46; DANC 10; ENGL 42A, 42B, 42C; MUS 1, 2A, 2B, 2C, 2D, 3A, 3B, 3C, 7, 7D, 7E, 8, 8H, 10, 11A, 11B, 11C, 27, 85A, 85B; PHIL 11; PHOT 1, 8, 8H, 10, 10H, 11, 11H; THTR 1, 2A, 2B, 2C, 8, 20A with 20AL, 46; VART 1, 2C, 3; WMN 15

**C-2 Humanities (Literature, Philosophy, Foreign Languages):** CHIN 1, 2, 3, 4, 5, 6, 25A, 25B; COMM 12, 30; CRWR 6, 39A, 39B, 40, 41A, 41B, 60; ENGL 1B, 5, 5H, 7, 7H, 8, 11, 11H, 12, 14, 17, 22, 25, 25H, 26, 31, 40, 40H, 41, 42A, 42B, 42C, 46A, 46B, 46C, 48A, 48B, 48C; FA 1, 2; GERM 1, 2, 3; HIST 4A, 4B, 4C, 4CH; HUMN 1A, 1B; JAPN 1, 2, 3, 4, 5, 6, 25A, 25B, 33; LING 25, 25H, 26; PHIL 2, 4, 8, 20A, 20B, 20C, 22, 24, 25; SPAN 1, 2, 3, 4, 5, 6, 25A, 25B, 39; THTR 2A, 2B, 2C; VART 2A, 2B

## Area D—Social Sciences

Complete 12–15 quarter units from #1 and #2 below:

1. American Institutions Requirement for CSU graduation. Complete one course from each group:

**Group One:** POLI 1 **Group Two:** HIST 17A, 17B or 17C.

2. Complete at least one course from D-1 through D-0:

**D-1 Anthropology & Archaeology:** ANTH 2A, 2B, 3, 4, 5, 6, 8, 8L, 8LX, 8LY, 11, 50

**D-2 Economics:** ECON 1A, 1B, 9, 25; GEOG 5; POLI 9

**D-3 Ethnic Studies:** (Some CSU campuses have specific courses to meet this requirement.) ANTH 2B, 4, 6; ART 11; CHLD 11; COMM 12; ENGL 12, 31; HIST 10; MUS 8; PHIL 24, 25; PHOT 8, 8H; PSYC 21, 22; SOC 21, 23; SOSC 20; WMN 21

**D-4 Gender Studies:** ART 2E; COMM 10; ENGL 22; PSYC 21; SOC 21; WMN 5, 11, 15, 21

**D-5 Geography:** GEOG 2, 5, 9, 10

**D-6 History:** HIST 4A, 4B, 4C, 4CH, 8, 9, 9H, 10, 15, 16, 16H, 17A, 17B, 17C, 18, 19, 20, 23A, 24, 30; POLI 24

**D-7 Interdisciplinary Social or Behavioral Science:** CHLD 11, 55; ENGL 26; HIST 18; LING 26; PHED 2; SOC 8; SOSC 20; SPED 62; VART 8

**D-8 Political Science, Government & Legal Institutions:** ECON 9; GERM 8; HIST 30; POLI 1, 2, 2H, 3, 3H, 9, 9H, 15, 15H

**D-9 Psychology:** CHLD 50A, 55; PSYC 1, 4, 10, 14, 21, 22, 25, 30, 33, 40, 49, 55; SOC 10, 21, 30; WMN 21

**D-0 Sociology & Criminology:** PSYC 10, 21, 30; SOC 1, 8, 10, 11, 15, 20, 21, 23, 30, 40, 57; WMN 21

## Area E—Lifelong Understanding & Self-Development

A minimum of four quarter units from the following:

- |               |  |
|---------------|--|
| 1. BIOL 8     | 7. SOC 19, 40                          |
| 2. CNSL 2, 72 | 8. SPED 52, 62, 72                     |
| 3. CRLP 70    | 9. Physical Education activity courses |
| 4. HLTH 21    | (maximum allowed: 2 units)             |
| 5. PHED 4     | includes DANC 1A, 1B, 3A, 3B, 4,       |
| 6. PSYC 50    | 5, 6, 7, 9                             |

Effective Fall 2010

For updated information, access [www.assist.org](http://www.assist.org)

\*A minimum of 90 units required for the A.A./A.S. Degree, to include required courses, required electives, and graduation requirements, and these minimum proficiencies: ENGL 1A or ESLL 26, and MATH 105.

# Major & Certificate Requirements\*

## ACCOUNTING

### Program Type(s):

**AA Degree; Certificate of Achievement; Certificate of Proficiency; Career Certificate**

May be transferrable to a 4-year university.

Units required for major: 48, certificate: 9–38

### Associate Degree Requirements\*

#### Core Courses: (38 units)

ACTG 1A Financial Accounting I (5 units)

ACTG 1B Financial Accounting II (5 units)

ACTG 1C Managerial Accounting (5 units)

ACTG 64A Computerized Accounting Practice Using QuickBooks (2 units)

ACTG 64B Computerized Accounting Practice Using Excel (2 units)

ACTG 67 Tax Accounting (5 units)

BUSI 18 Business Law I (5 units)

BUSI 22 Principles of Business (4 units)

or BUSI 53 Survey of International Business (4 units)

ECON 1A Principles of Macroeconomics (5 units)

or ECON 1B Principles of Microeconomics (5 units)

#### Elective Courses: (10 units)

ACTG 51A Intermediate Accounting I (4 units)

ACTG 51B Intermediate Accounting II (4 units)

ACTG 51C Intermediate Accounting III (4 units)

ACTG 60 Accounting for Small Business (5 units)<sup>[1]</sup>

ACTG 65 Payroll & Business Tax Accounting (4 units)

ACTG 66 Cost Accounting (5 units)

ACTG 68A Advanced Tax Accounting I (4 units)

ACTG 68B Advanced Tax Accounting II (4 units)

ACTG 68C Advanced Tax Accounting III (3 units)

BUSI 19 Business Law II (4 units)

BUSI 53 Survey of International Business (4 units)<sup>[2]</sup>

BUSI 61 Investment Fundamentals (3 units)

ECON 1A Principles of Macroeconomics (5 units)<sup>[3]</sup>

ECON 1B Principles of Microeconomics (5 units)<sup>[4]</sup>

BUSI 91L Introduction to Business Information Processing (4 units)

### Certificate information

Request certificate forms at [www.foothill.edu/bss/cert/index.php](http://www.foothill.edu/bss/cert/index.php)

### Accounting Certificate of Achievement (38 units)

Awarded after completion of the core courses. General education courses are not required.

### Financial Accounting Career Certificate (22 units)

#### NON-TRANSCRIPTABLE<sup>[5]</sup>

ACTG 1A Financial Accounting I (5 units)

[1] May be taken only once for credit (either core or elective)

[2] May be taken only once for credit (either core or elective)

[3] May be taken only once for credit (either core or elective)

[4] May be taken only once for credit (either core or elective)

[5] Certificate completion will not appear on the student's transcript.

ACTG 1B Financial Accounting II (5 units)

ACTG 51A Intermediate Accounting I (4 units)

ACTG 51B Intermediate Accounting II (4 units)

ACTG 51C Intermediate Accounting III (4 units)

### Career Certificate in Tax Accounting (23 units)

#### NON-TRANSCRIPTABLE<sup>[6]</sup>

ACTG 1B Financial Accounting II (5 units)

ACTG 64A Computerized Accounting Practice using QuickBooks (2 units)

ACTG 67 Tax Accounting (5 units)

ACTG 68A Advanced Tax Accounting I (4 units)

ACTG 68B Advanced Tax Accounting II (4 units)

ACTG 68C Advanced Tax Accounting III (3 units)

### Enrolled Agent Preparation Certificate of Proficiency (16 units)

#### NON-TRANSCRIPTABLE<sup>[7]</sup>

ACTG 67 Tax Accounting (5 units)

ACTG 68A Advanced Tax Accounting I (4 units)

ACTG 68B Advanced Tax Accounting II (4 units)

ACTG 68C Advanced Tax Accounting III (3 units)

### Tax Specialist Certificate of Proficiency (13 units)

#### NON-TRANSCRIPTABLE<sup>[8]</sup>

ACTG 65 Payroll & Business Tax Accounting (4 units)

ACTG 67 Tax Accounting (5 units)

ACTG 68A Advanced Tax Accounting I (4 units)

### Bookkeeping Specialist Certificate of Proficiency (13 units)

#### NON-TRANSCRIPTABLE<sup>[9]</sup>

ACTG 60 Accounting for Small Business (5 units)

or ACTG 1A Financial Accounting I (5 units)

ACTG 64A Computerized Accounting Practice Using QuickBooks (2 units)

ACTG 64B Computerized Accounting Practice Using Excel (2 units)

ACTG 65 Payroll & Business Tax Accounting (4 units)

### Payroll Preparation Certificate of Proficiency (9 units)

#### NON-TRANSCRIPTABLE<sup>[10]</sup>

ACTG 60 Accounting for Small Business (5 units)

or ACTG 1A Financial Accounting I (5 units)

ACTG 65 Payroll & Business Tax Accounting (4 units)

## ADAPTIVE AQUATICS

### Program Type(s):

**Career Certificate**

### Career Certificate: (26 units) NON-TRANSCRIPTABLE<sup>[11]</sup>

#### Core Courses: (18 units)

[6] Certificate completion will not appear on the student's transcript.

[7] Certificate completion will not appear on the student's transcript.

[8] Certificate completion will not appear on the student's transcript.

[9] Certificate completion will not appear on the student's transcript.

[10] Certificate completion will not appear on the student's transcript.

[11] Certificate completion will not appear on the student's transcript.

\*A minimum of 90 units required for the A.A./A.S. Degree, to include required courses, required electives, and graduation requirements, and these minimum proficiencies: ENGL 1A or ESLL 26, and MATH 105.

SPED 50 Introduction to Adaptive Fitness Techniques (3 units)  
SPED 55 Geriatric Fitness Concepts (3 units)  
SPED 57 Working with Special Populations (3 units)  
SPED 73 Introduction to Aquatic Exercise (3 units)  
SPED 74 Principles of Adaptive Aqua Fitness (3 units)  
SPED 75 Internship in Adaptive Aquatics (3 units)

**Support Courses: (8 units)**

BIOL 14 Human Biology (5 units)  
BIOL 45 Introduction to Human Nutrition (4 units)  
GERN 50 Sociology of Aging (3 units)  
GERN 51 Psychology of Aging (3 units)  
GERN 52 Health & Aging (3 units)  
GERN 56 Aging & Diversity (3 units)  
HLTH 55 Emergency Response (5 units)  
PHED 8 Theory & Concepts of Exercise Physiology (4 units)  
SPED 62 Psychological Aspects of Disability (4 units)  
SPED 72 Stress, Wellness & Coping (3 units)

**ADAPTIVE FITNESS THERAPY**

**Program Type(s):**

**AA Degree; Certificate of Achievement**

Units required for major: 40, certificate: 25

**Associate Degree Requirements\***

**Core Courses: (32 units)**

BIOL 14 Human Biology (5 units)  
or PHED 8 Theory & Concepts of Exercise Physiology (4 units)  
SPED 50 Introduction to Adaptive Fitness Techniques (3 units)  
SPED 52 Positive Aging (3 units)  
SPED 54 Principles of Therapeutic Exercise (3 units)  
SPED 55 Geriatric Fitness Concepts (3 units)  
SPED 56 Functional Aspects of Adaptive Fitness (3 units)  
SPED 57 Working with Special Populations (3 units)  
SPED 62 Psychological Aspects of Disability (4 units)  
SPED 73 Introduction to Aquatic Exercise (3 units)  
GERN 56 Aging & Diversity (3 units)

**Support Courses: (8 units)**

BIOL 40A Human Anatomy & Physiology I (5 units)  
BIOL 40B Human Anatomy & Physiology II (5 units)  
BIOL 40C Human Anatomy & Physiology III (5 units)  
COMM 3 Fundamentals of Oral Communication (5 units)  
GERN 50 Sociology of Aging (3 units)  
GERN 51 Psychology of Aging (3 units)  
GERN 52 Health & Aging (3 units)  
GERN 53 Practicum in Senior Services (3 units)  
GERN 54 Continuum of Care Options (3 units)  
GERN 55 Issues in Death, Dying & Bereavement Across Cultures (3 units)  
GERN 56 Aging & Diversity (3 units)  
HLTH 55 Emergency Response (5 units)  
PSYC 1 General Psychology (5 units)  
SPED 61 Introduction to Disabilities (4 units)  
SPED 63 Learning Disabilities (4 units)

SPED 64 Disability & the Law (4 units)  
SPED 65 Fundamentals of Attention Deficit Disorders (4 units)  
SPED 66 Disability & Technology Access (4 units)  
SPED 72 Stress, Wellness & Coping (3 units)  
SPED 74 Principles of Adaptive Aqua Fitness (3 units)

**Adaptive Fitness Therapy Certificate of Achievement (25 units)**

SPED 50 Introduction to Adaptive Fitness Techniques (3 units)  
SPED 52 Positive Aging (3 units)  
SPED 54 Principles of Therapeutic Exercise (3 units)  
SPED 55 Geriatric Fitness Concepts (3 units)  
SPED 56 Functional Aspects of Adaptive Fitness (3 units)  
SPED 57 Working with Special Populations (3 units)  
SPED 62 Psychological Aspects of Disability (4 units)  
SPED 73 Introduction to Aquatic Exercise (3 units)

**AMERICAN STUDIES**

**Program Type(s):**

**AA Degree**

Units required for major: 33.5

**Associate Degree Requirements\***

**Core Courses: (25.5 units)**

ART 14 American Art (4.5 units)  
ENGL 41 Literature of Multicultural America (4 units)  
HIST 17A History of the United States to 1816 (4 units)  
HIST 17B History of the United States from 1812 to 1914 (4 units)  
MUS 8 Music of Multicultural America (4 units)  
or MUS 8H Honors Music of Multicultural America (4 units)  
POLI 1 Political Science: Introduction to American Government & Politics (5 units)

**Support Courses: (8 units)**

ANTH 4 First Peoples of North America (4 units)  
HIST 10 History of California: The Multicultural State (4 units)  
PSYC 22 Psychology of Prejudice (4 units)  
SOC 15 Law & Society (4 units)  
WMN 5 Introduction to Women's Studies (4 units)

**ANTHROPOLOGY**

**Program Type(s):**

**AA Degree; Certificate of Proficiency**

Units required for major: 32, certificate: 9–20

**Associate Degree Requirements\*<sup>[12]</sup>**

**Core Courses: (16 units)**

**Select four of the following:**

ANTH 1 Introduction to Physical Anthropology (4 units)  
ANTH 2A Cultural Anthropology (4 units)  
ANTH 3 Prehistory: The Search for Lost Civilizations (4 units)  
ANTH 4 First Peoples of North America (4 units)  
ANTH 8 Introduction to Archaeology (4 units)

[12] *De Anza Courses: All same or similar De Anza courses may be substituted (by petition) for Foothill Business & Social Science (BSS) courses and Social Science General Education requirements, regardless of units. The unit total for the AA degree remains the same.*

\*A minimum of 90 units required for the A.A./A.S. Degree, to include required courses, required electives, and graduation requirements, and these minimum proficiencies: ENGL 1A or ESLL 26, and MATH 105.

**Support Courses: (8 units)**

ANTH 1L Physical Anthropology Laboratory (1 unit)  
 ANTH 2B Patterns of Culture (4 units)  
 ANTH 5 Magic, Science & Religion (4 units)  
 ANTH 6 Peoples of Africa (4 units)  
 ANTH 8L Archaeology Laboratory (1 unit)  
 ANTH 11 Archaeological Field Methods (4 units)  
 ANTH 11B Archaeology Survey (2 units)  
 ANTH 34H Honors Institute Seminar in Anthropology (1 unit)  
 ANTH 35 Department Honors Projects in Anthropology (1 unit)  
 ANTH 36, X, Y or Z Special Projects in Anthropology (1–4 units)  
 ANTH 50 Medical Anthropology: Methods & Practice (4 units)  
 GEOG 1 Physical Geography (5 units)  
 or GEOG 2 Human Geography (4 units)

**Elective Courses: (8 units)<sup>[13]</sup>**

BIOL 1C Evolution, Systematics & Ecology (6 units)  
 BIOL 10 General Biology: Basic Principles (5 units)  
 HIST 4A History of Western Civilization to 800 AD (4 units)  
 HIST 8 History of Latin America (4 units)  
 HIST 9 History of Contemporary Europe (4 units)  
 or HIST 9H Honors History of Contemporary Europe (4 units)  
 HIST 18 Introduction to Middle Eastern Civilization (4 units)  
 HUMN 1A Humanities & the Modern Experience I (4 units)  
 ENGL 26 Language, Mind & Society (4 units)  
 or LING 26 Language, Mind & Society (4 units)  
 SOC 30 Social Psychology (4 units)  
 SOC 40 Aspects of Marriage & Family (4 units)  
 SOSC 20 Cross-Cultural Perspectives for a Multicultural Society (4 units)  
 SOSC 36 Special Projects in Social Science (1 unit)  
 WMN 5 Introduction to Women's Studies (4 units)

**Certificate information**

Awarded to the student who completes three or more courses in a specific anthropology subfield with a cumulative GPA of 3.0 or higher. Request certificate forms at [www.foothill.edu/bss/cert/index.php](http://www.foothill.edu/bss/cert/index.php)

**Medical Anthropology Certificate of Proficiency (20 units)****NON-TRANSCRIPTABLE<sup>[14]</sup>**

ANTH 1 Introduction to Physical Anthropology (4 units)  
 ANTH 50 Medical Anthropology: Methods & Practice (4 units)

**And one of the following:**

ANTH 5 Magic, Science & Religion (4 units)  
 ANTH 12 Applied Anthropology (4 units)

**And 8 units from the following:**

BIOL 14 Human Biology (5 units)  
 BIOL 40A Human Anatomy & Physiology I (5 units)  
 or BIOL 40B Human Anatomy & Physiology II (5 units)  
 PSYC 4 Introduction to Psychobiology (4 units)  
 PSYC 10 Introduction to Social Research (4 units)

[13] Students may also use courses listed under support courses for electives. One course cannot count for both support and elective units.

[14] Certificate completion will not appear on the student's transcript.

PSYC 40 Human Development (4 units)  
 SOC 19 Alcohol & Drug Abuse (4 units)  
 ANTH 34H Honors Institute Seminar in Anthropology (1 unit)  
 ANTH 35 Department Honors Projects in Anthropology (1–4 units)

**Cultural Anthropology Certificate of Proficiency (16 units)****NON-TRANSCRIPTABLE<sup>[15]</sup>**

Select 12 units from the following:

ANTH 2A Cultural Anthropology (4 units)  
 ANTH 2B Patterns of Culture (4 units)  
 ANTH 4 First Peoples of North America (4 units)  
 ANTH 5 Magic, Science & Religion (4 units)  
 ANTH 6 Peoples of Africa (4 units)  
 ANTH 12 Applied Anthropology (4 units)

**And 4 units from the following:**

ANTH 34H Honors Institute Seminar in Anthropology (1 unit)  
 ANTH 35 Department Honors Projects in Anthropology (1 unit)  
 ANTH 36, X, Y or Z Special Projects in Anthropology (1–4 units)  
 COMM 12 Intercultural Communication (5 units)  
 ENGL 25 Introduction to Descriptive & Historical Linguistics (4 units)  
 or ENGL 25H Honors Introduction to Descriptive & Historical Linguistics (4 units)  
 or LING 25 Introduction to Descriptive & Historical Linguistics (4 units)  
 or LING 25H Honors Introduction to Descriptive & Historical Linguistics (4 units)  
 ENGL 26 Language, Mind & Society (4 units)  
 or LING 26 Language, Mind and Society (4 units)  
 GEOG 2 Human Geography (4 units)  
 GEOG 12 Introduction to Geographic Information Systems (GIS) (4 units)  
 HIST 4A History of Western Civilization to 800 AD (4 units)  
 HIST 9 History of Contemporary Europe (4 units)  
 or HIST 9H Honors History of Contemporary Europe (4 units)  
 HUMN 1A Humanities & the Modern Experience I (4 units)  
 MUS 7D Contemporary Musical Styles: The Beatles in the Culture of Popular Music (4 units)  
 MUS 8 Music of Multicultural America (4 units)  
 or MUS 8H Honors Music of Multicultural America (4 units)  
 SOCS 20 Cross-Cultural Perspectives for a Multicultural Society (4 units)  
 SOC 30 Social Psychology (4 units)  
 or PSYC 30 Social Psychology (4 units)  
 SOC 40 Aspects of Marriage & Family (4 units)  
 WMN 5 Introduction to Women's Studies (4 units)

**Archaeology Certificate of Proficiency (16 units)****NON-TRANSCRIPTABLE<sup>[16]</sup>**

Select 12 units from the following:

ANTH 3 Prehistory: The Search for Lost Civilizations (4 units)  
 ANTH 4 First Peoples of North America (4 units)

[15] Certificate completion will not appear on the student's transcript.

[16] Certificate completion will not appear on the student's transcript.

\*A minimum of 90 units required for the A.A./A.S. Degree, to include required courses, required electives, and graduation requirements, and these minimum proficiencies: ENGL 1A or ESSL 26, and MATH 105.

ANTH 8 Introduction to Archaeology (4 units)  
ANTH 8L Archaeology Laboratory (1 unit)  
ANTH 11 Archaeological Field Methods (4 units)  
ANTH 11B Archaeology Survey (2 units)

**And 4 units from the following:**

HIST 4A History of Western Civilization to 800 AD (4 units)  
HIST 8 History of Latin America (4 units)  
HIST 15 History of Mexico (4 units)  
HIST 18 Introduction to Middle Eastern Civilization (4 units)  
GEOG 1 Physical Geography (5 units)  
GEOG 12 Introduction to Geographic Information Systems (GIS) (4 units)  
ANTH 34H Honors Institute Seminar in Anthropology (1 unit)  
ANTH 35 Department Honors Projects in Anthropology (1 unit)  
ANTH 36 Special Projects in Anthropology (1–4 units)

**Physical Anthropology Certificate of Proficiency (9 units)**

**NON-TRANSCRIPTABLE<sup>[17]</sup>**

ANTH 1 Introduction to Physical Anthropology (4 units)  
ANTH 1L Physical Anthropology Laboratory (1 unit)

**And 4 units from the following:**

BIOL 1C Evolution, Systematics & Ecology (6 units)  
BIOL 10 General Biology: Basic Principles (5 units)  
BIOL 12 Human Genetics (4 units)  
ANTH 34H Honors Institute Seminar in Anthropology (1 unit)  
ANTH 35 Department Honors Projects in Anthropology (1 unit)  
ANTH 36, X, Y or Z Special Projects in Anthropology (1–4 units)

**APPRENTICESHIP: ELEVATOR CONSTRUCTORS**

**Program Type(s):**

Career Certificate

**Certificate information**

Entry into any of the certificate programs requires that you fill out an application at the apprenticeship school; pass an entry exam with a score of 70 percent or better; and pass an oral examination. At the end of the program, students are required to take a state exam to receive their license card from the Department of Apprenticeship Standards. This test is not administered at Foothill College, and is coordinated at the apprenticeship school.

**Elevator Constructor Career Certificate (24 units)**

APRT 170 Introduction to the Elevator Constructor Program (3 units)  
APRT 171 PIT Structures; Guide Rails; Overhead Installation; Roping & Re-Roping (3 units)  
APRT 172 Basic Electricity; Electrical Circuits; Electromagnetism (3 units)  
APRT 173 Advanced Electricity; Voltage, Current & Resistance; DC Generators & Motors (3 units)  
APRT 174 Industry Elevator Construction Training; Construction Wiring; Doors & Operators (3 units)

[17] Certificate completion will not appear on the student's transcript.

APRT 175 Hydraulics for Elevator Constructors; Escalators & Moving Walks (3 units)  
APRT 176 Circuit Tracing; Basic Elevator Solid State Electronics (3 units)  
APRT 177 Basic Elevator Solid State Electronics II (3 units)

**APPRENTICESHIP: PIPE TRADES**

**Program Type(s):**

Career Certificate

**NON-TRANSCRIPTABLE<sup>[18]</sup>**

**Certificate information**

Entry into any of the certificate programs requires that the student complete an application at the apprenticeship school; pass an entry exam with a score of 70 percent or better; and pass an oral examination.

**Commercial Plumbing Career Certificate, San Mateo**

**(42.5 units) NON-TRANSCRIPTABLE<sup>[19]</sup>**

APPT 161 Safety/Tools/Heritage/Service (4 units)  
APPT 162 Mathematics/Science for the Plumbing Trade (4.5 units)  
APPT 163 Code/Water Supply Systems (4 units)  
APPT 164 Drawing I for the Plumbing Trades (4.5 units)  
APPT 165 Drawing II for the Plumbing Trades (4 units)  
APPT 166 Welding/Oxy-Acetylene Training (4.5 units)  
APPT 167 Steam Systems/Rigging/Pipe Fitting & Service (4 units)  
APPT 168 Medical Gas/Hydronics (4.5 units)  
APPT 169 Advanced Drawing/Layout for the Plumbing Trades (4 units)  
APPT 170 Code II/Junior Mechanics Review & Exam (4.5 units)

**Heating, Ventilation, Air Conditioning (HVAC) Refrigeration**

**Fitter Career Certificate, San Mateo (42.5 units)**

**NON-TRANSCRIPTABLE<sup>[20]</sup>**

APPT 171 Basic Refrigeration/Heritage/CFC (4 units)  
APPT 172 Refrigeration Science (4.5 units)  
APPT 173 Basic Electricity for the HVAC Service Trade (4 units)  
APPT 174 Advanced Electricity/Pneumatic DDC Introduction (4.5 units)  
APPT 175 Controls I/Electro Pneumatics (4 units)  
APPT 176 Controls II/Advanced Pneumatics Calibration/Hydronics (4.5 units)  
APPT 177 Start, Test & Balance I (4 units)  
APPT 178 Start, Test & Balance II (4.5 units)  
APPT 179 Chillers/Special Systems/HVACR Star Review (4 units)  
APPT 180 HVACR Star Review & Exit Exam (4.5 units)

**Steam Fitter Career Certificate, San Mateo (42.5 units)**

**NON-TRANSCRIPTABLE<sup>[21]</sup>**

APPT 161 Safety/Tools/Heritage/Service (4 units)  
APPT 162 Mathematics/Science for the Plumbing Trade (4.5 units)  
APPT 163 Code/Water Supply Systems (4 units)

[18] Certificate completion will not appear on the student's transcript.

[19] Certificate completion will not appear on the student's transcript.

[20] Certificate completion will not appear on the student's transcript.

[21] Certificate completion will not appear on the student's transcript.

\*A minimum of 90 units required for the A.A./A.S. Degree, to include required courses, required electives, and graduation requirements, and these minimum proficiencies: ENGL 1A or ESLL 26, and MATH 105.

APPT 164 Drawing I for the Plumbing Trades (4.5 units)  
 APPT 165 Drawing II for the Plumbing Trades (4 units)  
 APPT 166 Welding/Oxy-Acetylene Training (4.5 units)  
 APPT 167 Steam Systems/Rigging/Pipe Fitting & Service (4 units)  
 APPT 168 Medical Gas/Hydronics (4.5 units)  
 APPT 169 Advanced Drawing/Layout for the Plumbing Trades (4 units)  
 APPT 170 Code II/Junior Mechanics Review & Exam (4.5 units)

## APPRENTICESHIP: SHEET METAL

### Program Type(s):

**Career Certificate, Certificate of Achievement; Certificate of Specialization**

### Certificate information

Entry into any of the certificate programs requires that the student complete an application at the apprenticeship school; pass an entry exam with a score of 70 percent or better; and pass an oral examination.

### Sheet Metal Building Trades Certificate of Achievement (45 units)

APSM 101 SMQ-1 Trade Introduction (1.5 units)  
 APSM 102 SMQ-2 Certified Safety & Beginning Trade Math (1.5 units)  
 APSM 103 SMQ-3 Sheet Metal Tools & Shop (1.5 units)  
 APSM 104 SMQ-4 Soldering & Common Seams (1.5 units)  
 APSM 105 SMQ-5 Drafting Introduction & Views (1.5 units)  
 APSM 106 SMQ-6 Beginning Duct Fittings (1.5 units)  
 APSM 107 SMQ-7 Parallel Line Fittings (1.5 units)  
 APSM 108 SMQ-8 Triangulation Fittings (1.5 units)  
 APSM 109 SMQ-9 Radial Line Layout & Ogee Offsets (1.5 units)  
 APSM 110 SMQ-10 Basics of Architectural Sheet Metal (1.5 units)  
 APSM 111 SMQ-11 Architectural Sheet Metal (1.5 units)  
 APSM 112 SMQ-12 Field Installation (1.5 units)  
 APSM 113 SMQ-13 Welding 1: Process & Safety Overview (1.5 units)  
 APSM 114 SMQ-14 Welding 2: GMAW (1.5 units)  
 APSM 115 SMQ-15 Welding 3: GMAW (1.5 units)  
 APSM 116 SMQ-16 Plans & Specifications (1.5 units)  
 APSM 117 SMQ-17 Submittals & Shop Drawings (1.5 units)  
 APSM 118 SMQ-18 Industrial & Stainless Steel Introduction (1.5 units)  
 APSM 119 SMQ-19 HVAC Air Systems & Duct Design (1.5 units)  
 APSM 120 SMQ-20 Measuring & Sketching (1.5 units)  
 APSM 121 SMQ-21 Fabrication & Shortcuts (1.5 units)  
 APSM 122 SMQ-22 Codes & Standards (1.5 units)  
 APSM 123 SMQ-23 Residential Sheet Metal (1.5 units)  
 APSM 124 SMQ-24 Metal Roofing (1.5 units)  
 APSM 125 SMQ-25 Detailing (1.5 units)  
 APSM 126 SMQ-26 Foreman Training (1.5 units)  
 APSM 127 SMQ-27 Basic AutoCAD (1.5 units)

### And 3 of the following courses:

APSM 130 SMQ-30 Advanced Welding (1.5 units)

APSM 131 SMQ-31 CAD Detailing (Beginning CAD Duct) (1.5 units)  
 APSM 132 SMQ-32 Intermediate CAD Detailing (1.5 units)  
 APSM 133 SMQ-33 Advanced Architectural (1.5 units)  
 APSM 134 SMQ-34 Advanced Layout Fabrication (1.5 units)  
 APSM 135 SMQ-35 Project Management, Takeoffs & Estimates (1.5 units)  
 APSM 136 SMQ-36 Service Basics (1.5 units)  
 APSM 137 SMQ-37 Final HVAC Project (1.5 units)  
 APSM 138 SMQ-38 Final Architectural, Industrial, Ornamental Project (1.5 units)

### Sheet Metal Testing & Air Balance Certificate of Achievement (45 units)

APRT 143A Air Balance Test Equipment & Instruments (First Year) (4.5 units)  
 APRT 143B Temperature Measurement Instruments & Duct Systems (First Year) (4.5 units)  
 APRT 149A Electrical Systems Operation, Controls & Devices (TAB-2) (4.5 units)  
 APRT 149B HVAC Testing & Balancing Procedures (TAB-2) (4.5 units)  
 APRT 150A Air Distribution & Manufacturing Systems (TAB-3) (4.5 units)  
 APRT 150B Systems Installation & Troubleshooting (TAB-3) (4.5 units)  
 APRT 153A Control Systems & Customer Service I (TAB-4) (4.5 units)  
 APRT 153B Control Systems & Customer Service II (TAB-4) (4.5 units)  
 APRT 154A Project Management for the Test & Air Balance Industry (TAB-5) (4.5 units)  
 APRT 154B Hazardous Material Recognition for the Test & Air Balance Industry (TAB-5) (4.5 units)

### Sheet Metal Air Conditioning Service Mechanic Career Certificate (45 units) NON-TRANSCRIPTABLE<sup>[22]</sup>

APPR 183A Basic Electricity for Sheet Metal Air Conditioning Service (4.5 units)  
 APPR 183B Advanced Electricity for Sheet Metal & Air Conditioning Service (4.5 units)  
 APPR 184A Air Conditioning; Commercial Systems; Heating (Fourth-Year Service) (4.5 units)  
 APPR 184B Commercial Systems; Heat Loads; Piping (Fourth-Year Service) (4.5 units)  
 APPR 185A Basic Refrigeration for Sheet Metal Air Conditioning Service (4.5 units)  
 APPR 185B Advanced Refrigeration for Sheet Metal Air Conditioning Service (4.5 units)  
 APPR 186A Properties of Air Distribution for Sheet Metal Air Conditioning Service (4.5 units)  
 APPR 186B Refrigeration Theory for Sheet Metal Air Conditioning Service (4.5 units)

[22] Certificate completion will not appear on the student's transcript.

\*A minimum of 90 units required for the A.A./A.S. Degree, to include required courses, required electives, and graduation requirements, and these minimum proficiencies: ENGL 1A or ESLL 26, and MATH 105.

APRT 106A Sheet Metal Control Systems (Fifth-Year Service) (4.5 units)

APRT 106B Energy Management & Customer Service (Fifth-Year Service) (4.5 units)

### Sheet Metal Air Conditioning Certificate of Specialization (10 units) NON-TRANSCRIPTABLE<sup>[23]</sup>

APPR 188A Orientation; Safety & Beginning Residential Sheet Metal Installation (Specialist 1A) (2.5 units)

APPR 188B Residential Components Identification & Installation (Specialist 1B) (2.5 units)

APPR 189A Residential Systems; Duct & HVAC Systems (Specialist 2A) (2.5 units)

APPR 189B Plans & Architectural Applications for Residential Sheet Metal (Specialist 2B) (2.5 units)

### Sheet Metal Ship Yard Certificate of Specialization (7.5 units) NON-TRANSCRIPTABLE<sup>[24]</sup>

APRT 144A Introduction to Marine Sheet Metal Training for Apprentices I (2.5 units)

APRT 144B Introduction to Marine Sheet Metal Training for Apprentices II (2.5 units)

APRT 151A Intermediate Marine Sheet Metal Training for Apprentices I (2.5 units)

## APPRENTICESHIP: SOUND & COMMUNICATION

### Program Type(s):

Career Certificate NON-TRANSCRIPTABLE<sup>[25]</sup>

#### Certificate information

Entry into any of the certificate programs requires that the student complete an application at the apprenticeship school; pass an entry exam with a score of 70 percent or better; and pass an oral examination. At the end of the program, students are required to take a state exam to receive their license card from the Department of Apprenticeship Standards. This test is not administered at Foothill College, and is coordinated at the apprenticeship school.

### Sound & Communication Career Certificate (21 units) NON-TRANSCRIPTABLE<sup>[26]</sup>

APSC 111 Job Information, Safety, Test Instruments, Structured Cabling, Fiber Optics & Blueprint Reading (3.5 units)

APSC 112 DC Theory, Codes & Practices, Boxes, Connectors & Raceways (3.5 units)

APSC 121 AC Theory, Power Quality, Fire Alarm Systems & Grounding (3.5 units)

APSC 122 Security, Access Control, Telephony & Paging Systems (3.5 units)

APSC 131 Semiconductors, Nurse Call, Audio Visual Systems (3.5 units)

APSC 132 CCTV Systems, Fire/Life Safety & Voice Data Video State Certification Prep (3.5 units)

[23] Certificate completion will not appear on the student's transcript.

[24] Certificate completion will not appear on the student's transcript.

[25] Certificate completion will not appear on the student's transcript.

[26] Certificate completion will not appear on the student's transcript.

## ART GENERAL

### Program Type(s):

AA Degree, Certificate of Achievement, Certificate of Specialization

Units required for major: 46.5, certificate: 18–46.5

### Associate Degree Requirements\*

#### Core Courses: (28.5 units)

ART 1 Introduction to Art (4.5 units)

ART 4A Drawing I (3 units)<sup>[27]</sup>

ART 4B Drawing II (3 units)

ART 4C Drawing III (3 units)

or ART 4D Figure Drawing (3 units)

ART 5A Basic Two-Dimensional Design (3 units)<sup>[28]</sup>

ART 5B Three-Dimensional Design (3 units)

ART 6 Collage & Composition (3 units)

ART 20A Color (3 units)

ART 45A Beginning Ceramics Handbuilding (3 units)<sup>[29]</sup>

#### Support Courses: (Minimum 18 units)

ART 2A History of Art: History of Western Art from Prehistory through Early Christianity (4.5 units)

or ART 2AH Honors Art History: History of Western Art from Prehistory through Early Christianity (4.5 units)

ART 2B History of Western Art from the Middle Ages to the Renaissance (4.5 units)

or ART 2BH Honors History of Western Art from the Middle Ages to the Renaissance (4.5 units)

ART 2CH History of Western Art from the Baroque to Post Impressionism (4.5 units)

or ART 2CH Honors History of Western Art from the Baroque to Post Impressionism (4.5 units)

ART 2D African, Oceanic & Native American Art (4.5 units)

ART 2E A History of Women in Art (4.5 units)

ART 3 Modern Art & Contemporary Thought (4.5 units)

ART 4C Drawing III (3 units)

ART 4D Figure Drawing (3 units)

ART 4E Portrait Drawing (3 units)

ART 8 Basic Perspective Drawing (3 units)

ART 11 Introduction to Mexican Art & Architecture (4 units)

ART 14 American Art (4.5 units)

ART 19A Painting (3 units)

ART 19B Painting (3 units)

ART 19C Painting (3 units)

ART 44 Ceramic Sculpture (3 units)

ART 45B Beginning Ceramics Potter's Wheel (3 units)

ART 45C Advanced Ceramics (3 units)

ART 45F Low-Temperature Ceramic Firing & Glazing Techniques (3 units)

ART 47 Watercolor (3 units)

[27] ART 4AX is required if transferring to CSU and using ART 4A to satisfy the Humanities requirement.

[28] ART 5AX is required if transferring to CSU and using ART 5A to satisfy the Humanities requirement.

[29] ART 45AX is required if transferring to CSU and using ART 45A to satisfy the Humanities requirement.

\*A minimum of 90 units required for the A.A./A.S. Degree, to include required courses, required electives, and graduation requirements, and these minimum proficiencies: ENGL 1A or ESLL 26, and MATH 105.

ART 49 Monoprinting (3 units)  
 or GID 48 Monoprinting (3 units)  
 ART 69 Introduction to Printmaking (3 units)  
 or GID 38 Printmaking I (4 units)  
 GID 39 Printmaking II (4 units)  
 ART 80 Mural Making: Community Art Project (3 units)  
 ART 86 Painting with the Computer (3 units)  
 GID 90 Book Arts I (4 units)  
 VART 20 Digital Video Production I (4 units)  
 or GID 20 Digital Video Production I (4 units)  
 GID 50 Graphic Design Studio I (4 units)  
 GID 60 Careers in the Visual Arts (2 units)  
 GID 74 Digital Art & Graphics (4 units)  
 PHOT 1 Black & White Photography I (4 units)

**Certificate of Achievement in Art/General (46.5 units)**

Awarded upon completion of the degree core and support courses. General education courses are not required.

**Certificate of Specialization in Two-Dimensional Art (24 units)**

**NON-TRANSCRIPTABLE<sup>[30]</sup>**

**Core Courses: (15 units)**

ART 4A Drawing I (3 units)  
 ART 4B Drawing II (3 units)  
 or ART 4D Figure Drawing (3 units)  
 ART 6 Collage & Composition (3 units)  
 ART 5A Basic Two-Dimensional Design (3 units)  
 ART 20A Color (3 units)

**Support Courses: (9 units)**

Select 9 units from the list of degree support courses.

**Certificate of Specialization in Painting (24 units)**

**NON-TRANSCRIPTABLE<sup>[31]</sup>**

Core Courses: (18 units)

ART 4A Drawing I (3 units)  
 ART 4B Drawing II (3 units)  
 ART 19A Painting (3 units)  
 ART 19B Painting (3 units)  
 ART 19C Painting (3 units)  
 or ART 47 Watercolor (3 units)  
 ART 20A Color (3 units)

**Support Courses: (6 units)**

Select 6 units from the list of degree support courses.

**Certificate of Specialization in Ceramics (18 units)**

**NON-TRANSCRIPTABLE<sup>[32]</sup>**

ART 44 Ceramic Sculpture (3 units)  
 ART 45A Beginning Ceramics Handbuilding (3 units)  
 ART 45B Beginning Ceramics Potter's Wheel (3 units)  
 ART 45C Advanced Ceramics (3 units)  
 ART 45F Low-Temperature Ceramic Firing & Glazing Techniques (3 units)

[30] Certificate completion will not appear on the student's transcript.

[31] Certificate completion will not appear on the student's transcript.

[32] Certificate completion will not appear on the student's transcript.

ART 72 Studio Art Portfolio Preparation (3 units)

**ART HISTORY**

**Program Type(s):**

**AA Degree; Certificate of Achievement, Certificate of Specialization**

Units required for major: 48, certificate: 18–48

**Associate Degree Requirements\***

**Core Courses: (36 units)**

ART 1 Introduction to Art (4.5 units)<sup>[33]</sup>  
 ART 2A History of Art: History of Western Art from Prehistory through Early Christianity (4.5 units)  
 or ART 2AH Honors Art History: History of Western Art from Prehistory through Early Christianity (4.5 units)  
 ART 2B History of Western Art from the Middle Ages to the Renaissance (4.5 units)  
 or ART 2BH Honors History of Western Art from the Middle Ages to the Renaissance (4.5 units)  
 ART 2C History of Western Art from the Baroque to Post Impressionism (4.5 units)  
 or ART 2CH Honors History of Western Art from the Baroque to Post Impressionism (4.5 units)  
 ART 2D African, Oceanic & Native American Art (4.5 units)  
 and/or ART 12 Introduction to Asian Art (4.5 units)  
 and/or ART 13 Introduction to Islamic Art (4.5 units)  
 ART 14 American Art (4.5 units)  
 ART 2E A History of Women in Art (4.5 units)  
 ART 3 Modern Art & Contemporary Thought (4.5 units)

**Support Courses: (12 units)**

ANTH 2A Cultural Anthropology (4 units)  
 PHIL 50 Introduction to Critical Thinking (4 units)  
 HIST 4A History of Western Civilization to 800 AD (4 units)  
 HIST 4B History of Western Civilization (4 units)  
 HIST 4C History of Western Civilization 1781–Present (4 units)  
 or HIST 4CH Honors History of Western Civilization (4 units)  
 PHOT 10 History of Photography (4 units)  
 or PHOT 10H Honors History of Photography (4 units)  
 ART 4A Drawing I (3 units)  
 Concurrent with ART 4AX Studio Art Seminar: Drawing (1 unit)

**Certificate of Achievement in Art History (48 units)**

Awarded upon completion of the core and support courses. General education courses are not required.

**Certificate of Specialization in Art History (18 units)**

**NON-TRANSCRIPTABLE<sup>[34]</sup>**

ART 1 Introduction to Art (4.5 units)  
 ART 2A History of Art: History of Western Art from Prehistory through Early Christianity (4.5 units)  
 or ART 2AH Honors Art History: History of Western Art from Prehistory through Early Christianity (4.5 units)

[33] ART 1 recommended before taking art history courses if no previous experience in art.

[34] Certificate completion will not appear on the student's transcript.

\*A minimum of 90 units required for the A.A./A.S. Degree, to include required courses, required electives, and graduation requirements, and these minimum proficiencies: ENGL 1A or ESSL 26, and MATH 105.

ART 2B History of Western Art from the Middle Ages to the Renaissance (4.5 units)  
 or ART 2BH Honors History of Western Art from the Middle Ages to the Renaissance (4.5 units)  
 ART 2C History of Western Art from the Baroque to Post Impressionism (4.5 units)  
 or ART 2CH Honors History of Western Art from the Baroque to Post Impressionism (4.5 units)  
 or any combination of core courses to total 18 units

## ART STUDIO

### Program Type(s):

#### AA Degree; Certificate of Achievement

May be transferrable to a 4-year university.

Units required for major: 53.5, certificate: 53.5

#### Associate Degree Requirements\*

##### Core Courses: (44.5 units)

ART 2A History of Art: History of Western Art from Prehistory through Early Christianity (4.5 units)  
 or ART 2AH Honors Art History: History of Western Art from Prehistory through Early Christianity (4.5 units)  
 ART 2B History of Western Art from the Middle Ages to the Renaissance (4.5 units)  
 or ART 2BH Honors History of Western Art from the Middle Ages to the Renaissance (4.5 units)  
 ART 2C History of Western Art from the Baroque to Post Impressionism (4.5 units)  
 or ART 2CH Honors History of Western Art from the Baroque to Post Impressionism (4.5 units)  
 ART 4A Drawing I (3 units)<sup>[35]</sup>  
 ART 4B Drawing II (3 units)  
 ART 4C Drawing III (3 units)  
 or ART 4D Figure Drawing (3 units)  
 ART 6 Collage & Composition (3 units)  
 ART 5A Basic Two-Dimensional Design (3 units)<sup>[36]</sup>  
 ART 5B Three-Dimensional Design (3 units)  
 or ART 45A Beginning Ceramics Handbuilding (3 units)<sup>[37]</sup>  
 ART 20A Color (3 units)  
 ART 20B Color (3 units)  
 ART 72 Studio Art Portfolio Preparation (3 units)  
 GID 74 Digital Art & Graphics (4 units)

##### Support Courses: (9 units)

Students may configure the 9 units of support courses in any manner depending upon the requirements of their transfer institution.

##### Two-Dimensional Art

ART 4C Drawing III (3 units)  
 ART 4D Figure Drawing (3 units)

[35] ART 4AX is required if transferring to CSU and using ART 4A to satisfy the Humanities requirement.

[36] ART 5AX is required if transferring to CSU and using ART 5A to satisfy the Humanities requirement.

[37] ART 45AX is required if transferring to CSU and using ART 45A to satisfy the Humanities requirement.

ART 4E Portrait Drawing (3 units)  
 ART 8 Basic Perspective Drawing (3 units)  
 ART 19A Painting (3 units)  
 ART 19B Painting (3 units)  
 ART 19C Painting (3 units)  
 ART 47 Watercolor (4 units)  
 ART 69 Introduction to Printmaking (3 units)  
 or GID 38 Printmaking I (4 units)  
 ART 86 Painting with the Computer (3 units)  
 GID 90 Book Arts I (4 units)  
 VART 20 Digital Video Production I (4 units)  
 or GID 20 Digital Video Production I (4 units)  
 GID 40 Digital Printmaking (4 units)  
 GID 50 Graphic Design Studio I (4 units)  
 GID 60 Careers in the Visual Arts (2 units)  
 GID 70 Graphic Design Drawing (4 units)  
 GID 76 Illustration & Digital Imaging (4 units)  
 PHOT 1 Black & White Photography I (4 units)  
 or PHOT 5 Introduction to Photography (4 units)

##### Three-Dimensional Art

ART 5B Three-Dimensional Design (3 units)  
 ART 44 Ceramic Sculpture (3 units)  
 ART 45A Beginning Ceramics: Handbuilding (3 units)<sup>[38]</sup>  
 ART 45B Beginning Ceramics: Potter's Wheel (3 units)  
 ART 45C Advanced Ceramics (3 units)  
 ART 45F Low-Temperature Ceramic Firing & Glazing Techniques (3 units)  
 THTR 21 Introduction to Technical Theatre (1 unit)  
 or THTR 21A Scenery & Properties Construction (3 units)

##### Art History

ART 2D African, Oceanic & Native American Art (4.5 units)  
 ART 2E A History of Women in Art (4.5 units)  
 ART 3 Modern Art & Contemporary Thought (4.5 units)  
 ART 11 Introduction to Mexican Art & Architecture (4 units)  
 ART 14 American Art (4.5 units)

##### Certificate of Achievement in Art/Studio (53.5 units)

Awarded upon completion of the degree core and support courses. General education courses are not required.

## ATHLETIC INJURY CARE: PHYSICAL EDUCATION

### Program Type(s):

#### AS Degree

Units required for major: 48

#### Associate Degree Requirements\*

##### Core Courses: (48 units)

PHED 1 Introduction to Physical Education as a Profession (4 units)  
 PHED 62A Clinical Experiences in Sports Medicine I (3 units)  
 PHED 62B Clinical Experiences in Sports Medicine II (3 units)  
 PHED 62C Clinical Experiences in Sports Medicine III (3 units)

[38] ART 45AX is required if transferring to CSU and using ART 45A to satisfy the Humanities requirement.

\*A minimum of 90 units required for the A.A./A.S. Degree, to include required courses, required electives, and graduation requirements, and these minimum proficiencies: ENGL 1A or ESSL 26, and MATH 105.

PHED 62D Clinical Experiences in Sports Medicine IV (3 units)  
 PHED 62E Clinical Experiences in Sports Medicine V (3 units)  
 PHED 67A Prevention of Athletic Injuries (3 units)  
 PHED 67B Emergency Athletic Injury Care (3 units)  
 PHED 67C Treatment & Rehabilitation of Athletic Injuries (3 units)  
 BIOL 40A Human Anatomy & Physiology I (5 units)  
 BIOL 40B Human Anatomy & Physiology II (5 units)  
 BIOL 40C Human Anatomy & Physiology III (5 units)  
 CHEM 25 Fundamentals of Chemistry (5 units)  
 or CHEM 30A Survey of Inorganic & Organic Chemistry (5 units)

**Elective Courses: (optional)**

BIOL 45 Introduction to Human Nutrition (4 units)  
 CHEM 1A General Chemistry (5 units)  
 CHEM 1B General Chemistry (5 units)  
 CHEM 1C General Chemistry & Qualitative Analysis (5 units)  
 HLTH 21 Health Education (3 units)  
 MATH 10 Elementary Statistics (5 units)  
 PHED 4 Concepts of Physical Fitness & Wellness (4 units)  
 PHED 65A PNF: Introduction to the Upper Extremity (3 units)  
 PHED 65B PNF: Introduction to the Lower Extremity (3 units)  
 PHED 66 First Aid & CPR/AED (2 units)  
 PHYS 2A General Physics (5 units)  
 PHYS 2B General Physics (5 units)  
 PHYS 2C General Physics (5 units)  
 PSYC 1 General Psychology (5 units)

**BIOLOGICAL SCIENCES**

**Program Type(s):**

**AS Degree**

Units required for major: 48

**Associate Degree Requirements\***

**Core Courses: (48 units)**

BIOL 1A Principles of Cell Biology (6 units)  
 BIOL 1B Form & Function in Plants & Animals (6 units)  
 BIOL 1C Evolution, Systematics & Ecology (6 units)  
 CHEM 1A General Chemistry (5 units)  
 CHEM 1B General Chemistry (5 units)  
 CHEM 1C General Chemistry & Qualitative Analysis (5 units)

**Students must select one option:**

Organic Chemistry (Option 1) or Physics (Option 2).

**Option 1**

CHEM 12A Organic Chemistry (6 units)  
 CHEM 12B Organic Chemistry (6 units)  
 CHEM 12C Organic Chemistry (6 units)

**Option 2**

PHYS 2A General Physics (5 units)  
 PHYS 2B General Physics (5 units)  
 PHYS 2C General Physics (5 units)  
 or PHYS 4A General Physics (Calculus) (6 units)  
 PHYS 4B General Physics (Calculus) (6 units)  
 PHYS 4C General Physics (Calculus) (6 units)

**BUSINESS ADMINISTRATION**

**Program Type(s):**

**AA Degree; Career Certificate, Certificate of Specialization**

Units required for major: 51, certificate: 3.5–26

**Associate Degree Requirements\***

**Core Courses: (23 units)**

ACTG 1A Financial Accounting I (5 units)  
 ACTG 1B Financial Accounting II (5 units)  
 BUSI 18 Business Law I (5 units)  
 BUSI 22 Principles of Business (4 units)  
 BUSI 59 Principles of Marketing (4 units)

**Support Courses: (28 units)**

ACTG 1C Managerial Accounting (5 units)  
 BUSI 19 Business Law II (4 units)  
 or BUSI 53 Survey of International Business (4 units)  
 BUSI 91L Introduction to Business Information Processing (4 units)  
 or BUSI 57 Principles of Advertising (4 units)  
 or ADVT 57 Principles of Advertising (4 units)  
 or BUSI 90A Principles of Management (4 units)  
 ECON 1A Principles of Macroeconomics (5 units)  
 ECON 1B Principles of Microeconomics (5 units)  
 MATH 10 Elementary Statistics (5 units)<sup>[39]</sup>

**CSU campuses require:**

MATH 11 Finite Mathematics (5 units)  
 MATH 12 Calculus for Business & Economics (5 units)

**University of California campuses require:**

MATH 1A Calculus (5 units)  
 MATH 1B Calculus (5 units)

**Certificate information<sup>[40]</sup>**

Request certificate information at [bss.foothill.fhda.edu/certificates](http://bss.foothill.fhda.edu/certificates).

**Career Certificate Business Management (26 units)**

**NON-TRANSCRIPTABLE<sup>[41]</sup>**

BUSI 18 Business Law I (5 units)  
 BUSI 22 Principles of Business (4 units)  
 or BUSI 53 Survey of International Business (4 units)  
 or BUSI 70 Business Professional Ethics (4 units)  
 BUSI 59 Principles of Marketing (4 units)  
 BUSI 91L Introduction to Business Information Processing (4 units)  
 BUSI 90A Principles of Management (4 units)  
 or BUSI 92 Financial Planning Practices (4 units)  
 ACTG 1A Financial Accounting I (5 units)

**Career Certificate in E-Commerce & Electronic Business**

**(26 units) NON-TRANSCRIPTABLE<sup>[42]</sup>**

BUSI 22 Principles of Business (4 units)  
 or BUSI 53 Survey of International Business (4 units)

[39] Consult your counselor for details in meeting math requirements for AA Degree, CSU and UC requirements in business administration.

[40] 55 percent of certificate coursework must be completed at Foothill College. Core coursework must be completed with a grade of C or better.

[41] Certificate completion will not appear on the student's transcript.

[42] Certificate completion will not appear on the student's transcript.

\*A minimum of 90 units required for the A.A./A.S. Degree, to include required courses, required electives, and graduation requirements, and these minimum proficiencies: ENGL 1A or ESLL 26, and MATH 105.

BUSI 59 Principles of Marketing (4 units)  
BUSI 91L Introduction Business Information Processing (4 units)  
or BUSI95 Entrepreneurship-Small Business Management (4 units)  
or CIS 60 Introduction to Business Information Systems (5 units)  
COIN 56 E-Business (5 units)  
COIN 61 Publishing on the Web Using HTML/XHTML (5 units)  
COIN 72 Web Marketing (4 units)

#### **Career Certificate in Entrepreneurship (26 units)**

##### **NON-TRANSCRIPTABLE<sup>[43]</sup>**

BUSI 95 Entrepreneurship-Small Business Management (4 units)  
BUSI 22 Principles of Business (4 units)  
BUSI 18 Business Law I (5 units)  
BUSI 59 Principles of Marketing (4 units)  
BUSI 90A Principles of Management (4 units)  
ACTG 1A Financial Accounting I (5 units)

#### **Career Certificate in Marketing (24 units)**

##### **NON-TRANSCRIPTABLE<sup>[44]</sup>**

BUSI 18 Business Law I (5 units)  
BUSI 22 Principles of Business (4 units)  
BUSI 57 Principles of Advertising (4 units)  
BUSI 58 Survey of International Marketing (4 units)  
BUSI 59 Principles of Marketing (4 units)  
BUSI 62 Principles of Salesmanship (3 units)

#### **Career Certificate in Basic Financial Literacy (16 units)**

##### **NON-TRANSCRIPTABLE<sup>[45]</sup>**

BUSI 22 Principles of Business (4 units)  
BUSI 61 Investment Fundamentals (3 units)  
BUSI 92 Financial Planning Practices (4 units)  
ACTG 1A Financial Accounting (5 units)

#### **Career Certificate in Small Business (7 units)**

##### **NON-TRANSCRIPTABLE<sup>[46]</sup>**

BUSI 95 Entrepreneurship-Small Business Management (4 units)  
BUSI 97 Management Seminar (.5 unit)  
BUSI 133A Starting a Small Business (1 unit)  
BUSI 131B How to Start a Home-Based Business (.5 unit)  
BUSI 133E Small Business Marketing, Research & Planning (1 unit)

#### **Certificate of Specialization Dispute Resolution (3.5 units)**

##### **NON-TRANSCRIPTABLE<sup>[47]</sup>**

BUSI 120 Dispute Resolution & Mediation (3.5 units)<sup>[48]</sup>

## **BUSINESS INTERNATIONAL STUDIES**

### **Program Type(s):**

**AA Degree; Certificate of Achievement; Career Certificate**

Units required for major: 51, certificate: 23–51

[43] Certificate completion will not appear on the student's transcript.

[44] Certificate completion will not appear on the student's transcript.

[45] Certificate completion will not appear on the student's transcript.

[46] Certificate completion will not appear on the student's transcript.

[47] Certificate completion will not appear on the student's transcript.

[48] This course meets the qualification of 35 hours of continuing education credit for MFTs and LCSWs as required by the California Board of Behavioral Sciences Provider number 1695.

### **Associate Degree Requirements\***

#### **Core Courses: (28 units)**

ACTG 1A Financial Accounting I (5 units)  
ACTG 1B Financial Accounting II (5 units)  
BUSI 18 Business Law I (5 units)  
BUSI 22 Principles of Business (4 units)  
BUSI 53 Survey of International Business (4 units)  
ECON 1A Principles of Macroeconomics (5 units)<sup>[49]</sup>

#### **Support Courses: (23 units)**

##### **Choose 3 courses from the following:**

ACTG 1C Managerial Accounting (5 units)  
BUSI 95E Small Business Export & Import (3 units)  
BUSI 58 Survey of International Marketing (4 units)  
ECON 1B Principles of Microeconomics (5 units)  
ECON 25 Introduction to the Global Economy (4 units)

##### **And one course from each of the following subject categories:**

###### **Geography**

GEOG 1 Physical Geography (5 units)  
GEOG 2 Human Geography (4 units)  
GEOG 10 World Regional Geography (4 units)

###### **History**

HIST 8 History of Latin America (4 units)  
HIST 9 History of Contemporary Europe (4 units)  
or HIST 9H Honors History of Contemporary Europe (4 units)  
HIST 15 History of Mexico (4 units)  
HIST 18 Introduction to Middle Eastern Civilization (4 units)  
HIST 20 History of Russia & the Soviet Union (4 units)

###### **Political Science/Language (1 Course or Language Proficiency)**

POLI 2 Comparative Government & Politics (4 units)  
or POLI 2H Honors Comparative Government & Politics (4 units)  
POLI 15 International Relations/World Politics (4 units)  
or POLI 15H Honors International Relations/World Politics (4 units)  
or advanced language proficiency in same language as in previous required courses (level 3, or tested proficiency; if student tests in this area, proficiency may count for only 4 units).

###### **Certificate information**

Request certificate information at [bss.foothill.fhda.edu/certificates](http://bss.foothill.fhda.edu/certificates).

###### **Certificate of Achievement in International Business (51 units)**

Awarded after the completion of the core and supporting courses. General education courses are not required.

###### **Career Certificate in International Business Strategy (23 units)**

##### **NON-TRANSCRIPTABLE<sup>[50]</sup>**

BUSI 53 Survey of International Business (4 units)  
BUSI 58 Survey of International Marketing (4 units)  
BUSI 95E Small Business Export & Import (3 units)  
ECON 25 Introduction to the Global Economy (4 units)

[49] ECON 1A can only be used once to meet one business international studies requirement.

[50] Certificate completion will not appear on the student's transcript.

\*A minimum of 90 units required for the A.A./A.S. Degree, to include required courses, required electives, and graduation requirements, and these minimum proficiencies: ENGL 1A or ESLL 26, and MATH 105.

**And one History course:**

- HIST 8 History of Latin America (4 units)
- or HIST 9 History of Contemporary Europe (4 units)
- or HIST 9H Honors History of Contemporary Europe (4 units)
- or HIST 15 History of Mexico (4 units)
- or HIST 18 Introduction to Middle Eastern Civilization (4 units)
- or HIST 20 History of Russia & the Soviet Union (4 units)

**And one Political Science course:**

- POLI 15 International Relations/World Politics (4 units)
- or POLI 15H Honors International Relations/World Politics (4 units)

**BUSINESS TECHNOLOGY:  
HELP DESK/TECHNICAL SUPPORT**

**Program Type(s):**

**AS Degree; Certificate of Achievement; Career Certificate; Skills Certificate**

Units required for major: 39, certificate: 10–39

**Associate Degree Requirements\***

**Core Courses: (19 units)**

- CNET 54A Networking Fundamentals & the TCP/IP Protocol Suite (CCNA I) (5 units)
- CNET 75A Microsoft Windows Vista (5 units)
- CNET 116A Introduction to PC Electronics & the Command Line (A+PREP) (5 units)
- CNET 119 Business Skills for Service/Support & Project Management (4 units)

**Support Courses: (20 units)**

- CNET 116B Windows Installation Upgrading & Troubleshooting (A+ PREP) (5 units)
- CNET 75B Windows Server 2008 Network Infrastructure (5 units)
- CNET 75C Windows Server 2008 Active Directory (5 units)
- CNET 54B Routing Protocols & Concepts (CCNA II) (5 units)

**Certificate of Achievement (39 units)**

Awarded upon completion of the core and support courses. General education courses are not required.

**Level I Career Certificate (19 units) NON-TRANSCRIPTABLE<sup>[51]</sup>**

- CNET 54A Networking Fundamentals & the TCP/IP Protocol Suite (CCNA I) (5 units)
- CNET 75A Microsoft Windows Vista (5 units)
- CNET 116A Introduction to PC Electronics & the Command Line (A + PREP) (5 units)
- CNET 119 Business Skills for Service/Support & Project Management (4 units)

**Level II Certificate of Achievement (A+) (29 units)**

Provides the class work necessary to support the acquisition of A+ certification.

- CNET 54A Networking Fundamentals & the TCP/IP Protocol Suite (CCNA I) (5 units)
- CNET 75A Microsoft Windows Vista (5 units)
- CNET 116A Introduction to PC Electronics & the Command Line (A + PREP) (5 units)
- CNET 119 Business Skills for Service/Support & Project Management (4 units)
- CNET 116B Windows Installation Upgrading & Troubleshooting (A + PREP) (5 units)
- CNET 75B Windows Server 2008 Network Infrastructure (5 units)

**A+ Preparation Skill Certificate (10 units)**

**NON-TRANSCRIPTABLE<sup>[52]</sup>**

Prepares the student to pass the A+ examination independent of other degree requirements. It is highly recommended that the student complete CNET 54A and 95A prior to beginning this sequence. CNET 116A Introduction to PC Construction Electronics & the Command Line (A+ PREP) (5 units)  
CNET 116B Windows Installation, Upgrading & Troubleshooting (A+ PREP) (5 units)

**BUSINESS TECHNOLOGY:  
OFFICE ADMINISTRATION**

**Program Type(s):**

**AS Degree; Certificate of Achievement; Skills Certificate**

Units required for major: 61.5–62.5, certificate: 25.5–57

**Associate Degree Requirements\***

**Core Courses: (56–57 units)**

**Prerequisite Skills (5.5 units)**

- CAST 102 Computer Keyboarding Skills (.5 units)
- ENGL 110 Introduction to College Writing (5 units)
- or ESLL 25 Composition & Reading (5 units)

**Office Manager: General Office Emphasis (57 units)**

- ACTG 1A Financial Accounting I (5 units)
- ACTG 1B Financial Accounting II (5 units)
- B T 51A Professional Keyboarding I (Beginning) (1 unit)
- B T 51B Professional Keyboarding II (Basic Formatting) (1 unit)
- B T 51C Proofreading I (1 unit)
- B T 59 Integrated Business Communication (5 units)
- BUSI 18 Business Law I (4 units)
- BUSI 22 Principles of Business (4 units)
- CIS 51A Preparation for Technology Careers I (3 units)
- CIS 51C Workplace Principles & Practices (4 units)
- CIS 60 Introduction to Business Information Systems (5 units)
- ENGL 1A Composition & Reading (5 units)
- or ENGL 1AH Honors Composition & Reading (5 units)
- MATH 10 Elementary Statistics (5 units)
- MATH 105 Intermediate Algebra (5 units)
- MATH 220 Elementary Algebra (4 units)

[51] Certificate completion will not appear on the student's transcript.

[52] Certificate completion will not appear on the student's transcript.

\*A minimum of 90 units required for the A.A./A.S. Degree, to include required courses, required electives, and graduation requirements, and these minimum proficiencies: ENGL 1A or ESLL 26, and MATH 105.

**Office Manager: Office Computing Emphasis (56 units)**

B T 51A Professional Keyboarding I (Beginning) (1 unit)  
 B T 51B Professional Keyboarding II (Basic Formatting) (1 unit)  
 B T 51C Proofreading I (1 unit)  
 B T 59 Integrated Business Communication (5 units)  
 BUSI 22 Principles of Business (4 units)  
 CAST 86A Introduction to Adobe InDesign (4 units)  
 CAST 93A PowerPoint: Effective Presentations (4 units)  
 CIS 51A Preparation for Technology Careers I (3 units)  
 CIS 51C Workplace Principles & Practices (4 units)  
 CIS 60 Introduction to Business Information Systems (5 units)  
 COIN 61 Publishing on the Web Using HTML/XHTML (5 units)  
 COIN 56 E-Business (5 units)  
 ENGL 1A Composition & Reading (5 units)  
 or ENGL 1AH Honors Composition & Reading (5 units)  
 MATH 220 Elementary Algebra (4 units)

**Office Manager: General Office Certificate of Achievement (62.5 units)**

Awarded upon completion of the prerequisite skills and general office emphasis core courses. General education courses are not required.

**Office Manager: Office Computing Certificate of Achievement (61.5 units)**

Awarded upon completion of the prerequisite skills and office computing emphasis core courses. General education courses are not required.

**Business Communication Skills Certificate (20 units)****NON-TRANSCRIPTABLE<sup>[53]</sup>**

B T 51A Professional Keyboarding I (Beginning) (1 unit)  
 B T 51B Professional Keyboarding II (Basic Formatting) (1 unit)  
 B T 51C Proofreading I (1 unit)  
 B T 59 Integrated Business Communication (5 units)  
 CIS 51A Preparation for Technology Careers I (3 units)  
 CIS 60 Introduction to Business Information Systems (5 units)  
 MATH 220 Elementary Algebra (4 units)

**Internet/Electronic Commerce Certificate of Achievement (39 units)**

Requires the Business Communication Skills Certificate and:  
 COIN 51 Internet Technology & Applications: Introduction (5 units)  
 COIN 56 E-Business (5 units)  
 COIN 61 Publishing on the Web Using HTML/XHTML (5 units)  
 CIS 51C Workplace Principles & Practices (4 units)

**Database/SQL Certificate of Achievement (37 units)**

Requires the Business Communication Skills Certificate and:  
 CAST 109F Using Access (3 units)  
 CIS 52A Introduction to Data Management Systems (5 units)  
 CIS 52B Oracle SQL (5 units)  
 CIS 51C Workplace Principles & Practices (4 units)

**Accounting/Spreadsheets Certificate of Achievement (36 units)**

Requires the Business Communication Skills Certificate and:  
 CAST 107D Excel Basics (3 units)

[53] Certificate completion will not appear on the student's transcript.

ACTG 1A Financial Accounting I (5 units)  
 ACTG 64A Computerized Accounting Practice Using Quickbooks (2 units)

**ACTG 64B Computerized Accounting Practice Using Excel (2 units)**

CIS 51C Workplace Principles & Practices (4 units)

**Word Processing/Desktop Publishing Certificate of Achievement (35 units)**

Requires the Business Communication Skills Certificate and:  
 CAST 104A Microsoft Word I (3 units)  
 CAST 86A Introduction to Adobe InDesign (4 units)  
 CAST 92A Introduction to Adobe Photoshop (4 units)  
 CIS 51C Workplace Principles & Practices (4 units)

**CHEMISTRY****Program Type(s):****AS Degree**

Units required for major: 60

**Associate Degree Requirements\*****Core Courses: (60 units)****Chemistry: 33 units:**

CHEM 1A General Chemistry (5 units)  
 CHEM 1B General Chemistry (5 units)  
 CHEM 1C General Chemistry & Qualitative Analysis (5 units)  
 CHEM 12A Organic Chemistry (6 units)  
 CHEM 12B Organic Chemistry (6 units)  
 CHEM 12C Organic Chemistry (6 units)

**Mathematics: 15 units:**

MATH 1A Calculus (5 units)  
 MATH 1B Calculus (5 units)  
 MATH 1C Calculus (5 units)  
 MATH 1D Calculus (5 units)  
 MATH 2A Differential Equations (5 units)

**Physics: 12 units:**

PHYS 4A General Physics-Calculus (6 units)  
 PHYS 4B General Physics-Calculus (6 units)  
 PHYS 4C General Physics-Calculus (6 units)  
 PHYS 4D General Physics-Calculus (6 units)

**CHILD DEVELOPMENT****Program Type(s):****AA Degree; Certificate of Achievement; Certificate of Specialization**

May be transferrable to a 4-year university.

Units required for major: 40, certificate: 24–80

**Associate Degree Requirements\*****Core Courses: (15 units)**

CHLD 55 Child Growth & Development (5 units)  
 CHLD 56N Introduction to Child Development (4 units)  
 CHLD 88 Child, Family & Community (4 units)  
 CHLD 88B Positive Behavior Management (2 units)

\*A minimum of 90 units required for the A.A./A.S. Degree, to include required courses, required electives, and graduation requirements, and these minimum proficiencies: ENGL 1A or ESLL 26, and MATH 105.

**Support Courses: (22 units)**

CHLD 11 Affirming Diversity in Education (4 units)  
 CHLD 56 Observation Techniques (4 units)  
 CHLD 72 Language Development (3 units)  
 CHLD 86B Practicum Student Teaching in an Early Childhood Program (5 units)  
 CHLD 95 Health, Safety & Nutrition in Children's Programs (3 units)

**And one of the following:**

CHLD 59 Working with School-Age Children: Principles & Practices (3 units)  
 CHLD 79 Caring for Infants & Toddlers in Groups (3 units)  
 CHLD 89 Curriculum for Early Care & Education Programs (3 units)

**Elective Courses: (3 units)**

ENGL 8 Children's Literature (4 units)  
 CHLD 50 School-Age Child (5–12): Behavior & Development (3 units)  
 CHLD 50A Infant/Toddler Development (3 units)  
 CHLD 50B Preschool Years: Ages 3 to 6 (3 units)  
 CHLD 53NC Supporting Children with Special Needs in Children's Programs (3 units)  
 CHLD 53NP Atypical Development in the Early Years (3 units)  
 CHLD 59 Working with School-Age Children: Principles & Practices (3 units) (if not used as a support course)  
 CHLD 63N Artistic & Creative Development (3 units)  
 CHLD 64N Building Relationships Between Parents & Children (1 unit)  
 CHLD 68–68Z Topics/Projects in Child Development (1–4 units)  
 CHLD 71 Planning Creative Art Activities for Children (1 unit)  
 CHLD 73 Music & Movement in the Early Years (3 units)  
 CHLD 74 Science & Nature (1 unit)  
 CHLD 79 Caring for Infants & Toddlers in Groups (3 units) (if not used as a support course)  
 CHLD 82 Planning Creative Dramatics (1 unit)  
 CHLD 85 Literacy & Literature in Preschool Education (3 units)  
 CHLD 86A Mentoring & Professional Development of Early Childhood Professionals (4 units)  
 CHLD 89 Curriculum for Early Care & Education Programs (3 units) (if not used as a support course)  
 CHLD 90B Administration & Supervision: Designing & Starting Child Care Facilities (4 units)  
 CHLD 90C Administration & Supervision: Program Operation (4 units)  
 CHLD 91 Administration & Supervision: Adult Supervision (4 units)  
 PSYC 1 General Psychology (5 units)  
 PSYC 14 Childhood & Adolescence (4 units)

**Certificate information**

Request certificate forms at [www.foothill.edu/bss/cert/index.php](http://www.foothill.edu/bss/cert/index.php)

**Infant Toddler Development Certificate of Specialization (24 units) NON-TRANSCRIPTABLE<sup>[54]</sup>**

Meets the requirements for the California Commission on Teacher Credentialing Child Development Associate Teacher Permit.

**Core Courses: (15 units)**

CHLD 55 Child Growth & Development (5 units)  
 CHLD 56N Introduction to Child Development (4 units)  
 CHLD 88 Child, Family & Community (4 units)  
 CHLD 88B Positive Behavior Management (2 units)

**And the following:**

CHLD 50A Infant/Toddler Development (3 units)  
 CHLD 53NP Atypical Development in the Early Years (3 units)  
 CHLD 79 Caring for Infants & Toddlers in Groups (3 units)

**Early Childhood Education Certificate of Achievement (25 units)**

Meets the requirements for the California Commission on Teacher Credentialing Child Development Associate Teacher Permit.

**Core Courses: (15 units)**

CHLD 55 Child Growth & Development (5 units)  
 CHLD 56N Introduction to Child Development (4 units)  
 CHLD 88 Child, Family & Community (4 units)  
 CHLD 88B Positive Behavior Management (2 units)

**And the following:**

CHLD 11 Affirming Diversity in Education (4 units)  
 CHLD 53NP Atypical Development in the Early Years (3 units)  
 CHLD 89 Curriculum for Early Care & Education Programs (3 units)

**School-Age Child Care Certificate of Specialization (25 units) NON-TRANSCRIPTABLE<sup>[55]</sup>**

Meets the requirements for the California Commission on Teacher Credentialing Child Development Associate Teacher Permit.

**Core Courses: (15 units)**

CHLD 55 Child Growth & Development (5 units)  
 CHLD 56N Introduction to Child Development (4 units)  
 CHLD 88 Child, Family & Community (4 units)  
 CHLD 88B Positive Behavior Management (2 units)

**And the following:**

CHLD 50 School-Age Child (5–12): Behavior & Development (3 units)  
 CHLD 59 Working with School-Age Children: Principles & Practices (3 units)  
 ENGL 8 Children's Literature (4 units)

**Inclusion & Children with Special Needs Certificate of Specialization (25 units) NON-TRANSCRIPTABLE<sup>[56]</sup>**

Meets the requirements for the California Commission on Teacher Credentialing Child Development Associate Teacher Permit.

**Core Courses: (15 units)**

CHLD 55 Child Growth & Development (5 units)  
 CHLD 56N Introduction to Child Development (4 units)

[54] Certificate completion will not appear on the student's transcript.

[55] Certificate completion will not appear on the student's transcript.

[56] Certificate completion will not appear on the student's transcript.

\*A minimum of 90 units required for the A.A./A.S. Degree, to include required courses, required electives, and graduation requirements, and these minimum proficiencies: ENGL 1A or ESLL 26, and MATH 105.

CHLD 88 Child, Family & Community (4 units)  
CHLD 88B Positive Behavior Management (2 units)

**And the following:**

CHLD 11 Affirming Diversity in Education (4 units)  
CHLD 53NC Supporting Children with Special Needs in Children's Programs (3 units)  
CHLD 53NP Atypical Development in the Early Years (3 units)

**Child Development Teacher Certificate of Achievement (64 units)**

Meets the requirements for the California Commission on Teacher Credentialing Child Development Teacher Permit. Awarded after completion of the degree core, support and elective requirements and 24 units of general education courses (one course from each of the following categories):

- |                          |                                |
|--------------------------|--------------------------------|
| 1. English/Language Arts | 3. Social Sciences             |
| 2. Math or Science       | 4. Humanities and/or Fine Arts |

**Program Supervision & Mentoring Certificate of Achievement (80 units)**

Meets the requirements for the California Commission on Teacher Credentialing Child Development Site Supervisor Permit. Completion of the Child Development Teacher Certificate of Achievement (64 units)

**And the following:**

CHLD 86A Mentoring & Professional Development of Early Childhood Professionals (4 units)  
CHLD 90B Administration & Supervision: Designing & Starting Child Care Facilities (4 units)  
CHLD 90C Administration & Supervision: Program Operation (4 units)  
CHLD 91 Administration & Supervision: Adult Supervision (4 units)

**CHINESE**

**Program Type(s):**

**AA Degree; Career Certificate; Certificate of Specialization**

Units required for major: 30, certificate: 15–30

**Associate Degree Requirements\***

**Core Courses: (30 units)<sup>[57]</sup>**

**Select any 30 units from the following:**

CHIN 1 Elementary Chinese I (5 units)  
CHIN 2 Elementary Chinese II (5 units)  
CHIN 3 Elementary Chinese III (5 units)  
CHIN 4 Intermediate Chinese I (5 units)  
CHIN 5 Intermediate Chinese II (5 units)  
CHIN 6 Intermediate Chinese III (5 units)  
CHIN 13A Intermediate Conversation I (4 units)  
CHIN 13B Intermediate Conversation II (4 units)  
CHIN 14A Advanced Conversation I (4 units)  
CHIN 14B Advanced Conversation II (4 units)  
CHIN 25A Advanced Composition & Reading I (4 units)

[57] Students who can demonstrate proficiency equivalent to 1 year of college Chinese, CHIN 1, 2 and 3 can be eliminated from the core courses. However, the intermediate and advanced courses must be taken in residence at Foothill College.

CHIN 25B Advanced Composition & Reading II (4 units)

**Certificate of Specialization in Chinese Conversation (16 units) NON-TRANSCRIPTABLE<sup>[58]</sup>**

CHIN 13A Intermediate Conversation I (4 units)  
CHIN 13B Intermediate Conversation II (4 units)  
CHIN 14A Advanced Conversation II (4 units)  
CHIN 14B Intermediate Conversation II (4 units)

**Certificate of Specialization in Chinese Language (15 units)<sup>[59]</sup> NON-TRANSCRIPTABLE<sup>[60]</sup>**

CHIN 1 Elementary Chinese I (5 units)  
CHIN 2 Elementary Chinese II (5 units)  
CHIN 3 Elementary Chinese III (5 units)

**Career Certificate in Chinese Language (30 units)<sup>[61]</sup> NON-TRANSCRIPTABLE<sup>[62]</sup>**

**Select any 30 units from the following:**

CHIN 1 Elementary Chinese I (5 units)  
CHIN 2 Elementary Chinese II (5 units)  
CHIN 3 Elementary Chinese III (5 units)  
CHIN 4 Intermediate Chinese I (5 units)  
CHIN 5 Intermediate Chinese II (5 units)  
CHIN 6 Intermediate Chinese III (5 units)  
CHIN 13A Intermediate Conversation I (4 units)  
CHIN 13B Intermediate Conversation II (4 units)  
CHIN 14A Advanced Conversation II (4 units)  
CHIN 14B Intermediate Conversation II (4 units)  
CHIN 25A Advanced Composition & Reading I (4 units)  
CHIN 25B Advanced Composition & Reading II (4 units)

**COMMUNICATION STUDIES**

**Program Type(s):**

**AA Degree; Certificate of Proficiency; Career Certificate; Certificate of Specialization**

Units required for major: 27, certificate: 12–27

**Associate Degree Requirements\***

**Core Courses: (27 units)**

**General Concentration Core: (27 units)**

COMM 1A Public Speaking (5 units)  
or COMM 1AH Honors Public Speaking (5 units)

**And five courses from the following:**

COMM 1B Argumentation & Persuasion (5 units)  
or COMM 1BH Honors Argumentation & Persuasion (5 units)  
COMM 2 Interpersonal Communication (5 units)  
COMM 3 Fundamentals of Oral Communication (5 units)  
COMM 4 Group Discussion (5 units)  
COMM 10 Gender, Communication & Culture (5 units)  
COMM 12 Intercultural Communication (5 units)

[58] Certificate completion will not appear on the student's transcript.

[59] At least 10 units must be completed in residence at Foothill College.

[60] Certificate completion will not appear on the student's transcript.

[61] Students who can demonstrate proficiency equivalent to 1 year of college Chinese, CHIN 1, 2 and 3 can be eliminated from the core courses. However, the intermediate and advanced courses must be taken in residence at Foothill College.

[62] Certificate completion will not appear on the student's transcript.

\*A minimum of 90 units required for the A.A./A.S. Degree, to include required courses, required electives, and graduation requirements, and these minimum proficiencies: ENGL 1A or ESLL 26, and MATH 105.

COMM 53 Forensic Speech & Debate (4.5 units)  
COMM 54, X, Y, Z Special Projects: Intercollegiate Debate (1–5 units)  
COMM 55 Career & Leadership Communication in the Global Workplace (5 units)

**Intercultural Concentration Core: (27 units)**

COMM 10 Gender, Communication & Culture (5 units)  
COMM 12 Intercultural Communication (5 units)

**And two courses from the following:**

COMM 1A Public Speaking (5 units)  
or COMM 1AH Honors Public Speaking (5 units)  
COMM 1B Argumentation & Persuasion (5 units)  
or COMM 1BH Honors Argumentation & Persuasion (5 units)  
COMM 3 Fundamentals of Oral Communication (5 units)  
COMM 4 Group Discussion (5 units)  
COMM 53 Forensic Speech & Debate (4.5 units)  
COMM 54, X, Y, Z Special Projects: Intercollegiate Debate (1–5 units)  
COMM 55 Career & Leadership Communication in the Global Workplace (5 units)

**And one of the following:**

HIST 10 History of California: The Multicultural State (4 units)  
MUS 8 Music of Multicultural America (4 units)  
or MUS 8H Honors Music of Multicultural America (4 units)  
PSYC 22 Psychology of Prejudice (4 units)  
SOC 20 Major Social Problems (4 units)  
SOSC 20 Cross-Cultural Perspectives for a Multicultural Society (4 units)  
THTR 8 Multicultural Mosaic of Performing Arts in America (4 units)  
WMN 11 Women in Global Perspective (4 units)

**And one of the following:**

COMM 2 Interpersonal Communication (5 units)  
ANTH 4 First Peoples of North America (4 units)  
ANTH 6 Peoples of Africa (4 units)  
ENGL 5 Gay & Lesbian Literature (4 units)  
ENGL 7 Native American Literature (4 units)  
or ENGL 7H Honors Native American Literature (4 units)  
ENGL 12 African American Literature (4 units)  
ENGL 31 Latino/a Literature (4 units)  
ENGL 40 Asian American Literature (4 units)

**Rhetoric Concentration Core: (27 units)**

COMM 1A Public Speaking (5 units)  
or COMM 1AH Honors Public Speaking (5 units)  
COMM 1B Argumentation & Persuasion (5 units)  
or COMM 1BH Honors Argumentation & Persuasion (5 units)

**And two courses from the following:**

COMM 3 Fundamentals of Oral Communication (5 units)  
COMM 4 Group Discussion (5 units)  
COMM 10 Gender, Communication & Culture (5 units)  
COMM 12 Intercultural Communication (5 units)

**And two of the following:**

COMM 2 Interpersonal Communication (5 units)  
COMM 53 Forensic Speech & Debate (4.5 units)  
COMM 54, X, Y, Z Intercollegiate Speech & Debate (1–5 units)  
COMM 55 Career & Leadership Communication in the Global Workplace (5 units)  
ENGL 4 Journalism (4 units)  
ENGL 26 Language, Mind & Society (4 units)  
or LING 26 Language, Mind & Society (4 units)  
PHIL 1 Critical Thinking & Writing (5 units)  
PHIL 7 Introduction to Symbolic Logic (5 units)  
VART 2B History of Film 1945–Current (4 units)

**Career Certificate (27 units) NON-TRANSCRIPTABLE<sup>[63]</sup>**

Awarded upon the completion of the core courses from a single concentration. General Education courses are not required.

**Certificate of Specialization (17 units)**

**NON-TRANSCRIPTABLE<sup>[64]</sup>**

A minimum of any four communication courses.

**Certificate of Proficiency (12 units) NON-TRANSCRIPTABLE<sup>[65]</sup>**

A minimum of any three communication courses.

## COMPUTER SCIENCE

**Program Type(s):**

**AS Degree**

Units required for major: 54

**Associate Degree Requirements\***

Program Prerequisite: MATH 49

**Core Courses: (35 units)**

**Select one language (C++ or JAVA)**

CIS 15A Computer Science I: C++ (5 units)  
CIS 15B Computer Science II: C++ (5 units)  
CIS 15C Computer Science III: Data Structures & Algorithms C++ (5 units)  
or CIS 27A Computer Science I: JAVA (5 units)  
CIS 27B Computer Science II: JAVA (5 units)  
CIS 27C Computer Science III: Data Structures & Algorithms JAVA (5 units)  
and MATH 1A Calculus (5 units)  
MATH 1B Calculus (5 units)  
MATH 1C Calculus (5 units)  
MATH 22 Discrete Mathematics (5 units)

**Elective Courses: (19 units)**

CIS 12A Fundamentals of Visual Basic.NET Programming (5 units)  
CIS 19A Introduction to Programming with C# (5 units)  
CIS 27P JAVA for Programmers (5 units)  
CIS 27D JAVA Advanced Features (5 units)  
CIS 52A Introduction to Data Management Systems (5 units)  
CIS 52B Oracle SQL (5 units)

[63] Certificate completion will not appear on the student's transcript.

[64] Certificate completion will not appear on the student's transcript.

[65] Certificate completion will not appear on the student's transcript.

\*A minimum of 90 units required for the A.A./A.S. Degree, to include required courses, required electives, and graduation requirements, and these minimum proficiencies: ENGL 1A or ESLL 26, and MATH 105.

CIS 68A Introduction to Linux & UNIX (5 units)  
CIS 68B Linux & UNIX Shell Programming (5 units)  
CIS 78 Software Engineering (5 units)  
CNET 54A Network Fundamentals & the TCP/IP Protocol Suite (CCNA I) (5 units)  
MATH 1D Calculus (5 units)  
MATH 2A Differential Equations (5 units)  
MATH 2B Linear Algebra (5 units)  
PHYS 4A General Physics (Calculus) (6 units)

## COMPUTER SOFTWARE DEVELOPMENT

### Program Type(s):

**AS Degree; Certificate of Achievement; Career Certificate; Skills Certificate**

Units required for major: 45, certificate: 20–40

### Associate Degree Requirements\*

#### Core Courses: (25 units)

CIS 15A Computer Science I: C++ (5 units)  
CIS 15B Computer Science II: C++ (5 units)  
CIS 15C Computer Science III: Data Structures & Algorithms C++ (5 units)  
or CIS 27A Computer Science I: JAVA (5 units)  
CIS 27B Computer Science II: JAVA (5 units)  
CIS 27C Computer Science III: Data Structures & Algorithms in JAVA (5 units)  
and CIS 52A Introduction to Data Management Systems (5 units)  
CIS 78 Software Engineering (5 units)

#### Elective Courses: (20 units)

CIS 12A Fundamentals of Visual Basic.NET Programming (5 units)  
MATH 22 Discrete Mathematics (5 units)  
CIS 68A Introduction to Linux & UNIX (5 units)  
CIS 68B Linux & UNIX Shell Programming (5 units)  
CIS 27P JAVA for Programmers (5 units)  
CIS 52B Oracle SQL (5 units)

### Linux/UNIX System Operation & Administration Certificate of Achievement (40 units)

#### Core Courses (30 units):

CIS 27A Computer Science I: JAVA (5 units)  
or CIS 15A Computer Science I: C++ (5 units)  
CIS 68A Introduction to Linux & UNIX (5 units)  
CIS 68B Linux & UNIX Shell Programming (5 units)  
CIS 68C1 Linux & UNIX System Administration (5 units)  
CIS 68C2 Linux & UNIX Networking Administration (5 units)  
CNET 54A Network Fundamentals & the TCP/IP Protocol Suite (CCNA 1) (5 units)

#### Electives (10 units):

CIS 27B Computer Science II: JAVA (5 units)  
or CIS 15B Computer Science II: C++ (5 units)  
CIS 68E Programming in PERL (5 units)  
CIS 68K Introduction to Python Programming (5 units)

### Object-Oriented Software Using C++ Certificate of Achievement (40 units)

#### Core Courses (25 units):

CIS 15A Computer Science I: C++ (5 units)  
CIS 15B Computer Science II: C++ (5 units)  
CIS 15C Computer Science III: Data Structures & Algorithms C++ (5 units)  
CIS 52A Introduction to Data Management Systems (5 units)  
CIS 78 Software Engineering (5 units)

#### Electives (15 units):

CIS 12A Fundamentals of Visual Basic.NET Programming (5 units)  
CIS 19A Introduction to Programming with C# (5 units)  
CIS 68A Introduction to Linux & UNIX (5 units)  
CIS 68B Linux & UNIX Shell Programming (5 units)  
CIS 68E Programming in PERL (5 units)  
CNET 54A Network Fundamentals & the TCP/IP Protocol Suite (CCNA 1) (5 units)  
CIS 27P JAVA for Programmers (5 units)

### Object-Oriented Software Using JAVA Career Certificate (40 units) NON-TRANSCRIPTABLE<sup>[66]</sup>

#### Core Courses (25 units):

CIS 27A Computer Science I: JAVA (5 units)  
CIS 27B Computer Science II: JAVA (5 units)  
CIS 27C Computer Science III: Data Structures & Algorithms in JAVA (5 units)  
CIS 52A Introduction to Data Management Systems (5 units)  
CIS 78 Software Engineering (5 units)

#### Electives (15 units):

CIS 12A Fundamentals of Visual Basic.NET Programming (5 units)  
CIS 19A Introduction to Programming with C# (5 units)  
CIS 27D JAVA Advanced Features (5 units)  
CIS 68A Introduction to Linux & UNIX (5 units)  
CIS 68B Linux & UNIX Shell Programming (5 units)  
CIS 68E Programming in PERL (5 units)  
CNET 54A Network fundamentals & the TCP/IP Protocol Suite (CCNA 1) (5 units)

### Microsoft Certified Application Developer C# Skills Certificate (20 units) NON-TRANSCRIPTABLE<sup>[67]</sup>

CIS 19A Introduction to Programming with C# (5 units)  
CIS 19D Developing Windows-Based Applications with C# (5 units)  
CIS 19W Developing Web Applications (5 units)  
CIS 54C Microsoft SQL Server Database Development & Design (5 units)

### Linux/UNIX Skills Certificate (20 units)

#### NON-TRANSCRIPTABLE<sup>[68]</sup>

CIS 68A Introduction to Linux & UNIX (5 units)  
CNET 54A Network Fundamentals & the TCP/IP Protocol Suite (CCNA 1) (5 units)  
CIS 68C1 Linux & UNIX System Administration (5 units)

[66] Certificate completion will not appear on the student's transcript.

[67] Certificate completion will not appear on the student's transcript.

[68] Certificate completion will not appear on the student's transcript.

\*A minimum of 90 units required for the A.A./A.S. Degree, to include required courses, required electives, and graduation requirements, and these minimum proficiencies: ENGL 1A or ESLL 26, and MATH 105.

CIS 68C2 Linux & UNIX Networking Administration (5 units)

## CREATIVE WRITING

### Program Type(s):

**AA Degree; Certificate of Specialization**

Units required for major: 34, certificate: 14–15

### Associate Degree Requirements\*

#### Core Courses: (34 units)

ENGL 1B Composition, Critical Reading & Thinking (5 units)  
or ENGL 1BH Honors Composition, Critical Reading & Thinking (5 units)

CRWR 6 Introduction to Creative Writing (5 units)  
CRWR 39A Introduction to Short Fiction Writing (5 units)  
CRWR 41A Poetry Writing (5 units)

#### And one of these:

CRWR 39B Advanced Short Fiction Writing (5 units)  
CRWR 41B Advanced Poetry Writing (5 units)

#### And one of these:

CRWR 40 Introduction to Writing the Novel (5 units)  
CRWR 60 Memoir Writing (5 units)

#### And one of these:

ENGL 3 Technical Writing (5 units)  
ENGL 4 Journalism (4 units)  
ENGL 5 Gay & Lesbian Literature (4 units)  
ENGL 7 Native American Literature (4 units)  
or ENGL 7H Honors Native American Literature (4 units)  
ENGL 8 Children's Literature (4 units)  
ENGL 11 Introduction to Poetry (4 units)  
or ENGL 11H Honors Introduction to Poetry (4 units)  
ENGL 12 African American Literature (4 units)  
ENGL 14 Introduction to Contemporary Fiction (4 units)  
ENGL 17 Introduction to Shakespeare (4 units)  
ENGL 31 Latino/a Literature (4 units)  
ENGL 40 Asian American Literature (4 units)  
ENGL 41 Literature of Multicultural America (4 units)  
ENGL 46A Survey of English Literature (4 units)  
ENGL 46B Survey of English Literature (4 units)  
ENGL 46C Survey of English Literature (4 units)  
ENGL 48A Survey of Early American Literature: 1492–1864 (4 units)  
ENGL 48B American Literature in the Gilded Age: 1865–1914 (4 units)  
ENGL 48C Modern American Literature: 1914–Present (4 units)

### Certificate information

At least two of the three courses for each certificate must be completed at Foothill College.

### Certificate of Specialization in Creative Writing: Genres (15 units) NON-TRANSCRIPTABLE<sup>[69]</sup>

CRWR 6 Introduction to Creative Writing (5 units)  
CRWR 39A Introduction to Short Fiction Writing (5 units)

[69] Certificate completion will not appear on the student's transcript.

CRWR 41A Poetry Writing (5 units)

### Certificate of Specialization in Creative Writing: Fiction (15 units) NON-TRANSCRIPTABLE<sup>[70]</sup>

CRWR 6 Introduction to Creative Writing (5 units)  
CRWR 39A Introduction to Short Fiction Writing (5 units)  
CRWR 39B Advanced Short Fiction Writing (5 units)

### Certificate of Specialization in Creative Writing: Poetry (15 units) NON-TRANSCRIPTABLE<sup>[71]</sup>

CRWR 6 Introduction to Creative Writing (5 units)  
CRWR 41A Poetry Writing (5 units)  
CRWR 41B Advanced Poetry Writing (5 units)

### Certificate of Specialization in Reading & Writing: Poetry (14 units) NON-TRANSCRIPTABLE<sup>[72]</sup>

CRWR 6 Introduction to Creative Writing (5 units)  
CRWR 41A Poetry Writing (5 units)

#### and one of these:

ENGL 11 Introduction to Poetry (4 units)  
or ENGL 11H Honors Introduction to Poetry (4 units)  
ENGL 46A Survey of English Literature (4 units)  
ENGL 46B Survey of English Literature (4 units)  
ENGL 46C Survey of English Literature (4 units)  
ENGL 48A Survey of Early American Literature: 1492–1864 (4 units)  
ENGL 48B American Literature in the Gilded Age: 1865–1914 (4 units)  
ENGL 48C Modern American Literature: 1914–Present (4 units)

### Certificate of Specialization in Reading & Writing: Fiction (14 units) NON-TRANSCRIPTABLE<sup>[73]</sup>

CRWR 6 Introduction to Creative Writing (5 units)  
CRWR 39A Introduction to Short Fiction Writing (5 units)

#### and one of these:

ENGL 14 Introduction to Contemporary Fiction (4 units)  
ENGL 46A Survey of English Literature (4 units)  
ENGL 46B Survey of English Literature (4 units)  
ENGL 46C Survey of English Literature (4 units)  
ENGL 48A Survey of Early American Literature: 1492–1864 (4 units)  
ENGL 48B American Literature in the Gilded Age: 1865–1914 (4 units)  
ENGL 48C Modern American Literature: 1914–Present (4 units)

## DATABASE MANAGEMENT

### Program Type(s):

**AS Degree; Certificate of Achievement; Certificate of Proficiency; Skills Certificate**

Units required for major: 40, certificate: 15–40

[70] Certificate completion will not appear on the student's transcript.

[71] Certificate completion will not appear on the student's transcript.

[72] Certificate completion will not appear on the student's transcript.

[73] Certificate completion will not appear on the student's transcript.

\*A minimum of 90 units required for the A.A./A.S. Degree, to include required courses, required electives, and graduation requirements, and these minimum proficiencies: ENGL 1A or ESLL 26, and MATH 105.

### Associate Degree Requirements\*

#### Core Courses: (20 units)

CIS 52A Introduction to Data Management Systems (5 units)  
CIS 52B Oracle SQL (5 units)  
CIS 52J Oracle: Programming with PL/SQL (5 units)  
CIS 68A Introduction to Linux & UNIX (5 units)

#### Support Courses: (20 units)

##### Select one option:

##### Database Administration Option:

CIS 52C Database Modeling & Relational Database Design (5 units)  
CIS 52E Oracle Database Administration I (5 units)  
CIS 52F Oracle Database Administration II (5 units)  
CNET 50 Introduction to Computer Networking (5 units)

or

##### Database Developer Option:

CIS 52K Oracle Forms Developer: Build Internet Applications (5 units) and select three courses:  
CIS 52C Database Modeling & Relational Database Design (5 units)  
CIS 52E Oracle Database Administration I (5 units)  
CIS 52F Oracle Database Administration II (5 units)  
CIS 62A Data Warehousing & Web Mining (5 units)

#### Oracle Database Administration Certificate of Achievement (40 units)

CIS 52A Introduction to Data Management Systems (5 units)  
CIS 52B Oracle SQL (5 units)  
CIS 52C Database Modeling & Relational Database Design (5 units)  
CIS 52E Oracle Database Administration I (5 units)  
CIS 52F Oracle Database Administration II (5 units)  
CIS 52J Oracle: Programming with PL/SQL (5 units)  
CIS 68A Introduction to Linux & UNIX (5 units)  
CNET 50 Introduction to Computer Networking (5 units)

#### Oracle Database Developer Certificate of Achievement (40 units)

CIS 52A Introduction to Data Management Systems (5 units)  
CIS 52B Oracle SQL (5 units)  
CIS 52J Oracle: Programming with PL/SQL (5 units)  
CIS 52K Oracle Forms Developer: Build Internet Applications (5 units)  
CIS 68A Introduction to Linux & UNIX (5 units)

##### Select three:

CIS 52C Database Modeling & Relational Database Design (5 units)  
CIS 52E Oracle Database Administration I (5 units)  
CIS 52F Oracle Database Administration II (5 units)  
CIS 62A Data Warehousing & Web Mining (5 units)

#### Oracle Database Administration Skills Certificate (15 units)

##### NON-TRANSCRIPTABLE<sup>[74]</sup>

CIS 52B Oracle: SQL (5 units)

[74] Certificate completion will not appear on the student's transcript.

CIS 52E Oracle Database Administration I (5 units)  
CIS 52F Oracle Database Administration II (5 units)

#### Oracle Database Developer Skills Certificate (15 units)

##### NON-TRANSCRIPTABLE<sup>[75]</sup>

CIS 52B Oracle: SQL (5 units)  
CIS 52J Oracle: Programming with PL/SQL (5 units)  
CIS 52K Oracle Forms Developer: Build Internet Applications (5 units)

#### Open Source Databases Certificate of Proficiency (20 units)

##### NON-TRANSCRIPTABLE<sup>[76]</sup>

CIS 52C Database Modeling & Relational Database Design (5 units)  
CIS 52N PHP & MySQL (5 units)  
CIS 52Q MySQL: In Depth (5 units)  
CIS 52P PHP Programming (5 units)

#### Microsoft Certified IT Professional

##### (MCITP) Database Administration Skills Certificate (15 units)

##### NON-TRANSCRIPTABLE<sup>[77]</sup>

CIS 54C Microsoft SQL Server Database Development & Design (5 units)  
CIS 54D Microsoft SQL Server Implementation & Maintenance (5 units)  
CIS 54E Microsoft SQL Server Database Administration (5 units)

## DENTAL ASSISTING

### Program Type(s):

#### AS Degree; Certificate of Achievement

Units required for major: 45, certificate: 45

### Associate Degree Requirements\*

#### Core Courses: (45 units)

##### Fall Quarter

DA 50 Orientation to Dental Assisting (2.5 units)  
DA 51A Introduction to Chairside Dental Assisting (5.5 units)  
DA 62A Dental Sciences (2 units)  
DA 53A Introduction to Radiography (3 units)  
DA 58 Specialty Practice Procedures (1 unit)  
DA 71 Infection Control & Hazardous Waste Management (1.5 units)

##### Winter Quarter

DA 51B Intermediate Clinical Dental Assisting (2 units)  
DA 57 Office Emergency Procedures (2 units)  
DA 62B Dental Sciences (2 units)  
DA 53B Dental Radiography (2 units)  
DA 56 Dental Health Education (1 unit)  
DA 60A Dental Office Business Practices I (2 units)  
DA 73 Dental Assisting Supervised Clinic (3 units)

##### Spring Quarter

DA 51C Advance Dental Assisting Skills (3 units)  
DA 53C Dental Radiography (1 unit)  
DA 62C Dental Sciences (2 units)

[75] Certificate completion will not appear on the student's transcript.

[76] Certificate completion will not appear on the student's transcript.

[77] Certificate completion will not appear on the student's transcript.

\*A minimum of 90 units required for the A.A./A.S. Degree, to include required courses, required electives, and graduation requirements, and these minimum proficiencies: ENGL 1A or ESLL 26, and MATH 105.

DA 60B Dental Office Business Practices (3 units)  
DA 63 Special Patient Populations (1 unit)  
DA 74 Dental Assisting Clinical Practice (3 units)  
DA 85 RDA Review (1 unit)

#### Summer Session

DA 88 Pit & Fissure Sealants (1.5 units)

#### Certificate of Achievement in Dental Assisting (45 units)

Awarded upon completion of the core courses and cardiopulmonary resuscitation certificate (Health Care Provider, American Heart Association; eligibility for ENGL 110 (or equivalent) or ESLL 25 (or equivalent); MATH 230 completion (or equivalent on the Foothill College math assessment test).

### DENTAL HYGIENE

#### Program Type(s):

##### AS Degree

Units required for major: 124

##### Associate Degree Requirements\*

##### Core Courses: (124 units)

##### First Year

##### Summer Session

D H 50 Orientation to Dental Hygiene (1 unit)

##### Fall Quarter

D H 52A Oral Biology (3 units)

D H 53 Assessment Procedures in the Dental Hygiene Process (4 units)

D H 54 Preclinical Dental Hygiene (4 units)

D H 59 Survey of Dentistry (1 unit)

D H 60A Introduction to Dental Radiography (2 units)

BIOL 40A Human Anatomy & Physiology I (5 units)

BIOL 58 Fundamentals of Pharmacology (4 units)

PSYC 1 General Psychology (5 units)

##### Winter Quarter

D H 52B Oral Biology (3 units)

D H 60B Dental Radiography (1 unit)

D H 61A Clinical Technique (6 units)

D H 71 Office Emergency Procedures (2 units)

D H 72 Dental Materials (3 units)

D H 73 Dental Health Education (2 units)

BIOL 40B Human Anatomy & Physiology II (5 units)

BIOL 41 Microbiology (6 units)

##### Spring Quarter

D H 55A Fundamentals of Pathology I (2 units)

D H 56 Applied Pharmacology in Dentistry (2 units)

D H 57A Periodontics (2 units)

D H 61B Introduction to Clinic (4 units)

D H 68A Radiographic Interpretation (2 unit)

BIOL 40C Human Anatomy & Physiology III (5 units)

BIOL 45 Introduction to Human Nutrition (4 units)

#### Summer Session

D H 62A Clinical Dental Hygiene (3.5 units)

D H 65 Clinical Local Anesthesia (2.5 units)

#### Second Year

##### Fall Quarter

D H 55B Fundamentals of Pathology (2 units)

D H 57B Periodontics (2 units)

D H 60C Dental Radiography (.5 unit)

D H 62B Clinical Dental Hygiene (5 units)

D H 63C Community Dental Health (3 units)

D H 66 Soft Tissue Curettage (1 unit)

D H 75A Clinical Dental Hygiene Theory (1.5 units)

HLTH 21 Health Education (3 units)

##### Winter Quarter

D H 60D Dental Radiography (.5 unit)

D H 62C Clinical Dental Hygiene (5 units)

D H 63D Community Dental Health II (3 units)

D H 67 Nitrous Oxide/Oxygen Analgesia (1 unit)

D H 75B Clinical Dental Hygiene Theory (1.5 units)

##### Spring Quarter

D H 57C Periodontics (2 units)

D H 60E Dental Radiography (.5 unit)

D H 62D Clinical Dental Hygiene (5 units)

D H 64 Ethics, Law & Dental Office Practices (2 units)

D H 75C Clinical Dental Hygiene Theory (1.5 units)

### DIAGNOSTIC MEDICAL SONOGRAPHY

#### Program Type(s):

##### AS Degree (pending state approval); Certificate of Achievement

Units required for major: 96, certificate: 96

##### Core Courses: (96 units)

##### Fall Quarter

DMS 50A Diagnostic Medical Sonography Principles & Protocols (4 units)

DMS 50B Sonography & Patient Care (2 units)

DMS 60A Critique & Pathology I (2 units)

DMS 72A Diagnostic Medical Sonography Procedures & Applications (8 units)

##### Winter Quarter

DMS 51A Sectional Anatomy (3 units)

DMS 53A Diagnostic Medical Sonography I (2 units)

DMS 54A Gynecology (2 units)

DMS 60B Critique & Pathology II (1 unit)

DMS 70A Clinical Preceptorship I (8.5 units) (32 hrs/wk for 13 wks)

##### Spring Quarter

DMS 52A Physical Principles of Diagnostic Medical Sonography I (2 units)

DMS 53B Diagnostic Medical Sonography II (2 units)

DMS 54B Gynecology & Obstetrics (2 units)

DMS 60C Critique & Pathology III (1 unit)

DMS 70B Clinical Preceptorship II (8 units) (32 hrs/wk for 12 wks)

\*A minimum of 90 units required for the A.A./A.S. Degree, to include required courses, required electives, and graduation requirements, and these minimum proficiencies: ENGL 1A or ESLL 26, and MATH 105.

### Summer Session

DMS 52B Physical Principles of Diagnostic Medical Sonography II (2 units)  
DMS 53C Diagnostic Medical Sonography III (2 units)  
DMS 55A Obstetrics I (2 units)  
DMS 60D Critique & Pathology IV (1 unit)  
DMS 70C Clinical Preceptorship III (8.5 units) (32 hrs/wk for 13 wks)

### Fall Quarter

DMS 56A Vascular Sonography (3 units)  
DMS 55B Obstetrics II (2 units)  
DMS 60E Critique & Pathology V (1 unit)  
DMS 70D Clinical Preceptorship IV (8.5 units) (32 hrs/wk for 13 wks)  
DMS 72E Diagnostic Medical Sonography Procedures & Applications (2 units)

### Winter Quarter

DMS 52C Physical Principles of Diagnostic Medical Sonography III (2 units)  
DMS 56B Advanced Applications of Vascular Technology (2 units)  
DMS 60F Critique & Pathology VI (1 unit)  
DMS 70E Clinical Preceptorship V (8.5 units) (32 hrs/wk for 13 wks)  
DMS 80A Advanced Sonographic Principles (3 units)

## ECONOMICS

### Program Type(s):

#### AA Degree

Units required for major: 30

#### Associate Degree Requirements\*

##### Core Courses: (18 units)

ECON 1A Principles of Macroeconomics (5 units)  
ECON 1B Principles of Microeconomics (5 units)  
ECON 9 Political Economy (4 units)  
ECON 25 Introduction to the Global Economy (4 units)

##### Support Courses: (8 units)

BUSI 53 Survey of International Business (4 units)  
GEOG 5 Introduction to Economic Geography (4 units)  
or GEOG 10 World Regional Geography (4 units)  
MATH 10 Elementary Statistics (5 units)  
MATH 1A Calculus (5 units)

##### Elective Courses: (4 units)<sup>[78]</sup>

HIST 4A History of Western Civilization to 800 AD (4 units)  
HIST 4B History of Western Civilization II (4 units)  
HIST 4C History of Western Civilization 1789–Present (4 units)  
or HIST 4CH Honors History of Western Civilization (4 units)  
HIST 8 History of Latin American (4 units)  
HIST 9 History of Contemporary Europe (4 units)  
or HIST 9H Honors History of Contemporary Europe (4 units)  
HIST 17A History of the United States to 1816 (4 units)  
HIST 18 Introduction to Middle Eastern Civilization (4 units)  
POLI 3 Introduction to Political Philosophy/Political Theory (5 units)

[78] Students may also use courses listed under support courses for electives.

or POLI 3H Honors Introduction to Political Philosophy/  
Political Theory (5 units)  
POLI 15 International Relations/World Politics (4 units)  
or POLI 15H Honors International Relations/World Politics  
(4 units)

## EMERGENCY MEDICAL TECHNICIAN (EMT)

### Program Type(s):

#### Career Certificate NON-TRANSCRIPTABLE<sup>[79]</sup>

Emergency Medical Technician Career Certificate (7 units)  
EMT 304 Emergency Medical Technician: Basic Part A (3 units)  
EMT 305 Emergency Medical Technician: Basic Part B (4 units)

## ENGINEERING

### Program Type(s):

#### AS Degree

Units required for major: 68

#### Associate Degree Requirements\*

##### Core Courses: (48 units)

CHEM 1A General Chemistry (5 units)  
CHEM 1B General Chemistry (5 units)  
CIS 15A Computer Science I : C++ (5 units)  
MATH 1B Calculus (5 units)  
MATH 1C Calculus (5 units)  
MATH 1D Calculus (5 units)  
PHYS 4A General Physics (Calculus) (6 units)  
PHYS 4B General Physics (Calculus) (6 units)  
PHYS 4C General Physics (Calculus) (6 units)

##### Support Courses: (10 units)

MATH 2A Differential Equations (5 units)  
MATH 2B Linear Algebra (5 units)

##### Elective Courses: (10 units)

ENGR 10 Introduction to Engineering (4 units)  
ENGR 35 Statics (5 units)  
ENGR 45 Properties of Materials (5 units)  
ENGR 37 Introduction to Circuit Analysis (5 units)  
PHYS 4D General Physics (Calculus) (6 units)  
NANO 51 Introduction to Nanotechnology (5 units)

## ENGLISH

### Program Type(s):

#### AA Degree; Certificate of Specialization

Units required for major: 33, certificate: 12

#### Associate Degree Requirements\*

##### Core Courses: (33 units)

ENGL 1B Composition, Critical Reading & Thinking (5 units)  
or ENGL 1BH Honors Composition, Critical Reading &  
Thinking (5 units)  
and ENGL 46A Survey of English Literature (4 units)  
ENGL 46B Survey of English Literature (4 units)  
ENGL 46C Survey of English Literature (4 units)

[79] Certificate completion will not appear on the student's transcript.

\*A minimum of 90 units required for the A.A./A.S. Degree, to include required courses, required electives, and graduation requirements, and these minimum proficiencies: ENGL 1A or ESLL 26, and MATH 105.

or ENGL 48A Survey of American Literature: 1492–1864 (4 units)  
ENGL 48B American Literature in the Gilded Age: 1865–1914 (4 units)  
ENGL 48C Modern American Literature: 1914–Present (4 units)

**And two of these:**

ENGL 8 Children’s Literature (4 units)  
ENGL 11 Introduction to Poetry (4 units)  
or ENGL 11H Honors Introduction to Poetry (4 units)  
ENGL 14 Introduction to Contemporary Fiction (4 units)  
ENGL 17 Introduction to Shakespeare (4 units)

**And one of these:**

ENGL 23 Modern English: Function & Grammar (4 units)  
ENGL 25 Introduction to Descriptive & Historical Linguistics (4 units)  
or ENGL 25H Honors Introduction to Descriptive & Historical Linguistics (4 units)  
or LING 25 Introduction to Descriptive & Historical Linguistics (4 units)  
or LING 25H Honors Introduction to Descriptive & Historical Linguistics (4 units)  
ENGL 26 Language, Mind & Society (4 units)  
or LING 26 Language, Mind & Society (4 units)

**And one of these:**

ENGL 5 Gay & Lesbian Literature (4 units)  
ENGL 7 Native American Literature (4 units)  
or ENGL 7H Honors Native American Literature (4 units)  
ENGL 12 African American Literature (4 units)  
ENGL 22 Women Writers (4 units)  
ENGL 31 Latino/a Literature (4 units)  
ENGL 40 Asian American Literature (4 units)  
ENGL 41 Literature of Multicultural America (4 units)

**Support Courses: (19 units)**

**Optional/Recommended Courses**

ENGL 1C Advanced Composition (4 units)  
or ENGL 1CH Honors Advanced Composition (4 units)  
CRWR 6 Introduction to Creative Writing (5 units)  
CRWR 39A Introduction to Short Fiction Writing (5 units)  
CRWR 41A Poetry Writing (5 units)

**Certificate of Specialization in American Literature (12 units) NON-TRANSCRIPTABLE<sup>[80]</sup>**

ENGL 7 Native American Literature (4 units)  
or ENGL 7H Honors Native American Literature (4 units)  
ENGL 12 African American Literature (4 units)  
ENGL 31 Latino/a Literature (4 units)  
ENGL 40 Asian American Literature (4 units)  
ENGL 41 Literature of Multicultural America (4 units)  
ENGL 48A Survey of American Literature: 1492–1864 (4 units)  
ENGL 48B American Literature in the Gilded Age: 1865–1914 (4 units)  
ENGL 48C Modern American Literature: 1914–Present (4 units)

[80] Certificate completion will not appear on the student’s transcript.

**Certificate of Specialization in British Literature (12 units) NON-TRANSCRIPTABLE<sup>[81]</sup>**

ENGL 17 Introduction to Shakespeare (4 units)  
ENGL 46A Survey of English Literature (4 units)  
ENGL 46B Survey of English Literature (4 units)  
ENGL 46C Survey of English Literature (4 units)

**Certificate of Specialization in Literary Genres (12 units) NON-TRANSCRIPTABLE<sup>[82]</sup>**

ENGL 8 Children’s Literature (4 units)  
ENGL 11 Introduction to Poetry (4 units)  
or ENGL 11H Honors Introduction to Poetry (4 units)  
ENGL 14 Introduction to Contemporary Fiction (4 units)  
ENGL 17 Introduction to Shakespeare (4 units)

**Certificate of Specialization in Multicultural Literature (12 units) NON-TRANSCRIPTABLE<sup>[83]</sup>**

ENGL 5 Gay & Lesbian Literature (4 units)  
ENGL 7 Native American Literature (4 units)  
or ENGL 7H Honors Native American Literature (4 units)  
ENGL 12 African American Literature (4 units)  
ENGL 22 Women Writers (4 units)  
ENGL 31 Latino/a Literature (4 units)  
ENGL 40 Asian American Literature (4 units)  
ENGL 41 Literature of Multicultural America (4 units)

**Certificate of Specialization in Written Communication (12 units) NON-TRANSCRIPTABLE<sup>[84]</sup>**

ENGL 1A Composition & Reading (5 units)  
or ENGL 1AH Honors Composition & Reading (5 units)  
ENGL 1B Composition, Critical Reading & Thinking (5 units)  
or ENGL 1BH Honors Composition, Critical Reading & Thinking (5 units)  
ENGL 1C Advanced Composition (4 units)  
or ENGL 1CH Honors Advanced Composition (4 units)  
ENGL 3 Technical Writing (5 units)  
ENGL 4 Journalism (4 units)  
ENGL 23 Modern English: Function & Grammar (4 units)  
ENGL 54 Professional Writing Skills (4 units)

**Certificate of Specialization in Linguistics (12 units) NON-TRANSCRIPTABLE<sup>[85]</sup>**

ENGL 23 Modern English: Function & Grammar (4 units)  
ENGL 25 Introduction to Descriptive & Historical Linguistics (4 units)  
or ENGL 25H Honors Introduction to Descriptive & Historical Linguistics (4 units)  
or LING 25 Introduction to Descriptive & Historical Linguistics (4 units)  
or LING 25H Honors Introduction to Descriptive & Historical Linguistics (4 units)

[81] Certificate completion will not appear on the student’s transcript.

[82] Certificate completion will not appear on the student’s transcript.

[83] Certificate completion will not appear on the student’s transcript.

[84] Certificate completion will not appear on the student’s transcript.

[85] Certificate completion will not appear on the student’s transcript.

\*A minimum of 90 units required for the A.A./A.S. Degree, to include required courses, required electives, and graduation requirements, and these minimum proficiencies: ENGL 1A or ESLL 26, and MATH 105.

ENGL 26 Language, Mind & Society (4 units)  
or LING 26 Language, Mind & Society (4 units)

## ENTERPRISE NETWORKING

### Program Type(s):

#### AS Degree; Certificate of Proficiency

Units required for major: 55, certificate: 15–25

#### Associate Degree Requirements\*

##### Core Courses: (45 units)

CIS 68A Introduction to Linux & UNIX (5 units)  
CIS 68C1 Linux & UNIX Systems Administration (5 units)  
CNET 54A Networking Fundamentals & the TCP/IP Protocol Suite (CCNA I) (5 units)  
CNET 54B Routing Protocols & Concepts (CCNA II) (5 units)  
CNET 75A Microsoft Windows Vista (5 units)  
CNET 75B Windows Server 2008 Network Infrastructure (5 units)  
CNET 56A Introduction to Network Security (5 units)  
CNET 56B Intrusion Detection, Awareness Analysis & Prevention (5 units)  
CNET 65A Wireless Network Administration (5 units)  
or CNET 54N Fundamentals of CISCO Wireless LANs (5 units)

##### Support Courses: (10 units)

Select one of the following emphasis:

##### MCITP Emphasis (10 units)

CNET 75C Windows Server 2008 Active Directory (5 units)  
CNET 60F Microsoft Windows 2003 Exchange Server (5 units)

##### CCNA Emphasis (10 units)

CNET 54C LAN Switching & Wireless Networks (CCNA III) (5 units)  
CNET 54D WAN Technologies (CCNA IV) (5 units)

##### UNIX Emphasis (10 units)

CIS 68B Linux & UNIX Shell Programming (5 units)  
CIS 68C2 Linux & UNIX Networking Administration (5 units)

##### Wireless Emphasis (10 units)

CNET 65B Wireless Network Security (5 units)  
CNET 65C Wireless Network Analysis (5 units)

##### Security Emphasis (10 units)

CNET 56E Windows XP/2000/2003 System Security (5 units)  
CNET 56F Linux & UNIX System Security (5 units)

##### MCITP Server Administrator Certificate of Proficiency (25 units)

###### NON-TRANSCRIPTABLE<sup>[86]</sup>

CNET 75A Microsoft Windows Vista (5 units)  
CNET 75B Windows Server 2008 Network Infrastructure (5 units)  
CNET 75C Windows Server 2008 Active Directory (5 units)  
CNET 75E Windows Server 2008 Server Administrator (5 units)  
CNET 60F Microsoft Windows 2003 Exchange Server (5 units)

##### MCITP Enterprise Administrator Certificate of Proficiency

###### (25 units) NON-TRANSCRIPTABLE<sup>[87]</sup>

CNET 75A Microsoft Windows Vista (5 units)

[86] Certificate completion will not appear on the student's transcript.

[87] Certificate completion will not appear on the student's transcript.

CNET 75B Windows Server 2008 Network Infrastructure (5 units)  
CNET 75C Windows Server 2008 Active Directory (5 units)  
CNET 75D Windows Server 2008 Application Platform (5 units)  
CNET 75F Windows Server 2008 Enterprise Administrator (5 units)

##### Network Security Certificate of Proficiency (25 units)

###### NON-TRANSCRIPTABLE<sup>[88]</sup>

CNET 54A Networking Fundamentals & the TCP/IP Protocol Suite (CCNA I) (5 units)  
CNET 56A Introduction to Network Security (5 units)  
CNET 56B Intrusion Detection, Awareness, Analysis & Prevention (5 units)  
and  
CNET 56E Windows XP/2000/2003 System Security (5 units)  
CNET 56F Linux & UNIX System Security (5 units)  
or CNET 54L Network Security I, Firewalls, Access, Control & Identity Management (5 units)  
CNET 54M Cisco Network Security II: Virtual Private Networks, Intrusion Detection Systems & Intrusion Prevention Systems (5 units)

##### Cisco Academy CCNA Certificate of Proficiency (20 units)

###### NON-TRANSCRIPTABLE<sup>[89]</sup>

CNET 54A Networking Fundamentals & the TCP/IP Protocol Suite (CCNA I) (5 units)  
CNET 54B Routing Protocols & Concepts (CCNA II) (5 units)  
CNET 54C LAN Switching & Wireless Networks (CCNA III) (5 units)  
CNET 54D WAN Technologies (CCNA IV) (5 units)

##### Cisco Academy CCNP Certificate of Proficiency (15 units)

###### NON-TRANSCRIPTABLE<sup>[90]</sup>

CNET 54G Building Scalable CISCO Networks (CCNP I) (5 units)  
CNET 54H Implementing Secure Converged WANs (ISCW) (5 units)  
CNET 54I Building Multi-layer Switched Networks (5 units)

##### Wireless Networking Certificate of Proficiency (20 units)

###### NON-TRANSCRIPTABLE<sup>[91]</sup>

CNET 54A Networking Fundamentals & the TCP/IP Protocol Suite (CCNA I) (5 units)  
CNET 65A Wireless Network Administration (5 units)  
or CNET 54N Fundamentals of CISCO Wireless LANs (5 units)  
CNET 65B Wireless Network Security (5 units)  
CNET 65C Wireless Network Analysis (5 units)

##### MCDST Certificate of Proficiency (9 units)

###### NON-TRANSCRIPTABLE<sup>[92]</sup>

CNET 75A Microsoft Windows Vista (5 units)  
CNET 119 Customer Service for IT Professionals (4 units)

[88] Certificate completion will not appear on the student's transcript.

[89] Certificate completion will not appear on the student's transcript.

[90] Certificate completion will not appear on the student's transcript.

[91] Certificate completion will not appear on the student's transcript.

[92] Certificate completion will not appear on the student's transcript.

\*A minimum of 90 units required for the A.A./A.S. Degree, to include required courses, required electives, and graduation requirements, and these minimum proficiencies: ENGL 1A or ESLL 26, and MATH 105.

## ENVIRONMENTAL HORTICULTURE & DESIGN

### Program Type(s):

**AS Degree; Certificate of Achievement; Skills Certificate**

Units required for major: 64, certificate: 45–65

### Associate Degree Requirements\*

#### Core Courses: (45 units)

HORT 10 Environmental Horticulture & the Urban Landscape (5 units)

HORT 50A Orientation to Environmental Horticulture (4 units)

HORT 51A Plant Materials I (3 units)

HORT 51B Plant Materials II (3 units)

HORT 52A Horticultural Practices: Soils (3 units)

HORT 52C Horticultural Practices: Plant Installation & Maintenance (3 units)

HORT 54A Landscape Construction: General Practices (4 units)

HORT 54B Landscape Construction: Technical Practices (3 units)

HORT 54C Landscape Construction: Irrigation Practices (3 units)

HORT 60A Landscape Design: Graphic Communication (4 units)

HORT 60B Landscape Design: Theory (3 units)

HORT 60C Landscape Design: Irrigation (3 units)

HORT 80 Environmental Horticulture Skills (2 units)<sup>[93]</sup>

#### Support Courses: (19–20 units)

##### Plant Material Specialization (2 units)

HORT 51C Plant Materials: Annuals (2 units)

HORT 51D Plant Materials: California Native Plants (2 units)

HORT 51E Plant Materials: Ground Covers & Vines (2 units)

HORT 51F Plant Materials: Bamboos & Palms (2 units)

HORT 51H Plant Materials: Perennials & Annuals (2 units)

##### Career Focus Specialization (11 units)

HORT 52B Horticultural Practices: Plant Propagation (3 units)

HORT 52E Horticultural Practices: Greenhouse & Nursery Management (3 units)

HORT 52G Horticultural Practices: Turfgrass Management (3 units)

HORT 52H Horticultural Practices: Integrated Pest Management (3 units)

HORT 54D Landscape Construction: Applied Practices (2 units)

HORT 55A Green Industry Management: Business Practices (3 units)

HORT 60D Landscape Design: Planting (3 units)

HORT 60E Landscape Design: Computer Applications (3 units)

HORT 60F Landscape Design: Process (3 units)

HORT 60G Landscape Design: Intermediate Computer Applications (3 units)

##### Environmental Horticulture Skills (4 units)

HORT 80 Environmental Horticulture Skills (2 units)<sup>[94]</sup>

##### Short Course Specialization (2 units)

HORT 90A Container Plantings in the Landscape (1 unit)

HORT 90C Garden Ponds & Water Features (1 unit)

HORT 90E Horticultural & Landscape Photography (1 unit)

HORT 90F Landscape Design: Basic Principles (1 unit)

[93] This course must be repeated 2 times for a total of 4 units.

[94] This course must be repeated 2 times for a total of 4 units.

HORT 90G Landscape Design Forum (1 unit)

HORT 90H Landscape Lighting (1 unit)

HORT 90I Landscape Sustainability Practices (1 unit)

HORT 90K Landscaping with Edibles (1 unit)

HORT 90L Plant Propagation: Basic Skills (1 unit)

HORT 90M Plant Nutrition & Fertilization (1 unit)

HORT 90N Plant Materials: Fall Color (1 unit)

HORT 90P Pruning: Basic Skills (1 unit)

HORT 90Q Residential Irrigation Systems (1 unit)

HORT 90R Seasonal Floral Design (1 unit)

HORT 90S Sustainable Integrated Pest Management (IMP) (1 unit)

HORT 90U Landscape Design: Perspective Sketching (1 unit)

HORT 90V Sustainable Organic Gardening (1 unit)

HORT 90X Xeriscaping: Creating Water-Conserving Landscapes (1 unit)

HORT 90Y Cacti & Succulents (1 unit)

HORT 90Z Ornamental Grasses (1 unit)

### Certificate of Achievement (64 units)

Awarded upon completion of the degree core and support courses. General education courses are not required.

HORT 80 Environmental Horticulture Skills (2 units)<sup>[95]</sup>

### Skills Certificate (45 units) NON-TRANSCRIPTABLE<sup>[96]</sup>

Awarded upon completion of the core courses with a letter grade of C or better. General education courses are not required.

HORT 80 Environmental Horticulture Skills (2 units)<sup>[97]</sup>

## GENERAL ELECTRICIAN

### Program Type(s):

**AS Degree; Career Certificate**

Units required for major: 40, certificate: 18–32

### Associate Degree Requirements\*

#### Core Courses: (40 units)

APEL 120 Orientation to the Electrical Trade (4 units)

APEL 121 Electron Theory; Basic Blueprint Reading; DC Theory; National Electrical Code Introduction (4 units)

APEL 122 Codeology; Test Equipment; Pipe Bending; Blueprints (4 units)

APEL 123 AC Theory; Transformers; Intermediate National Electrical Code (4 units)

APEL 124 DC/AC Theory Review; Electronics; Industrial Blueprints (4 units)

APEL 125 NEC Grounding; Overcurrent Protection; Transformer Connections (4 units)

APEL 126 Motors; Motor Control; Lighting Protection (4 units)

APEL 127 Digital Electronics; Motor Speed Control; Advanced National Electrical Code (4 units)

APEL 128 Programmable Logic Controllers; Low Voltage Systems & High Voltage Systems (4 units)

APEL 129 National Electrical Code Review (4 units)

[95] This course must be repeated 2 times for a total of 4 units.

[96] Certificate completion will not appear on the student's transcript.

[97] This course must be repeated 2 times for a total of 4 units.

\*A minimum of 90 units required for the A.A./A.S. Degree, to include required courses, required electives, and graduation requirements, and these minimum proficiencies: ENGL 1A or ESLL 26, and MATH 105.

## Certificate information

### Career Certificate: Inside Wireman (32 units)

#### NON-TRANSCRIPTABLE<sup>[98]</sup>

APEL 120 Orientation to the Electrical Trade (4 units)

APEL 121 Electron Theory; Basic Blueprint Reading; DC Theory; National Electrical Code Introductions (4 units)

APEL 122 Codeology; Test Equipment; Pipe Bending; Blueprints (4 units)

APEL 123 AC Theory; Transformers; Intermediate National Electrical Code (4 units)

APEL 124 DC/AC Theory Review; Electronics; Industrial Blueprints (4 units)

APEL 125 NEC Grounding; Overcurrent Protection; Transformer Connections (4 units)

APEL 126 Motors; Motor Control; Lighting Protection (4 units)

APEL 127 Digital Electronics; Motor Speed Control; Advanced National Electrical Code (4 units)

### Career Certificate: Residential Electrician (18 units)

#### NON-TRANSCRIPTABLE<sup>[99]</sup>

APEL 112 Residential Electrical Air Conditioning & Refrigeration; Telephone Systems (3 units)

APEL 113 Residential Electrical Systems: Basic Security, Solar Power, Home Automation & Life Safety (3 units)

APEL 135 Residential Electrical Orientation; Safety & Code Introduction (3 units)

APEL 136 Residential Electrical D/C Theory; Blueprint Reading (3 units)

APEL 137 Residential Electrical A/C Theory & Circuitry (3 units)

APEL 138 Residential Wiring Layout & Installation (3 units)

## GENERAL STUDIES: HUMANITIES

### Program Type(s):

#### AA Degree

Units required for major: 28

#### Associate Degree Requirements\*

##### Core Courses: (8 units)

HUMN 1A Humanities & the Modern Experience I (4 units)

HUMN 1B Humanities & the Modern Experience II (4 units)

##### Support Courses: (20 units)<sup>[100]</sup>

Complete at least 4 units in four of the five categories.

#### Art

ART 1 Introduction to Art (4.5 units)

ART 2A History of Art: History of Western Art from Prehistory through Early Christianity (4.5 units)

ART 2AH Honors History of Art: History of Western Art from Prehistory through Early Christianity (4.5 units)

ART 2B History of Western Art from the Middle Ages to the Renaissance (4.5 units)

ART 2BH Honors History of Western Art from the Middle Ages to the Renaissance (4.5 units)

ART 2C History of Western Art from the Baroque to Post Impressionism (4.5 units)

ART 2CH Honors History of Western Art from the Baroque to Post Impressionism (4.5 units)

ART 2D African, Oceanic & native American Art (4.5 units)

ART 2E A History of Women in Art (4.5 units)

ART 3 Modern Art & Contemporary Thought (4.5 units)

ART 11 Introduction to Mexican Art & Architecture (4 units)

ART 12 Introduction to Asian Art (4.5 units)

ART 13 Introduction to Islamic Art (4.5 units)

ART 14 American Art (4.5 units)

ART 87 Art of the Electronic Age (2 units)

#### Literature

ENGL 5 Gay & Lesbian Literature (4 units)

ENGL 7 Native American Literature (4 units)

ENGL 7H Honors Native American Literature (4 units)

ENGL 8 Children's Literature (4 units)

ENGL 11 Introduction to Poetry (4 units)

ENGL 11H Honors Introduction to Poetry (4 units)

ENGL 12 African American Literature (4 units)

ENGL 14 Introduction to Contemporary Fiction (4 units)

ENGL 17 Introduction to Shakespeare (4 units)

ENGL 22 Women Writers (4 units)

ENGL 31 Latino/a Literature (4 units)

ENGL 40 Asian American Literature (4 units)

ENGL 41 Literature of Multicultural America (4 units)

ENGL 42A Introduction to Dramatic Literature (4 units)

ENGL 42B Introduction to Dramatic Literature (4 units)

ENGL 42C Introduction to Dramatic Literature (4 units)

ENGL 46A Survey of English Literature (4 units)

ENGL 46B Survey of English Literature (4 units)

ENGL 46C Survey of English Literature (4 units)

ENGL 48A Survey of Early American Literature: 1492–1864 (4 units)

ENGL 48B American Literature in the Gilded Age: 1865–1914

ENGL 48C Modern American Literature: 1914–Present (4 units)

GERM 8 Post World War II Germany (4 units)

GERM 39 German Literature in Translation (4 units)

#### Music

MUS 1 Introduction to Music (4 units)

MUS 2A Great Composers & Music Masterpieces of Western Civilization (4 units)

MUS 2B Great Composers & Music Masterpieces of Western Civilization (4 units)

MUS 2C Great Composers & Music Masterpieces of Western Civilization (4 units)

MUS 2D World Music: Roots to Contemporary Global Fusion (4 units)

MUS 7 Contemporary Music Styles: Rock, Pop & Jazz (4 units)

MUS 7D Contemporary Music Styles: The Beatles in the Culture of Popular Music (4 units)

[98] Certificate completion will not appear on the student's transcript.

[99] Certificate completion will not appear on the student's transcript.

[100] Courses used to meet major requirements in these areas cannot be used to satisfy any general education requirements.

\*A minimum of 90 units required for the A.A./A.S. Degree, to include required courses, required electives, and graduation requirements, and these minimum proficiencies: ENGL 1A or ESLL 26, and MATH 105.

MUS 7E History of the Blues (4 units)  
MUS 8 Music of Multicultural America (4 units)  
MUS 11A Jazz & Swing (4 units)  
MUS 11B Funk, Fusion & Hip-Hop (4 units)  
MUS 11C Salsa & Latin Jazz (4 units)  
MUS 85A Music & Media: Edison to Hendrix (4 units)  
MUS 85B Music & Media: Hendrix to Hip-Hop (4 units)

### Philosophy

PHIL 8 Ethics (5 units)  
PHIL 11 Introduction to the Philosophy of Art (4 units)  
PHIL 20A History of Western Philosophy from Socrates through St. Thomas (4 units)  
PHIL 20B History of Western Philosophy from the Renaissance through Kant (4 units)  
PHIL 20C Contemporary Philosophy: 19<sup>th</sup> & 20<sup>th</sup> Century Thought (4 units)  
PHIL 22 Introduction to World Religions: The Search for Spiritual Meaning (4 units)  
PHIL 24 Comparative World Religions: East (4 units)  
PHIL 25 Comparative World Religions: West (4 units)

### Photography

PHOT 8 Photography of Multicultural America (4 units)  
PHOT 8H Honors Photography of Multicultural America (4 units)  
PHOT 10 History of Photography (4 units)  
PHOT 10H Honors History of Photography (4 units)  
PHOT 11 Contemporary Issues in Photography (4 units)  
PHOT 11H Honors Contemporary Issues in Photography (4 units)

### Theatre

THTR 1 Theatre Arts Appreciation (4 units)  
THTR 2A Introduction to Dramatic Literature (4 units)  
THTR 2B Introduction to Dramatic Literature (4 units)  
THTR 2C Introduction to Dramatic Literature (4 units)  
THTR 8 Multicultural Performing Arts in Modern America (4 units)  
THTR 61 The Theatre Live On-Stage (2 units)

## GENERAL STUDIES: SCIENCE

### Program Type(s):

#### AS Degree

Units required for major: 40

#### Associate Degree Requirements\*

##### Core Courses: (40 units)<sup>[101]</sup>

Courses must represent all 5 categories listed below.

### Biology

One class from Area A and one class from Area B required. At least one course in this area must include a laboratory.

#### Area A:

BIOL 1C Evolution, Systematics & Ecology (6 units)  
BIOL 9 Environmental Biology (may be taken with 9L) (4 units)

BIOL 10 General Biology: Basic Principles (5 units)  
BIOL 14 Human Biology (5 units)

#### Area B:

BIOL 1A Principles of Cell Biology (6 units)  
BIOL 1B Form & Function in Plants & Animals (6 units)  
BIOL 8 Basic Nutrition (5 units)  
BIOL 12 Human Genetics (4 units)  
BIOL 13 Marine Biology (5 units)  
BIOL 17 Biotechnology & Society (4 units)  
BIOL 40A Human Anatomy & Physiology I (5 units)  
BIOL 40B Human Anatomy & Physiology II (5 units)  
BIOL 40C Human Anatomy & Physiology III (5 units)  
BIOL 41 Microbiology (6 units)  
BIOL 45 Introduction to Human Nutrition (4 units)

#### Chemistry (5 units)

CHEM 1A General Chemistry (5 units)  
CHEM 1B General Chemistry (5 units)  
CHEM 1C General Chemistry & Qualitative Analysis (5 units)  
CHEM 12A Organic Chemistry (6 units)  
CHEM 12B Organic Chemistry (6 units)  
CHEM 12C Organic Chemistry (6 units)  
CHEM 25 Fundamentals of Chemistry (5 units)  
CHEM 30A Survey of Inorganic & Organic Chemistry (5 units)  
CHEM 30B Survey of Organic & Biochemistry (5 units)  
CHEM 34H Honors Institute Seminar in Chemistry (1 unit)

#### Physics (5 units)

PHYS 2A General Physics (5 units)  
PHYS 2B General Physics (5 units)  
PHYS 2C General Physics (5 units)  
PHYS 4A General Physics (Calculus) (6 units)  
PHYS 4B General Physics (Calculus) (6 units)  
PHYS 4C General Physics (Calculus) (6 units)  
PHYS 4D General Physics (Calculus) (6 units)  
PHYS 6 Introductory Physics (5 units)  
PHYS 12 Introduction to Modern Physics (5 units)  
PHYS 34H Honors Institute Seminar in Physics (1 unit)

#### Mathematics (5 units)

MATH 1A Calculus (5 units)  
MATH 1B Calculus (5 units)  
MATH 1C Calculus (5 units)  
MATH 1D Calculus (5 units)  
MATH 49 Precalculus (5 units)  
MATH 51 Trigonometry (5 units)  
MATH 10 Elementary Statistics (5 units)  
MATH 11 Finite Mathematics (5 units)  
MATH 22 Discrete Mathematics (5 units)  
MATH 44 Math for the Liberal Arts (5 units)  
MATH 12 Calculus for Business & Economics (5 units)  
MATH 2A Differential Equations (5 units)  
MATH 2B Linear Algebra (5 units)  
MATH 34H Honors Institute Seminar in Mathematics (1 unit)

[101] Courses used to meet major requirements in these areas cannot be used to satisfy any general education requirements.

\*A minimum of 90 units required for the A.A./A.S. Degree, to include required courses, required electives, and graduation requirements, and these minimum proficiencies: ENGL 1A or ESLL 26, and MATH 105.

### **Engineering/Computer Science/Astronomy (5 units)**

ENGR 10 Introduction to Engineering (4 units)  
ENGR 35 Statics (5 units)  
ENGR 45 Properties of Materials (5 units)  
ENGR 37 Introduction to Circuit Analysis (5 units)  
ENGR 49 Engineering Profession (1 unit)  
ENGR 34H Honors Institute Seminar in Engineering (1 unit)  
CIS 15A Computer Science I: C++ (5 units)  
CIS 15B Computer Science II: C++ (5 units)  
CIS 15C Computer Science III: Data Structures & Algorithms C++ (5 units)  
CIS 15D Designing with C++ Classes (5 units)  
CIS 25A Programming in C (5 units)  
CIS 25B Advanced Programming in C (5 units)  
CIS 27A Computer Science I: JAVA (5 units)  
CIS 27B Computer Science II: JAVA (5 units)  
CIS 27C Computer Science III: Data Structures & Algorithms in JAVA (5 units)  
CIS 27D JAVA Advanced Features (5 units)  
CIS 27P JAVA for Programmers (5 units)  
ASTR 10A General Astronomy: Solar System (5 units)  
ASTR 10B General Astronomy: Star, Galaxies, Cosmology (5 units)  
    or ASTR 10BH Honors General Astronomy: Stars, Galaxies, Cosmology (5 units)  
ASTR 10L Astronomy Laboratory (1 unit)  
ASTR 34H Honors Institute Seminar in Astronomy (1 unit)

## **GENERAL STUDIES: SOCIAL SCIENCE**

### **Program Type(s):**

#### **AA Degree**

Units required for major: 30

#### **Associate Degree Requirements\***

##### **Core Courses: (30 units)**

Complete any combination of 30 units from at least five departments

#### **Anthropology**

ANTH 1 Introduction to Physical Anthropology (4 units)  
ANTH 2A Cultural Anthropology (4 units)  
ANTH 2B Patterns of Culture (4 units)  
ANTH 3 Prehistory: The Search for Lost Civilizations (4 units)  
ANTH 4 First Peoples of North America (4 units)  
ANTH 5 Magic, Science & Religion (4 units)  
ANTH 6 Peoples of Africa (4 units)  
ANTH 8 Introduction to Archaeology (4 units)  
ANTH 12 Applied Anthropology (4 units)

#### **Economics**

ECON 1A Principles of Macroeconomics (5 units)  
ECON 1B Principles of Microeconomics (5 units)  
ECON 9 Political Economy (4 units)  
ECON 25 Introduction to Global Economy (4 units)

### **Sociology**

SOC 1 Introduction to Sociology (5 units)  
SOC 8 Popular Culture (4 units)  
SOC 10 Introduction to Social Research (4 units)  
SOC 15 Law & Society (4 units)  
SOC 19 Alcohol & Drug Abuse (4 units)  
SOC 20 Major Social Problems (4 units)  
SOC 21 Psychology of Women: Sex & Gender Differences (4 units)  
SOC 30 Social Psychology (4 units)  
SOC 40 Aspects of Marriage & Family (4 units)

### **Psychology**

PSYC 1 General Psychology (4 units)  
PSYC 4 Introduction to Psychobiological (4 units)  
PSYC 10 Introduction to Social Research (4 units)  
PSYC 14 Childhood & Adolescence (4 units)  
PSYC 21 Psychology of Women: Sex & Gender Differences (4 units)  
PSYC 22 Psychology of Prejudice (4 units)  
PSYC 25 Introduction to Abnormal Psychology (4 units)  
PSYC 30 Social Psychology (4 units)  
PSYC 33 Introduction to the Concepts of Personality (4 units)  
PSYC 40 Human Development (4 units)  
PSYC 49 Human Psychology (4 units)  
PSYC 50 Psychology of Crisis (5 units)  
PSYC 55 Psychology of Sports (4 units)

### **History**

HIST 4A History of Western Civilization to 800 AD (4 units)  
HIST 4B History of Western Civilization II (4 units)  
HIST 4C History of Western Civilization 1789–Present (4 units)  
    or HIST 4CH Honors History of Western Civilization (4 units)  
HIST 9 History of Contemporary Europe (4 units)  
    or HIST 9H Honors History of Contemporary Europe (4 units)  
HIST 10 California: The Multicultural State (4 units)  
HIST 17A History of the United States to 1816 (4 units)  
HIST 17B History of the United States from 1812 to 1914 (4 units)  
HIST 17C History of the United States from 1900 to Present (4 units)  
HIST 18 Introduction to Middle Eastern Civilization (4 units)  
HIST 20 History of Russia & the Soviet Union (4 units)

### **Political Science**

POLI 1 Political Science: Introduction to American Government & Politics (5 units)  
POLI 2 Comparative Government & Politics (4 units)  
POLI 3 Introduction to Political Philosophy/Political Theory (4 units)  
POLI 15 International Relations/World Politics (4 units)  
    or POLI 15H Honors International Relations/World Politics (4 units)

\*A minimum of 90 units required for the A.A./A.S. Degree, to include required courses, required electives, and graduation requirements, and these minimum proficiencies: ENGL 1A or ESLL 26, and MATH 105.

## Geography

GEOG 1 Physical Geography (5 units)  
GEOG 2 Human Geography (4 units)  
GEOG 5 Introduction to Economic Geography (4 units)  
GEOG 9 California Geography (4 units)  
GEOG 10 World Regional Geography (4 units)

### GEOGRAPHY

#### Program Type(s):

**AA Degree; Certificate of Achievement; Career Certificate**

Units required for major: 33, certificate: 20–36

#### Associate Degree Requirements\*

##### Core Courses: (17 units)

GEOG 1 Physical Geography (5 units)  
GEOG 2 Human Geography (4 units)  
GEOG 5 Introduction to Economic Geography (4 units)  
GEOG 10 World Regional Geography (4 units)

##### Support Courses: (8 units)

ANTH 2A Cultural Anthropology (4 units)  
or ANTH 2B Patterns of Culture (4 units)  
ECON 25 Introduction to the Global Economy (4 units)  
GEOG 9 California Geography (4 units)  
GEOG 12 Introduction to Geographic Information Systems (GIS) (4 units)  
HIST 4A History of Western Civilization to 800 AD (4 units)  
or HIST 4B History of Western Civilization II (4 units)  
POLI 15 International Relations/World Politics (4 units)  
or POLI 15H Honors International Relations/World Politics (4 units)

##### Elective Courses: (8 units)<sup>[102]</sup>

ANTH 6 Peoples of Africa (4 units)  
HIST 8 History of Latin America (4 units)  
HIST 9 History of Contemporary Europe (4 units)  
or HIST 9H Honors History of Contemporary Europe (4 units)  
HIST 18 Introduction to Middle Eastern Civilization (4 units)  
HIST 20 History of Russia & the Soviet Union (4 units)  
POLI 2 Comparative Government & Politics (4 units)  
or POLI 2H Honors Comparative Government & Politics (4 units)

#### Certificate information

Request certificate information at [bss.foothill.fhda.edu/certificates](http://bss.foothill.fhda.edu/certificates).

#### Career Certificate in Geographic Information Systems (21 units) NON-TRANSCRIPTABLE<sup>[103]</sup>

##### Required Courses: (15 units)

GEOG 12 Introduction to Geographic Information Systems (GIS) (4 units)  
GEOG 52 Advanced Geographic Information Systems (GIS) (4 units)

[102] *May also use courses listed under support courses for electives. May be taken only once for credit (either support or electives).*

[103] *Certificate completion will not appear on the student's transcript.*

GEOG 54A Seminar in Specialized Applications of Geographic Information Systems I (2 units)  
GEOG 58 Remote Sensing & Digital Image Processing (3 units)  
GEOG 59 Cartography, Map Presentation & Design (2 units)  
and Focus Area Courses (6 units): Courses in an approved academic area of the student's selection.

#### Certificate of Achievement for Geographic Information Systems Analyst (36 units)

##### Required Courses: (25 units)

GEOG 12 Introduction to Geographic Information Systems (GIS) (4 units)  
GEOG 36Y Special Projects in Geography (3 units)  
GEOG 52 Advanced Geographic Information Systems (GIS) (4 units)  
GEOG 54A Seminar in Specialized Applications & Geographic Information Systems I (2 units)  
GEOG 54B Seminar in Specialized Applications of Geographic Information Systems II (2 units)  
GEOG 58 Remote Sensing & Digital Image Processing (3 units)  
GEOG 59 Cartography, Map Presentation & Design (2 units)  
CIS 52B Oracle SQL (5 units)  
and Focus Area Courses (6 units): Courses in an approved academic area of the student's selection.

##### Support Courses: (5 units)

Select one of the following:

COIN 61 Publishing on the Web Using HTML/XHTML (5 units)  
CIS 27A Computer Science I: Java (5 units)  
CIS 12A Fundamentals of Visual Basic.Net Programming (5 units)

### GERONTOLOGY

#### Program Type(s):

##### Career Certificate

Units required for certificate: 25

#### Certificate information

Awarded upon completion of the core and support courses.

#### Career Certificate in Gerontology (25 units)

##### NON-TRANSCRIPTABLE<sup>[104]</sup>

##### Core Courses: (18 units)

GERN 50 Sociology of Aging (3 units)  
GERN 51 Psychology of Aging (3 units)  
GERN 52 Health & Aging (3 units)  
GERN 53 Practicum in Senior Services (3 units)  
GERN 55 Issues in Death, Dying & Bereavement Across Cultures (3 units)  
SPED 55 Geriatric Fitness Concepts (3 units)

##### Support Courses: (7 units)

GERN 54 Continuum of Care Options (3 units)  
GERN 56 Aging & Diversity (3 units)  
SPED 50 Introduction to Adaptive Fitness Techniques (3 units)  
SPED 52 Positive Aging (3 units)  
SPED 54 Principles of Therapeutic Exercise (3 units)

[104] *Certificate completion will not appear on the student's transcript.*

\*A minimum of 90 units required for the A.A./A.S. Degree, to include required courses, required electives, and graduation requirements, and these minimum proficiencies: ENGL 1A or ESLL 26, and MATH 105.

SPED 56 Functional Aspects of Adaptive Fitness (3 units)  
SPED 57 Working with Special Populations (3 units)  
SPED 61 Introduction to Disabilities (4 units)  
SPED 62 Psychological Aspects of Disability (4 units)  
SPED 64 Disability & the Law (4 units)  
SPED 66 Disability & Technology Access (4 units)

## GRAPHIC & INTERACTIVE DESIGN

### Program Type(s):

**AA Degree; Certificate of Achievement; Skills Certificate**

Units required for major: 59, certificate: 11–59

### Associate Degree Requirements\*

#### Core Courses: (43 units)

ART 4A Drawing I (3 units)  
ART 5A Basic Two-Dimensional Design (3 units)  
ART 20A Color (3 units)  
PHOT 1 Black & White Photography (4 units)  
or PHOT 5 Introduction to Photography (4 units)  
GID 70 Graphic Design Drawing (4 units)  
GID 1 History of Graphic Design (4 units)  
or ART 36 History of Graphic Design (4 units)  
GID 60 Careers in the Visual Arts (2 units)  
or VART 50 Careers in the Visual Arts (2 units)  
GID 50 Graphic Design Studio I (4 units)  
GID 51 Graphic Design Studio II (4 units)  
GID 52 Graphic Design Studio III (4 units)  
GID 54 Typography (4 units)  
GID 61 Portfolio (4 units)

#### Elective Courses: (16 units)

GID 20 Digital Video Production I (4 units)  
or VART 20 Digital Video Production I (4 units)  
GID 30 Paper Arts I (4 units)  
GID 32 T-Shirt Design & Garment Printing (4 units)  
GID 38 Printmaking I (4 units)  
GID 40 Digital Printmaking (4 units)  
GID 42 Beginning Etching (3 units)  
GID 44 Beginning Relief Printmaking (3 units)  
GID 46 Beginning Screenprinting (3 units)  
or ART 39A Beginning Screenprinting (3 units)  
GID 56 Website Design (4 units)  
GID 62 Service Learning Projects (4 units)  
GID 64A Graphic & Interactive Design Experiential Internship (4 units)  
GID 64B GID Expanded Experiential Internship (6 units)  
GID 71 Storyboarding (4 units)  
GID 72 Cartooning (4 units)  
GID 74 Digital Art & Graphics (4 units)  
GID 76 Illustration & Digital Imaging (4 units)  
GID 80 Digital Sound, Video & Animation (4 units)  
or MUS 86 Introduction to Digital Sound, Video & Animation (4 units)  
or VART 86 Introduction to Digital Sound, Video & Animation (4 units)

GID 84 Motion Graphics (4 units)  
or VART 87 Motion Graphics (4 units)  
GID 90 Book Arts I (4 units)  
GID 91 Book Arts II (4 units)  
GID 92 Letterpress Printing (4 units)  
GID 93 Letterpress Projects (4 units)  
GID 94 Book Arts Professional Practices (3 units)  
GID 95 Graphic Arts Studio Projects (4 units)

### Certificate information

Complete GID 51 in preparation for skills certificate courses. See prerequisite information specific to each class.

#### Certificate of Achievement (59 units)

Awarded upon completion of the degree core and elective courses. General education courses are not required.

#### Graphic Design Skill Certificate (12 units)

##### NON-TRANSCRIPTABLE<sup>[105]</sup>

GID 50 Graphic Design Studio I (4 units)  
GID 51 Graphic Design Studio II (4 units)  
GID 52 Graphic Design Studio III (4 units)

#### Motion Graphics Skill Certificate (12 units)

##### NON-TRANSCRIPTABLE<sup>[106]</sup>

GID 71 Storyboarding (4 units)  
GID 80 Digital Sound, Video & Animation (4 units)  
or MUS 86 Introduction to Digital Sound, Video & Animation (4 units)  
or VART 86 Introduction to Digital Sound, Video & Animation (4 units)  
GID 84 Motion Graphics (4 units)  
or VART 87 Motion Graphics (4 units)

#### Video Design Skill Certificate (12 units)

##### NON-TRANSCRIPTABLE<sup>[107]</sup>

GID 20 Digital Video Production I (4 units)  
or VART 20 Digital Video Production I (4 units)  
GID 71 Storyboarding (4 units)  
GID 80 Digital Sound, Video & Animation (4 units)  
or MUS 86 Introduction to Digital Sound, Video & Animation (4 units)  
or VART 86 Introduction to Digital Sound, Video & Animation (4 units)

#### Book Arts Skill Certificate (12 units) NON-TRANSCRIPTABLE<sup>[108]</sup>

GID 90 Book Arts I (4 units)  
GID 91 Book Arts II (4 units)  
GID 92 Letterpress Printing (4 units)

#### Printmaking Skill Certificate (12 units)

##### NON-TRANSCRIPTABLE<sup>[109]</sup>

GID 38 Printmaking I (4 units)

[105] Certificate completion will not appear on the student's transcript.

[106] Certificate completion will not appear on the student's transcript.

[107] Certificate completion will not appear on the student's transcript.

[108] Certificate completion will not appear on the student's transcript.

[109] Certificate completion will not appear on the student's transcript.

\*A minimum of 90 units required for the A.A./A.S. Degree, to include required courses, required electives, and graduation requirements, and these minimum proficiencies: ENGL 1A or ESLL 26, and MATH 105.

GID 39 Printmaking II (4 units)  
GID 40 Digital Printmaking (4 units)

**Garment Printing Skill Certificate (11 units)**

**NON-TRANSCRIPTABLE<sup>[110]</sup>**

GID 74 Digital Art & Graphics (4 units)  
GID 46 Beginning Screenprinting (3 units)  
or ART 39A Beginning Screenprinting (3 units)  
GID 32 T-Shirt Design & Garment Printing (4 units)

**Illustration Skill Certificate (12 units) NON-TRANSCRIPTABLE<sup>[111]</sup>**

GID 70 Graphic Design Drawing (4 units)  
GID 74 Digital Art & Graphics (4 units)  
GID 76 Illustration & Digital Imaging (4 units)

**Web Design Skill Certificate (12 units)**

**NON-TRANSCRIPTABLE<sup>[112]</sup>**

GID 71 Storyboarding (4 units)  
GID 54 Typography (4 units)  
GID 56 Website Design (4 units)

**Software Skill Certificate (17 units) NON-TRANSCRIPTABLE<sup>[113]</sup>**

CAST 52A Introduction to Macromedia Flash (5 units)  
CAST 86A Introduction to Adobe InDesign (4 units)  
CAST 90A Introduction to Adobe Illustrator (4 units)  
CAST 92A Introduction to Adobe Photoshop (4 units)

**HISTORY**

**Program Type(s):**

**AA Degree**

Units required for major: 36

**Associate Degree Requirements\*<sup>[114]</sup>**

**Core Courses: (24 units)**

HIST 4A History of Western Civilization to 800 AD (4 units)  
HIST 4B History of Western Civilization II (4 units)  
HIST 4C History of Western Civilization 1789–Present (4 units)  
or HIST 4CH Honors History of Western Civilization (4 units)  
HIST 17A History of the United States to 1816 (4 units)  
HIST 17B History of the United States from 1812 to 1914 (4 units)  
HIST 17C History of the United States from 1900 to the Present (4 units)

**Support Courses: (12 units)**

HIST 8 History of Latin America (4 units)  
HIST 9 History of Contemporary Europe (4 units)  
or HIST 9H Honors History of Contemporary Europe (4 units)  
HIST 10 History of California: The Multicultural State (4 units)  
HIST 15 History of Mexico (4 units)  
HIST 16 Introduction to Ancient Rome (4 units)  
or HIST 16H Honors Introduction to Ancient Rome (4 units)

[110] Certificate completion will not appear on the student's transcript.

[111] Certificate completion will not appear on the student's transcript.

[112] Certificate completion will not appear on the student's transcript.

[113] Certificate completion will not appear on the student's transcript.

[114] De Anza College Courses: All same or similar De Anza courses may be substituted (by petition) for Foothill Business & Social Science courses and social science general education requirements, regardless of units. The unit total for the AA degree remains the same.

HIST 18 Introduction to Middle Eastern Civilization (4 units)  
HIST 20 History of Russia & the Soviet Union (4 units)  
HIST 34H Honors Institute Seminar in History (1 unit)  
HIST 36 Special Projects in History (1 unit)

**INFORMATICS**

**Program Type(s):**

**AS Degree; Certificate of Achievement; Skills Certificate**

Units required for major: 66, certificate: 33–66

**Program Prerequisites:**

CIS 61A Informatics (5 units)  
CIS 60 Introduction to Business Information Systems (5 units)  
or CIS 2 Computers & Society (5 units)  
or BUSI 91L Introduction to Business Information Processing (4 units)

**Associate Degree Requirements\***

**Core Courses: (39 units)**

CIS 52C Database Modeling & Relational Database Design (5 units)  
CIS 52B Oracle SQL (5 units)  
CIS 62A Data Warehousing & Web Mining (5 units)  
CIS 63A1 Systems Analysis & Design (5 units)  
CIS 63B Design & Analysis for Informatics Research (5 units)  
COIN 78 Extensible Markup Language (XML) (5 units)  
MATH 10 Elementary Statistics (5 units)  
or PSYC 10 Introduction to Social Research (4 units)  
or SOC 10 Introduction to Social Research (4 units)

**And one of the following:**

CIS 12A Fundamentals of Visual Basic.NET Programming (5 units)  
CIS 15A Computer Science I: C++ (5 units)  
CIS 19A Introduction to Programming with C# (5 units)  
CIS 27A Computer Science I: JAVA (5 units)  
CIS 68E Programming in PERL (5 units)

**Support Courses: (3 units)**

**Informatics Project:**

CIS 61Z Informatics Project (3.5 units)  
or CIS 93U Computer Information Systems Experiential Internship (~100 hours) (3 units)

**Certificate information**

English and math proficiencies are required for the certificates.

**Certificate of Achievement (66 units)**

Awarded upon completion of the program prerequisites, subject matter preparation, core courses and the informatics project. General education courses are not required.

**Skill Certificate in Informatics (33 units)**

**NON-TRANSCRIPTABLE<sup>[115]</sup>**

**Program Prerequisites (9 units)**

CIS 61A Informatics (5 units)

[115] Certificate completion will not appear on the student's transcript.

\*A minimum of 90 units required for the A.A./A.S. Degree, to include required courses, required electives, and graduation requirements, and these minimum proficiencies: ENGL 1A or ESLL 26, and MATH 105.

CIS 60 Introduction to Business Information Systems (5 units)  
or CIS 2 Computers & Society (5 units)  
or BUSI 91L Introduction to Business Information Processing  
(4 units)

**And the following:**

CIS 52C Database Modeling & Relational Database Design (5 units)  
CIS 62A Data Warehousing & Web Mining (5 units)  
CIS 63A1 Systems Analysis & Design (5 units)  
CIS 63B Design & Analysis for Informatics Research (5 units)  
MATH 10 Elementary Statistics (5 units)  
or PSYC 10 Introduction to Social Research (4 units)  
or SOC 10 Introduction to Social Research (4 units)

## INTERACTIVE & MULTIMEDIA TECHNOLOGIES

### Program Type(s):

**AS Degree; Certificate of Achievement; Skills Certificate**

Units required for major: 50, certificate: 20–50

### Associate Degree Requirements\*

#### Core Courses: (35 units)

CAST 52A Introduction to Macromedia Flash (5 units)  
CAST 52B Advanced Macromedia Flash (5 units)  
CAST 70D 3D Modeling & Animation for Multimedia (4 units)  
CAST 70C Interactive Multimedia Project (4 units)  
COIN 51 Internet Technology & Applications: Introduction (5 units)  
GID 71 Storyboarding (4 units)  
GID 74 Digital Art & Graphics (4 units)  
GID 80 Digital Sound, Video & Animation (4 units)

#### Support Courses: (5 units)

CIS 1 Introduction to Computer Science (5 units)  
CIS 12A Introduction to Visual Basic.NET Programming (5 units)  
CIS 12C Intermediate Visual Basic Programming (5 units)  
CIS 15A Computer Science I: C++ (5 units)  
CIS 27A Computer Science I: JAVA (5 units)  
COIN 70A Introduction to Programming Using JavaScript (5 units)  
or COIN 70B Using JavaScript (5 units)

#### Elective Courses: (10 units)

CAST 52B Advanced Macromedia Flash (5 units)  
CAST 92A Introduction to Adobe Photoshop (4 units)  
CAST 93A PowerPoint: Effective Presentations (4 units)  
CIS 2 Computers & Society (5 units)  
COIN 61 Publishing on the Web Using HTML/XHTML (5 units)  
GID 20 Digital Video Production I (4 units)  
GID 50 Graphic Design Studio I (4 units)  
GID 84 Motion Graphics (4 units)  
GID 56 Website Design (4 units)

### Interactive & Multimedia Technologies: Certificate of Achievement (50 units)

Awarded upon completion of the core, support and elective courses. The English and math proficiencies are required but general education courses are not required.

### Interactive & Multimedia Technologies Skills Certificate (23 units) NON-TRANSCRIPTABLE<sup>[116]</sup>

CAST 52A Introduction to Macromedia Flash (5 units)  
CAST 70B Multimedia Design & Authoring (4 units)  
GID 60 Careers in the Visual Arts (2 units)  
GID 71 Storyboarding (4 units)  
GID 74 Digital Art & Graphics (4 units)  
GID 80 Digital Sound, Video & Animation (4 units)

### Web-Based Multimedia Skills Certificate (20 units) NON-TRANSCRIPTABLE<sup>[117]</sup>

CAST 52A Introduction to Macromedia Flash (5 units)  
CAST 52B Advanced Macromedia Flash (5 units)  
COIN 61 Publishing on the Web Using HTML/XHTML (5 units)  
COIN 76 Web Publishing Tools: Multimedia (5 units)

## INTERNET TECHNOLOGY

### Program Type(s):

**AS Degree; Certificate of Achievement; Certificate of Proficiency; Skills Certificate**

Units required for major: 42, certificate: 19–42

### Associate Degree Requirements\*

#### Core Courses: (35–42 units)

#### Electronic Business Major Concentration: (42 units)

COIN 56 E-Business (5 units)  
COIN 58 Electronic Commerce Projects (5 units)  
COIN 61 Publishing on the Web Using HTML/XHTML (5 units)  
COIN 63 Advanced Topics in Web Publishing (5 units)  
COIN 72 Web Marketing (4 units)  
CNET 50 Introduction to Computer Networking (5 units)

### And three from the following:

CIS 60 Introduction to Business Information Systems (5 units)  
BUSI 22 Principles of Business (4 units)  
BUSI 53 Survey of International Business (4 units)  
BUSI 95 Entrepreneurship: Small Business Management (4 units)

#### Web Administration Major Concentration: (35 units)

CIS 52A Introduction to Data Management Systems (5 units)  
CIS 52N PHP & MySQL (5 units)  
CIS 68A Introduction to Linux & UNIX (5 units)  
CIS 68C1 Linux & UNIX System Administration (5 units)  
CIS 52P PHP Programming (5 units)  
COIN 61 Publishing on the Web Using HTML/XHTML (5 units)  
COIN 66 Apache Web Server Management (5 units)

#### Web Programming Major Concentration: (40 units)

CIS 27A Computer Science I: JAVA (5 units)  
CIS 68A Introduction to Linux & UNIX (5 units)  
CIS 52P PHP Programming (5 units)  
COIN 61 Publishing on the Web Using HTML/XHTML (5 units)  
COIN 63 Advanced Topics in Web Publishing (5 units)  
COIN 70B Using JavaScript (5 units)

[116] Certificate completion will not appear on the student's transcript.

[117] Certificate completion will not appear on the student's transcript.

\*A minimum of 90 units required for the A.A./A.S. Degree, to include required courses, required electives, and graduation requirements, and these minimum proficiencies: ENGL 1A or ESLL 26, and MATH 105.

COIN 78 eXtensible Markup Language (XML) (5 units)  
CIS 52N PHP & MySQL (5 units)

#### **Certificate information**

All certificates require: English proficiency: ENGL 110, ESLL 25, or equivalent; mathematics proficiency: MATH 220 or equivalent; prerequisite: COIN 51 or equivalent; coursework as outlined below for the four major areas.

#### **Certificate of Achievement (35–42 units)**

Awarded upon completion of the major concentrations of electronic business, Web administration or Web programming. General education courses are not required.

#### **AJAX Certificate of Proficiency (35 units)**

##### **NON-TRANSCRIPTABLE<sup>[118]</sup>**

COIN 61 Publishing on the Web Using HTML/XHTML (5 units)  
COIN 63 Advanced Topics in Web Publishing (5 units)  
COIN 65 Using Cascading Style Sheets for Design (5 units)  
COIN 70A Introduction to Programming Using JavaScript (5 units)  
or COIN 70B Using JavaScript (5 units)  
COIN 71 Application Software Development with AJAX (5 units)  
COIN 78 Extensible Markup Language (XML) (5 units)

#### **And one from the following:**

CIS 12A Fundamentals of Visual Basic.NET Programming (5 units)  
CIS 15A Computer Science I: C++ (5 units)  
CIS 27A Computer Science I: JAVA (5 units)  
CIS 78 Software Engineering (5 units)

#### **Web Publishing: Dreamweaver Certificate of Proficiency (24 units) NON-TRANSCRIPTABLE<sup>[119]</sup>**

COIN 61 Publishing on the Web Using HTML/XHTML (5 units)  
COIN 74A Web Publishing Tools: Dreamweaver Basics (5 units)  
COIN 74B Web Publishing Tools: Dreamweaver Interactive (5 units)  
COIN 74C Web Publishing Tools: Dreamweaver Interactive II (5 units)

#### **And one from the following:**

COIN 63 Advanced Topics in Web Publishing (5 units)  
COIN 65 Using Cascading Style Sheets for Design (5 units)  
COIN 82 Images for the Web (4 units)

#### **Web Development Certificate of Proficiency (24 units)**

##### **NON-TRANSCRIPTABLE<sup>[120]</sup>**

COIN 70A Introduction to Programming Using JavaScript (5 units)  
COIN 70B Using JavaScript (5 units)

#### **And three from the following:**

COIN 76 Web Publishing Tools: Multimedia (5 units)  
COIN 74A Web Publishing Tools: Dreamweaver Basics (5 units)  
CAST 52A Introduction to Macromedia Flash (5 units)  
COIN 82 Images for the Web (4 units)

#### **Electronic Business Skill Certificate (27 units)**

##### **NON-TRANSCRIPTABLE<sup>[121]</sup>**

COIN 56 E-Business (5 units)  
COIN 58 Electronic Commerce Projects (5 units)  
COIN 61 Publishing on the Web Using HTML/XHTML (5 units)  
COIN 72 Web Marketing (4 units)

#### **And two from the following:**

CIS 60 Introduction to Business Information Systems (5 units)  
BUSI 22 Principles of Business (4 units)  
BUSI 53 Survey of International Business (4 units)  
BUSI 95 Entrepreneurship: Small Business Management (4 units)

#### **Web Development Skill Certificate (20 units)**

##### **NON-TRANSCRIPTABLE<sup>[122]</sup>**

COIN 61 Publishing on the Web Using HTML/XHTML (5 units)  
COIN 63 Advanced Topics in Web Publishing (5 units)  
COIN 65 Using Cascading Style Sheets for Design (5 units)  
COIN 70A Introduction to Programming Using JavaScript (5 units)

#### **Web-Based Multimedia Skill Certificate (19 units)**

##### **NON-TRANSCRIPTABLE<sup>[123]</sup>**

CAST 52A Introduction to Macromedia Flash (5 units)  
CAST 52B Advanced Macromedia Flash (5 units)  
COIN 61 Publishing on the Web Using HTML/XHTML (5 units)  
COIN 76 Web Publishing Tools: Multimedia (5 units)  
or GID 80 Digital Sound, Video & Animation (4 units)

## **JAPANESE**

#### **Program Type(s):**

#### **AA Degree; Career Certificate; Certificate of Specialization**

Units required for major: 30, certificate: 20–52

#### **Associate Degree Requirements\***

##### **Core Courses: (30 units)<sup>[124]</sup>**

#### **Select any 30 units from the following:**

JAPN 1 Elementary Japanese I (5 units)  
JAPN 2 Elementary Japanese II (5 units)  
JAPN 3 Elementary Japanese III (5 units)  
JAPN 4 Intermediate Japanese I (5 units)  
JAPN 5 Intermediate Japanese II (5 units)  
JAPN 6 Intermediate Japanese III (5 units)  
JAPN 13A Intermediate Conversation I (4 units)  
JAPN 13B Intermediate Conversation II (4 units)  
JAPN 14A Advanced Conversation I (4 units)  
JAPN 14B Advanced Conversation II (4 units)  
JAPN 25A Advanced Composition & Reading (4 units)  
JAPN 25B Advanced Composition & Reading (4 units)  
JAPN 33 Introduction to Japanese Culture (4 units)

[118] Certificate completion will not appear on the student's transcript.

[119] Certificate completion will not appear on the student's transcript.

[120] Certificate completion will not appear on the student's transcript.

[121] Certificate completion will not appear on the student's transcript.

[122] Certificate completion will not appear on the student's transcript.

[123] Certificate completion will not appear on the student's transcript.

[124] Students who can demonstrate proficiency equivalent to 1 year of college Japanese, JAPN 1, 2 and 3 can be eliminated from the core courses. However, the intermediate and advanced courses must be taken in residence at Foothill College.

\*A minimum of 90 units required for the A.A./A.S. Degree, to include required courses, required electives, and graduation requirements, and these minimum proficiencies: ENGL 1A or ESLL 26, and MATH 105.

### **Certificate of Specialization in Japanese Conversation & Culture (20 units)<sup>[125]</sup> NON-TRANSCRIPTABLE<sup>[126]</sup>**

JAPN 13A Intermediate Conversation I (4 units)  
JAPN 13B Intermediate Conversation II (4 units)  
JAPN 14A Advanced Conversation I (4 units)  
JAPN 14B Advanced Conversation II (4 units)  
JAPN 33 Introduction to Japanese Culture (4 units)

### **Career Certificate in Japanese Language (30 units)<sup>[127]</sup> NON-TRANSCRIPTABLE<sup>[128]</sup>**

#### **Select any 30 units from the following:**

JAPN 1 Elementary Japanese I (5 units)  
JAPN 2 Elementary Japanese II (5 units)  
JAPN 3 Elementary Japanese III (5 units)  
JAPN 4 Intermediate Japanese I (5 units)  
JAPN 5 Intermediate Japanese II (5 units)  
JAPN 6 Intermediate Japanese III (5 units)  
JAPN 13A Intermediate Conversation I (4 units)  
JAPN 13B Intermediate Conversation II (4 units)  
JAPN 14A Advanced Conversation I (4 units)  
JAPN 14B Advanced Conversation II (4 units)  
JAPN 25A Advanced Composition & Reading I (4 units)  
JAPN 25B Advanced Composition & Reading II (4 units)  
JAPN 33 Introduction to Japanese Culture (4 units)

### **Career Certificate in Japanese Tutoring (52 units)<sup>[129]</sup> NON-TRANSCRIPTABLE<sup>[130]</sup>**

JAPN 1 Elementary Japanese I (5 units)  
JAPN 2 Elementary Japanese II (5 units)  
JAPN 3 Elementary Japanese III (5 units)  
JAPN 4 Intermediate Japanese I (5 units)  
JAPN 5 Intermediate Japanese II (5 units)  
JAPN 6 Intermediate Japanese III (5 units)  
JAPN 13A Intermediate Conversation I (4 units)  
JAPN 13B Intermediate Conversation II (4 units)  
JAPN 14A Advanced Conversation I (4 units)  
JAPN 33 Introduction to Japanese Culture (4 units)  
JAPN 192 Community Service Learning for Japanese (1 unit)  
must be taken six times, for a total of 6 units

## **LAW & SOCIETY (PRE-LAW)**

### **Program Type(s):**

#### **AA Degree**

Units required for major: 35

#### **Associate Degree Requirements\***

#### **Core Courses: (22 units)**

BUSI 18 Business Law I (5 units)  
PHIL 2 Introduction to Social & Political Philosophy (4 units)

[125] All courses must be completed at Foothill College.

[126] Certificate completion will not appear on the student's transcript.

[127] Students who can demonstrate proficiency equivalent to 1 year of college Japanese, JAPN 1, 2 and 3 can be eliminated from the core courses. However, the intermediate and advanced courses must be taken in residence at Foothill College.

[128] Certificate completion will not appear on the student's transcript.

[129] All courses must be completed at Foothill College. Two extra hours per week of teaching practicum is also required for six quarters.

[130] Certificate completion will not appear on the student's transcript.

POLI 2 Comparative Government & Politics (4 units)  
or POLI 2H Honors Comparative Government & Politics (4 units)  
SOC 1 Introduction to Sociology (5 units)  
SOC 15 Law & Society (4 units)

#### **Support Courses: (9 units)**

PHIL 8 Ethics (5 units)  
POLI 1 Political Science: Introduction to American Government & Politics (5 units)  
POLI 15 International Relations/World Politics (4 units)  
or POLI 15H Honors International Relations/World Politics (4 units)  
SOC 40 Aspects of Marriage & Family (4 units)  
BUSI 19 Business Law II (4 units)

#### **Elective Courses: (4 units)<sup>[131]</sup>**

BUSI 53 Survey of International Business (4 units)  
ECON 1A Principles of Macroeconomics (5 units)  
or ECON 1B Principles of Microeconomics (5 units)  
ECON 25 Introduction to the Global Economy (4 units)  
HIST 4A History of Western Civilization to 800 AD (4 units)

## **LEADERSHIP & SERVICE**

### **Program Type(s):**

#### **Certificate of Proficiency NON-TRANSCRIPTABLE<sup>[132]</sup>**

Units required for certificate: 26

#### **Certificate information<sup>[133]</sup>**

Requires English proficiency: ENGL 1A, ESLL 26 or equivalent;  
mathematics proficiency: MATH 105 or equivalent; (or the equivalent placement test scores);

#### **Certificate of Proficiency in Leadership & Service (26 units) NON-TRANSCRIPTABLE<sup>[134]</sup>**

#### **Core Courses (9 units):**

CNSL 86 Introduction to Leadership (1 unit)  
CNSL 87 Leadership: Theories & Practices (1 unit)  
CNSL 88 Leadership: Theories, Styles & Realities (1 unit)  
CNSL 89 Advanced Leadership: Theories, Styles & Realities (1 unit)  
SOSC 79 Introduction to Community Service (1 unit)

#### **And at least 4 units of laboratory; any combination of laboratories, totaling 4 units.**

CNSL 86LX Leadership Laboratory (1 unit)  
or CNSL 86LY Leadership Laboratory (2 units)  
or CNSL 86LZ Leadership Laboratory (3 units)

#### **Support Courses (17 units):**

Select one course from each category; and one additional course from the category of your choice

[131] Students may also use courses listed under support courses for electives.

[132] Certificate completion will not appear on the student's transcript.

[133] All courses pertaining to the certificate must be taken for a letter grade; a GPA of 2.0 or higher is required in all core and support courses for the certificate; courses used to meet certificate requirements can also be used to satisfy general education requirements.

[134] Certificate completion will not appear on the student's transcript.

\*A minimum of 90 units required for the A.A./A.S. Degree, to include required courses, required electives, and graduation requirements, and these minimum proficiencies: ENGL 1A or ESLL 26, and MATH 105.

## Communication

COMM 1A Public Speaking (5 units)  
or COMM 1AH Honors Public Speaking (5 units)  
COMM 2 Interpersonal Communication (5 units)  
COMM 4 Group Discussion (5 units)  
COMM 10 Gender, Communication & Culture (5 units)  
COMM 12 Intercultural Communication (5 units)

## Cultural Competency

ANTH 2A Cultural Anthropology (4 units)  
ENGL 5 Gay & Lesbian Literature (4 units)  
ENGL 12 African American Literature (4 units)  
ENGL 31 Latino/a Literature (4 units)  
ENGL 40 Asian American Literature (4 units)  
HIST 10 History of California: The Multicultural State (4 units)  
MUS 8 Music of Multicultural America (4 units)  
or MUS 8H Honors Music of Multicultural America (4 units)  
PHOT 8 Photography of Multicultural America (4 units)  
or PHOT 8H Honors Photography of Multicultural America (4 units)  
PSYC 21 Psychology of Women: Sex & Gender Differences (4 units)  
or SOC 21 Psychology of Women: Sex & Gender Differences (4 units)  
or WMN 21 Psychology of Women: Sex & Gender Differences (4 units)  
PSYC 22 Psychology of Prejudice (4 units)  
SOSC 20 Cross-Cultural Perspectives for a Multicultural Society (4 units)  
SOC 23 Race & Ethnic Relations (4 units)  
THTR 8 Multicultural Performing Arts in Modern America (4 units)  
WMN 5 Introduction to Women's Studies (4 units)  
WMN 11 Women in Global Perspective (4 units)

## Political Science

POLI 1 Political Science: Introduction to American Government & Politics (5 units)  
POLI 2 Comparative Government & Politics (4 units)  
or POLI 2H Honors Comparative Government & Politics (4 units)  
POLI 3 Introduction to Political Philosophy/Political Theory (5 units)  
or POLI 3H Honors Introduction to Political Philosophy/  
Political Theory (5 units)  
POLI 9 Political Economy (4 units)  
or POLI 9H Honors Political Economy (4 units)  
POLI 15 International Relations/World Politics (4 units)  
or POLI 15H Honors International Relations/World Politics (4 units)

## MATHEMATICS

### Program Type(s):

#### AS Degree

Units required for major: 45

#### Associate Degree Requirements\*

##### Core Courses: (45 units)

MATH 1A Calculus (5 units)  
MATH 1B Calculus (5 units)  
MATH 1C Calculus (5 units)  
MATH 1D Calculus (5 units)

MATH 22 Discrete Mathematics (5 units)  
MATH 2A Differential Equations (5 units)  
MATH 2B Linear Algebra (5 units)

#### And two courses selected from:

PHYS 2A General Physics (5 units)  
PHYS 2B General Physics (5 units)  
PHYS 2C General Physics (5 units)  
or TWO courses selected from:  
PHYS 4A General Physics (Calculus) (6 units)  
PHYS 4B General Physics (Calculus) (6 units)  
PHYS 4C General Physics (Calculus) (6 units)  
or TWO courses selected from:  
CHEM 1A General Chemistry (5 units)  
CHEM 1B General Chemistry (5 units)  
CHEM 1C General Chemistry & Qualitative Analysis (5 units)  
or TWO courses selected from:  
CIS 15A Computer Science I: C++ (5 units)  
CIS 15B Computer Science II: C++ (5 units)  
CIS 15C Computer Science III: Data Structures & Algorithms C++ (5 units)  
CIS 27A Computer Science I: JAVA (5 units)  
CIS 27B Computer Science II: JAVA (5 units)  
CIS 27C Computer Science III: Data Structures & Algorithms JAVA (5 units)

#### Optional Recommended Courses

MATH 10 Elementary Statistics (5 units)  
MATH 11 Finite Mathematics (5 units)

## MUSIC: GENERAL

### Program Type(s):

#### AA Degree

Units required for major: 43

#### Associate Degree Requirements\*

##### Core Courses: (35 units)

MUS 2A Great Composers & Music Masterpieces of Western Civilization (4 units)  
MUS 2B Great Composers & Music Masterpieces of Western Civilization (4 units)  
MUS 2C Great Composers & Music Masterpieces of Western Civilization (4 units)  
MUS 3A Beginning Music Theory, Literature & Composition (5 units)  
MUS 3B Intermediate Music Theory, Literature & Composition (5 units)  
MUS 3C Advanced Music Theory, Literature & Composition (5 units)  
MUS 12A Beginning Class Piano (2 units)  
or MUS 12B Intermediate Class Piano (2 units)  
or MUS 12C Advanced Class Piano (2 units)  
or MUS 12D Piano Repertoire (2 units)  
MUS 41 Live Music Performance Workshop (2 units)<sup>[135]</sup>

[135] Must be taken three times for a total of 6 units

\*A minimum of 90 units required for the A.A./A.S. Degree, to include required courses, required electives, and graduation requirements, and these minimum proficiencies: ENGL 1A or ESLL 26, and MATH 105.

### **Elective Courses: (8 units)**

MUS 1 Introduction to Music (4 units)  
MUS 2D World Music: Roots to Contemporary Global Fusion (4 units)  
MUS 7 Contemporary Music Styles: Rock, Pop & Jazz (4 units)  
MUS 7D Contemporary Music Styles: The Beatles in the Culture of Popular Music (4 units)  
MUS 7E History of the Blues (4 units)  
MUS 8 Music of Multicultural America (4 units)  
MUS 8H Honors Music of Multicultural America (4 units)  
MUS 10 Music Fundamentals (4 units)  
MUS 12A Beginning Class Piano (2 units)  
or MUS 12B Intermediate Class Piano (2 units)  
or MUS 12C Advanced Class Piano (2 units)  
or MUS 12D Piano Repertoire (2 units)  
MUS 13A Class Voice I (1 unit)  
or MUS 13B Class Voice II (1 unit)  
or MUS 13C Class Voice III (1 units)  
MUS 14A Beginning Classical Guitar (2 units)  
or MUS 14B Intermediate Classical Guitar (2 units)  
or MUS 14C Advanced Classical Guitar (2 units)  
MUS 15A Beginning Folk Guitar (2 units)  
or MUS 15B Intermediate Folk Guitar (2 units)  
or MUS 15C Advanced Folk Guitar (2 units)  
MUS 35 Special Projects In Music (2 units)  
MUSP 21 College Chorale (2 units)  
MUSP 24 Gospel Chorus (2 units)  
MUSP 26 Advanced Women's Chorus (2 units)  
MUSP 27 Renaissance Vocal Ensemble (2 units)  
MUSP 30 College Band (2 units)  
MUSP 31 Concert Band (2 units)  
MUSP 32 Symphonic Wind Ensemble (2 units)  
MUSP 33 Evening Jazz Ensemble (2 units)  
MUSP 34 Repertory Jazz Ensemble (2 units)  
MUSP 35 Stage Band (2 units)  
MUSP 36 Jazz Laboratory Band (2 units)  
MUSP 37 String Orchestra (2 units)  
MUSP 38 Chamber Orchestra (2 units)  
MUSP 39 College Orchestra (2 units)  
MUSP 40 Symphony Orchestra (2 units)

### **MUSIC TECHNOLOGY**

#### **Program Type(s):**

#### **AA Degree; Certificate of Achievement**

may be transferrable to a 4-year university.

Units required for major: 47.5, certificate: 35.5–36

#### **Associate Degree Requirements\***

#### **Core Courses: (35.5 units)**

MUS 50A Music Business (4 units)  
or MUS 50B Entertainment Law & New Media (4 units)  
MUS 11A Jazz & Swing (4 units)  
or MUS 11B Funk, Fusion & Hip-Hop (4 units)

MUS 85A Music & Media: Edison to Hendrix (4 units)  
or MUS 85B Music & Media: Hendrix to Hip-Hop (4 units)  
MUS 66A Introduction to Digital Audio: Pro Tools (4 units)  
or MUS 66B Introduction to Digital Audio: Reason & Pro Tools (4 units)  
MUS 80A Recording Studio Basics (4 units)  
or MUS 60A Producing in the Home Studio I (4 units)  
MUS 81A Audio Recording & Production (4 units)  
or MUS 60B Producing in the Home Studio II (4 units)  
MUS 81B Sound Design for Film & Video (3.5 units)  
MUS 81C Mixing & Mastering With Pro Tools (4 units)  
MUS 82A Pro Tools 101: Introduction to Pro Tools (4 units)

#### **Support Courses: (12 units)**

#### **Select any 12 units from the following:**

MUS 2D World Music: Roots to Contemporary Global Fusion (4 units)  
MUS 10 Music Fundamentals (4 units)  
MUS 11A Jazz & Swing (4 units)  
MUS 11B Funk, Fusion & Hip-Hop (4 units)  
MUS 11C Salsa & Latin Jazz (4 units)  
MUS 50A Music Business (4 units)  
MUS 50B Entertainment Law & New Media (4 units)  
MUS 58A Songwriter's Workshop I (3.5 units)  
MUS 58B Songwriter's Workshop II (3.5 units)  
MUS 58C Songwriter's Workshop III (4 units)  
MUS 60A Producing in the Home Studio I (4 units)  
MUS 60B Producing in the Home Studio II (4 units)  
MUS 62 Sound Reinforcement & Live Recording (4 units)  
MUS 81B Sound Design For Film & Video (4 units)  
MUS 81D Pro Tools & Plug-Ins I (4 units)  
MUS 81E Pro Tools & Plug-Ins II (4 units)  
MUS 82B Pro Tools 110: Essentials of Pro Tools (4 units)  
MUS 82C Pro Tools 201: Pro Tools Production Essentials (4 units)  
MUS 85A Music & Media: Edison to Hendrix (4 units)  
MUS 85B Music & Media: Hendrix to Hip-Hop (4 units)  
MUS 86 Introduction to Digital Sound, Video & Animation (4 units)  
MUS 41 Live Music Performance Workshop (2 units)  
F A 1 Introduction to Popular Culture (4 units)  
F A 2 Popular Culture & U. S. History (4 units)  
GID 56 Website Design (4 units)  
GID 80 Digital Sound, Video & Animation (4 units)  
PHOT 65A Digital Photography I (4 units)  
RAD 90A News & Information Production I (3 units)  
RAD 91B Radio Station Sales & Marketing II (3 units)  
RAD 93A Music Industry Relations & Engineering I (3 units)  
VART 1 Introduction to Film Studies (4 units)  
VART 3 American Cinema (4 units)  
VART 15 Web Video (4 units)

#### **Certificate information**

All courses pertaining to the certificate must be taken for a letter grade. A cumulative GPA of 2.8 or higher is required.

\*A minimum of 90 units required for the A.A./A.S. Degree, to include required courses, required electives, and graduation requirements, and these minimum proficiencies: ENGL 1A or ESLL 26, and MATH 105.

**Certificate of Achievement in Music Technology (35.5 units)**

Awarded after completion of the core courses. General education courses are not required.

**Certificate of Achievement in Pro Tools (36 units)**

Awarded after completion of the following courses. General education courses are not required.

MUS 66A Introduction to Digital Audio: Pro Tools (4 units)  
 MUS 66B Introduction to Digital Audio: Reason & Pro Tools (4 units)  
 MUS 80A Recording Studio Basics (4 units)  
 MUS 81A Audio Recording & Production (4 units)  
 MUS 81C Mixing & Mastering with Pro Tools (4 units)  
 MUS 81D Pro Tools & Plug-Ins I (4 units)  
 MUS 81E Pro Tools & Plug-Ins II (4 units)  
 MUS 82A Pro Tools 101: Introduction to Pro Tools (4 units)  
 MUS 82B Pro Tools 110: Essentials of Pro Tools (4 units)

**NANOSCIENCE****Program Type(s):**

**AS Degree; Certificate of Achievement; Certificate of Proficiency**

Units required for major: 47–68, certificate: 15–40

**Associate Degree Requirements\*****Core Courses: (47–55 units)****Nanobiotechnology Prerequisite Skills:**

PHYS 10 or equivalent  
 BIOL 10 or equivalent

**Nanobiotechnology Core Courses: 47 Units**

BTEC 51A Cell Biology for Biotechnology (3 units)  
 BTEC 51AL Cell Biology Laboratory for Biotechnology (5.5 units)  
 BTEC 52A Molecular Biology for Biotechnology (3 units)  
 BTEC52AL Molecular Biology Laboratory for Biotechnology (5.5 units)  
 CHEM 30A Survey of Inorganic & Organic Chemistry (5 units)  
 CHEM 30B Survey of Organic & Biochemistry (5 units)  
 NANO 51 Introduction to Nanotechnology (5 units)  
 NANO 52 Introduction to Materials Science (5 units)  
 NANO 59 Nanobiotechnology Sciences (5 units)  
 NANO 61 Micro & Nano Fabrication Techniques Capstone (5 units)

**Nanoscience Transfer Prerequisite Skills:**

CHEM 25 or equivalent  
 PHYS 10 or equivalent  
 MATH 105 or equivalent

**Nanoscience Transfer Core Courses: 68 Units****(53 Units + Electives 15 units)**

CHEM 1A General Chemistry (5 units)  
 CHEM 1B General Chemistry (5 units)  
 CHEM 1C General Chemistry & Qualitative Analysis (5 units)  
 NANO 51 Introduction to Nanotechnology (5 units)  
 MATH 1A Calculus (5 units)  
 MATH 1B Calculus (5 units)  
 MATH 1C Calculus (5 units)  
 PHYS 4A General Physics (Calculus) (6 units)

PHYS 4B General Physics (Calculus) (6 units)

PHYS 4C General Physics (Calculus) (6 units)

**Nanoscience Transfer Electives: (15 units)**

BIOL 1A Principles of Cell Biology (6 units)  
 BIOL 1D Molecular Genetics (4 units)  
 ENGL 3 Technical Writing (5 units)  
 ENGR 35 Statics (5 units)  
 ENGR 45 Properties of Materials (5 units)  
 NANO 52 Introduction to Materials Science (5 units)  
 NANO 53 Materials Characterization (5 units)  
 NANO 54 Surfaces & Thin Films (5 units)  
 NANO 56 Principles of MEMS, NEMS & Sensors (5 units)  
 NANO 57 Introduction to Micro & Nano Fabrication Techniques (5 units)  
 NANO 58 Micro & Nano Fabrication Techniques Laboratory (5 units)  
 NANO 59 Nanobiotechnology Sciences (5 units)  
 NANO 60 Introduction to Clean Technology (5 units)

**Nanoscience Prerequisite Skills:**

CHEM 25 or equivalent  
 PHYS 10 or equivalent  
 BIOL 10 or equivalent

**Nanoscience Core Courses: 55 Units**

NANO 51 Introduction to Nanotechnology (5 units)  
 NANO 52 Introduction to Materials Science (5 units)  
 NANO 53 Materials Characterization (5 units)  
 NANO 54 Surfaces & Thin Films (5 units)  
 NANO 56 Principles of MEMS, NEMS & Sensors (5 units)  
 NANO 57 Introduction to Micro & Nano Fabrication Techniques (5 units)  
 NANO 58 Micro & Nano Fabrication Techniques Laboratory (5 units)  
 NANO 61 Micro & Nano Fabrication Techniques Capstone (5 units)  
 PHYS 2A General Physics (5 units) (or equivalent)  
 PHYS 2B General Physics (5 units) (or equivalent)  
 PHYS 2C General Physics (5 units) (or equivalent)

**Certificate of Achievement: Nanoscience (40 units)**

NANO 51 Introduction to Nanotechnology (5 units)  
 NANO 52 Introduction to Materials Science (5 units)  
 NANO 53 Materials Characterization (5 units)  
 NANO 54 Surfaces & Thin Films (5 units)  
 NANO 56 Principles of MEMS, NEMS & Sensors (5 units)  
 NANO 57 Introduction to Micro & Nano Fabrication Techniques (5 units)  
 NANO 58 Micro & Nano Fabrication Techniques Laboratory (5 units)  
 NANO 61 Micro & Nano Fabrication Techniques Capstone (5 units)

**Certificate of Proficiency: Nanobiotechnology (37 units)****NON-TRANSCRIPTABLE<sup>[136]</sup>**

BTEC 51A Cell Biology for Biotechnology (3 units)  
 BTEC 51AL Cell Biology Laboratory for Biotechnology (5.5 units)  
 BTEC 52A Molecular Biology for Biotechnology (3 units)  
 BTEC52AL Molecular Biology Laboratory for Biotechnology (5.5 units)

[136] Certificate completion will not appear on the student's transcript.

\*A minimum of 90 units required for the A.A./A.S. Degree, to include required courses, required electives, and graduation requirements, and these minimum proficiencies: ENGL 1A or ESLL 26, and MATH 105.

NANO 51 Introduction to Nanotechnology (5 units)  
NANO 52 Introduction to Materials Science (5 units)  
NANO 59 Nanobiotechnology Sciences (5 units)  
NANO 61 Micro & Nano Fabrication Techniques Capstone (5 units)

**Certificate of Proficiency: Nanofabrication (15 units)**

**NON-TRANSCRIPTABLE<sup>[137]</sup>**

NANO 51 Introduction to Nanotechnology (5 units)  
NANO 57 Introduction to Micro & Nano Fabrication Techniques (5 units)  
NANO 58 Micro & Nano Fabrication Techniques Laboratory (5 units)

**Certificate of Proficiency: Characterization & Modeling (15 units) NON-TRANSCRIPTABLE<sup>[138]</sup>**

NANO 51 Introduction to Nanotechnology (5 units)  
NANO 53 Materials Characterization (5 units)  
NANO 54 Surfaces & Thin Films (5 units)

**NON-CREDIT: GERIATRIC HOME AIDE**

**Program Type(s):**

**Certificate of Completion**

**Certificate of Completion: 104 hours**

NCSV 400 Geriatric Home Aide Basics (60 Hours)  
NCSV 401 Geriatric Home Aide: Nutrition (44 Hours)

**NON-CREDIT: JOB READINESS**

**Program Type(s):**

**Certificate of Completion**

**Certificate of Completion: 67 Hours**

NCWP 400 Blueprint for Workforce Success (36 hours)  
NCWP 401 Blueprint for Customer Service (18 hours)  
NCWP 402 30 Ways to Shine as a New Employee (6 hours)  
NCWP 403 Job Club (7 hours)

**NON-CREDIT: MATHEMATICAL FOUNDATIONS**

**Program Type(s):**

**Certificate of Completion**

**Certificate of Completion: 60 hours**

NCBS 401A Mathematical Foundations for College Part I (20 hours)  
NCBS 401B Mathematical Foundations for College Part II (40 hours)

**PARAMEDIC**

**Program Type(s):**

**AS Degree; Certificate of Achievement**

Units required for major: 100.5, certificate: 85.5

**Associate Degree Requirements\***

BIOL 40A Human Anatomy & Physiology I (5 units)  
BIOL 40B Human Anatomy & Physiology II (5 units)  
BIOL 40C Human Anatomy & Physiology III (5 units)

<sup>[137]</sup> Certificate completion will not appear on the student's transcript.

<sup>[138]</sup> Certificate completion will not appear on the student's transcript.

**Certificate information**

All paramedic classes meet at the Foothill College Middlefield Campus, 4000 Middlefield Road, Palo Alto, CA 94303.

**Certificate of Achievement (85.5 units)**

**Option A: Accelerated**

**Fall Quarter**

EMTP 60A Mobile Intensive Care Paramedic Program: Cognitive & Affective IA (11 units)

EMTP 60B Mobile Intensive Care Paramedic Program: Cognitive, Psychomotor & Affective IB (8.5 units)

**Winter Quarter**

EMTP 61A Mobile Intensive Care Paramedic Program: Cognitive & Affective IIA (11 units)

EMTP 61B Mobile Intensive Care Paramedic Program: Cognitive, Affective & Psychomotor IIB (8.5 units)

EMTP 63A Mobile Intensive Care Paramedic Program: Hospital Specialty Rotations (3 units)

**Spring Quarter**

EMTP 62A Mobile Intensive Care Paramedic Program: Cognitive & Affective IIIA (11 units)

EMTP 62B Mobile Intensive Care Paramedic Program: Cognitive, Affective & Psychomotor IIIB (8.5 units)

EMTP 63B Mobile Intensive Care Paramedic Program: Hospital Emergency Department Rotations (5 units)

**Summer Session**

EMTP 64A Mobile Intensive Care Paramedic Program: Ambulance Field Internship (9.5 units)

EMTP 64B Mobile Intensive Care Paramedic Program: Ambulance Field Internship (9.5 units)

**Option B: Standard**

**Fall Quarter**

EMTP 60A Mobile Intensive Care Paramedic Program: Cognitive & Affective IA (11 units)

EMTP 60B Mobile Intensive Care Paramedic Program: Cognitive, Psychomotor & Affective IB (8.5 units)

**Winter Quarter**

EMTP 61A Mobile Intensive Care Paramedic Program: Cognitive & Affective IIA (11 units)

EMTP 61B Mobile Intensive Care Paramedic Program: Cognitive, Affective & Psychomotor IIB (8.5 units)

EMTP 63A Mobile Intensive Care Paramedic Program: Hospital Specialty Rotations (3 units)

**Spring Quarter**

EMTP 62A Mobile Intensive Care Paramedic Program: Cognitive & Affective IIIA (11 units)

EMTP 62B Mobile Intensive Care Paramedic Program: Cognitive, Affective & Psychomotor IIIB (8.5 units)

**Summer Session**

EMTP 63B Mobile Intensive Care Paramedic Program: Hospital Emergency Department Rotations (5 units)

\*A minimum of 90 units required for the A.A./A.S. Degree, to include required courses, required electives, and graduation requirements, and these minimum proficiencies: ENGL 1A or ESSL 26, and MATH 105.

### Fall Quarter

EMTP 64A Mobile Intensive Care Paramedic Program:  
Ambulance Field Internship (9.5 units)

EMTP 64B Mobile Intensive Care Paramedic Program:  
Ambulance Field Internship (9.5 units)

## PHARMACY TECHNICIAN

### Program Type(s):

**AS Degree; Certificate of Achievement**

Units required for major: 52, certificate: 52

### Associate Degree Requirements\*

**Core Courses: (52 units)**

#### Fall Quarter

PHT 50 Orientation to Pharmacy Technology (3 units)

PHT 51 Basic Pharmaceutics (4 units)

PHT 52A Inpatient Dispensing (3 units)

PHT 53 Ambulatory Pharmacy Practice (4 units)

PHT 54A Dosage Calculations A (3 units)

PHT 60A Retail Clinical I (1.5 units)

or PHT 62A Hospital Clinical I (1.5 units)

#### Winter Quarter

PHT 52B Aseptic Technique & IV Preparation (4 units)

PHT 54B Dosage Calculations B (3 units)

PHT 55A Pharmacology A (6 units)

PHT 56A Dispensing & Compounding A (4 units)

### And any one of the following clinical courses:

PHT 60A Retail Clinical I (1.5 units)

PHT 60B Retail Clinical II (1.5 units)

PHT 62A Hospital Clinical I (1.5 units)

PHT 62B Hospital Clinical II (1.5 units)

#### Spring Quarter

PHT 55B Pharmacology B (6 units)

PHT 56B Dispensing & Compounding B (3 units)

PHT 61 Home Healthcare Supplies (3 units)

### And any two of the following clinical courses:

PHT 60A Retail Clinical I (1.5 units)

PHT 60B Retail Clinical II (1.5 units)

PHT 62A Hospital Clinical I (1.5 units)

PHT 62B Hospital Clinical II (1.5 units)

## PHILOSOPHY

### Program Type(s):

**AA Degree**

Units required for major: 33

### Associate Degree Requirements\*

**Core Courses: (17 units)**

PHIL 2 Introduction to Social & Political Philosophy (4 units)

PHIL 4 Introduction to Philosophy (4 units)

PHIL 8 Ethics (5 units)

### and 4 units from the following courses:

PHIL 1 Critical Thinking & Writing (5 units)

PHIL 7 Introduction to Symbolic Logic (5 units)

PHIL 50 Introduction to Critical Thinking (4 units)

### Support Courses: (8 units)<sup>[139]</sup>

PHIL 20A History of Western Philosophy from Socrates through St. Thomas (4 units)

PHIL 20B History of Western Philosophy from the Renaissance through Kant (4 units)

PHIL 20C Contemporary Philosophy: 19<sup>th</sup> & 20<sup>th</sup> Century Thought (4 units)

PHIL 22 Introduction to World Religions: The Search for Spiritual Meaning (4 units)

PHIL 24 Comparative World Religions: East (4 units)

PHIL 25 Comparative World Religions: West (4 units)

### Elective Courses: (8 units)

ANTH 2A Cultural Anthropology (4 units)

ART 2A History of Art: History of Western Art from Prehistory through Early Christianity (4.5 units)

or ART 2AH Honors History of Art: History of Western Art from Prehistory through Early Christianity (4.5 units)

ART 2B History of Western Art from the Middle Ages to the Renaissance (4.5 units)

or ART 2BH Honors History of Western Art from the Middle Ages to the Renaissance (4.5 units)

ART 2C History of Western Art from the Baroque to Post Impressionism (4.5 units)

or ART 2CH Honors History of Western Art from the Baroque to Post Impressionism (4.5 units)

ART 12 Introduction to Asian Art (4.5 units)

BUSI 70 Business & Professional Ethics (4 units)

HIST 4A History of Western Civilization to 800 AD (4 units)

HIST 4B History of Western Civilization II (4 units)

HIST 4C History of Western Civilization 1789–Present (4 units)

or HIST 4CH Honors History of Western Civilization (4 units)

HIST 9 History of Contemporary Europe (4 units)

or HIST 9H Honors History of Contemporary Europe (4 units)

HIST 18 Introduction to Middle Eastern Civilization (4 units)

HUMN 1A Humanities & the Modern Experience I (4 units)

HUMN 1B Humanities & the Modern Experience II (4 units)

ENGL 26 Language, Mind & Society (4 units)

or LING 26 Language, Mind & Society (4 units)

POLI 3 Introduction to Political Philosophy/Political Theory (5 units)

or POLI 3H Honors Introduction to Political Philosophy/Political Theory (5 units)

POLI 9 Political Economy (4 units)

or POLI 9H Honors Political Economy (4 units)

PSYC 1 General Psychology (5 units)

PSYC 4 Introduction to Psychobiology (4 units)

SOC 1 Introduction to Sociology (5 units)

[139] Students may also use courses listed under support courses for electives.

\*A minimum of 90 units required for the A.A./A.S. Degree, to include required courses, required electives, and graduation requirements, and these minimum proficiencies: ENGL 1A or ESLL 26, and MATH 105.

## PHOTOGRAPHY

### Program Type(s):

**AA Degree; Certificate of Achievement; Skills Certificate**

Units required for major: 40, certificate: 12–40

### Associate Degree Requirements\*

#### Core Courses: (23 units)

PHOT 1 Black & White Photography I (4 units)  
or PHOT 5 Introduction to Photography (4 units)  
PHOT 10 History of Photography (4 units)  
or PHOT 10H Honors History of Photography (4 units)  
PHOT 65A Digital Photography I (4 units)  
ART 5A Basic Two-Dimensional Design (3 units)  
PHOT 57A Photographic Portfolio Development (4 units)  
PHOT 57B Professional Practices in Photography (4 units)  
And select option #1 or option #2:

#### Option #1: Traditional Photography (12 units)

PHOT 2 Black & White Photography II (4 units)  
PHOT 50 Black & White Photography III (4 units)  
PHOT 70 Introduction to Color Photography (4 units)

#### Option #2: Digital Imaging (12 units)

PHOT 65B Digital Photography II (4 units)  
PHOT 65C Digital Photography III (4 units)  
PHOT 71 The Photographic Book (4 units)

#### Elective Courses: (5 units)

ART 6 Collage & Composition (3 units)  
ART 20A Color (3 units)  
PHOT 1 Black & White Photography I (4 units)  
PHOT 2 Black & White Photography II (4 units)  
PHOT 5 Introduction to Photography (4 units)  
PHOT 8 Photography of Multicultural America (4 units)  
or PHOT 8H Honors Photography of Multicultural America (4 units)  
PHOT 10 History of Photography (4 units)  
or PHOT 10H Honors History of Photography (4 units)  
PHOT 11 Contemporary Issues in Photography (4 units)  
or PHOT 11H Honors Contemporary Issues in Photography (4 units)  
PHOT 13 Experimental Photography (4 units)  
PHOT 50 Black & White Photography III (4 units)  
PHOT 51 Zone System Photography (4 units)  
PHOT 55 Special Projects in Photography (2 units)  
PHOT 57A Photographic Portfolio Development (4 units)  
PHOT 57B Professional Practices in Photography (4 units)  
PHOT 63 Photojournalism (4 units)  
PHOT 65A Digital Photography I (4 units)  
PHOT 65B Digital Photography II (4 units)  
PHOT 65C Digital Photography III (4 units)  
PHOT 68A Darkroom Topics in Photography (1 unit)  
PHOT 68B Digital Topics in Photography (1 unit)  
PHOT 68C Studio Lighting Topics in Photography (1 unit)  
PHOT 68D Experimental Topics in Photography (1 unit)  
PHOT 68E Lecture Topics in Photography (1 unit)  
PHOT 68F Exhibition Topics in Photography (1 unit)  
PHOT 70 Introduction to Color Photography (4 units)

PHOT 71 The Photographic Book (4 units)  
PHOT 72 Digital Camera Technique (4 units)  
PHOT 74 Studio Photography Techniques (4 units)  
PHOT 78A Landscape Field Study in Photography (1 unit)  
PHOT 78B Social Concerns Field Study in Photography (1 unit)  
PHOT 78C Documentary Field Study in Photography (1 unit)  
PHOT 78D Museum/Gallery Field Study in Photography (1 unit)  
PHOT 78E Techniques Field Study in Photography (1 unit)  
PHOT 150, X, Y, Z Photography Production Laboratory (.5–3 units)<sup>[140]</sup>  
PHOT 180, X, Y, Z Photographic Practices (.5–3 units)<sup>[141]</sup>  
PHOT 190, X, Y, Z Directed Study (.5–3 units)<sup>[142]</sup>

#### Certificate of Achievement I (40 units)

Awarded upon completion of the core, required option #1 or #2, and electives. General education courses are not required.

#### Certificate of Achievement: Traditional Photography II (30 units)

PHOT 1 Black & White Photography I (4 units)  
PHOT 2 Black & White Photography II (4 units)  
PHOT 10 History of Photography (4 units)  
or PHOT 10H Honors History of Photography (4 units)  
PHOT 50 Black & White Photography III (4 units)  
PHOT 65A Digital Photography I (4 units)  
PHOT 70 Introduction to Color Photography (4 units)  
ART 5A Basic Two-Dimensional Design (3 units)  
And 3 units from elective list.

#### Certificate of Achievement: Digital Imaging II (30 units)

PHOT 1 Black & White Photography I (4 units)  
or PHOT 5 Introduction to Photography (4 units)  
PHOT 10 History of Photography (4 units)  
or PHOT 10H Honors History of Photography (4 units)  
PHOT 65A Digital Photography I (4 units)  
PHOT 65B Digital Photography II (4 units)  
PHOT 65C Digital Photography III (4 units)  
PHOT 71 The Photographic Book (4 units)  
ART 5A Basic Two-Dimensional Design (3 units)  
and 3 units from elective list.

#### Skills Certificate: Photographic Laboratory Technician (12.5 units)<sup>[143]</sup> NON-TRANSCRIPTABLE<sup>[144]</sup>

PHOT 1 Black & White Photography I (4 units)  
PHOT 2 Black & White Photography II (4 units)  
PHOT 70 Introduction to Color Photography (4 units)  
or PHOT 150 Photography Production Laboratory (.5 unit)  
and/or PHOT 180 Photographic Practices (.5 unit)  
or equivalent

#### Skills Certificate: Photo Criticism (12 units)

##### NON-TRANSCRIPTABLE<sup>[145]</sup>

PHOT 5 Introduction to Photography (4 units)  
PHOT 10 History of Photography (4 units)

[140] Maximum of 3 units of laboratory may be used toward a degree or certificate.

[141] Maximum of 3 units of laboratory may be used toward a degree or certificate.

[142] Maximum of 3 units of laboratory may be used toward a degree or certificate.

[143] Plus 50 hours of work experience verified by employer or volunteer supervisor.

[144] Certificate completion will not appear on the student's transcript.

[145] Certificate completion will not appear on the student's transcript.

\*A minimum of 90 units required for the A.A./A.S. Degree, to include required courses, required electives, and graduation requirements, and these minimum proficiencies: ENGL 1A or ESLL 26, and MATH 105.

or PHOT 10H Honors History of Photography (4 units)  
and  
PHOT 8 Photography of Multicultural America (4 units)  
or PHOT 8H Honors Photography of Multicultural America  
(4 units)  
or PHOT 11 Contemporary Issues in Photography (4 units)  
or PHOT 11H Honors Contemporary Issues in Photography  
(4 units)

## PHYSICAL EDUCATION

### Program Type(s):

#### AA Degree

Units required for major: 34

#### Associate Degree Requirements\*

##### Core Courses: (34 units)

PHED 1 Introduction to Physical Education as a Profession (4 units)  
PHED 3 Theories & Techniques of Coaching Sports (4 units)  
or DANC 10 Topics in Dance History (4 units)  
PHED 67B Emergency Athletic Injury Care (3 units)  
BIOL 10 General Biology: Basic Principles (5 units)  
or BIOL 14 Human Biology (5 units)  
PHED 2 Sport in Society (4 units)  
PHED 4 Concepts of Physical Fitness & Wellness (4 units)  
PHED 8 Theory & Concepts of Exercise Physiology (4 units)  
and 6 units of any PHED activity courses or DANC courses.

##### Elective Courses: (Recommended)

PHED 6 Performance-Enhancing Substances in Sport & Exercise  
(4 units)  
PHED 66 First Aid & CPR/AED (2 units)  
PHED 67A Prevention of Athletic Injuries (3 units)  
PHED 67C Treatment & Rehabilitation of Athletic Injuries (3 units)  
BIOL 40A Human Anatomy & Physiology I (5 units)  
BIOL 40B Human Anatomy & Physiology II (5 units)  
BIOL 40C Human Anatomy & Physiology III (5 units)  
CHEM 25 Fundamentals of Chemistry (5 units)  
or CHEM 30A Survey of Inorganic & Organic Chemistry (5 units)  
PHED 9 Basic Nutrition for Sports & Fitness (4 units)  
PSYC 1 General Psychology (5 units)  
DANC 10 Topics in Dance History (4 units)

## PHYSICS

### Program Type(s):

#### AS Degree

Units required for major: 59

#### Associate Degree Requirements\*

##### Core Courses: (59 units)

CHEM 1A General Chemistry (5 units)  
CHEM 1B General Chemistry (5 units)  
MATH 1B Calculus (5 units)  
MATH 1C Calculus (5 units)  
MATH 1D Calculus (5 units)  
MATH 2A Differential Equations (5 units)

MATH 2B Linear Algebra (5 units)  
PHYS 4A General Physics (Calculus) (6 units)  
PHYS 4B General Physics (Calculus) (6 units)  
PHYS 4C General Physics (Calculus) (6 units)  
PHYS 4D General Physics (Calculus) (6 units)

## POLITICAL SCIENCE

### Program Type(s):

#### AA Degree

Units required for major: 35

#### Associate Degree Requirements\*

##### Core Courses: (18 units)

POLI 1 Political Science: Introduction to American Government  
& Politics (5 units)  
POLI 2 Comparative Government & Politics (4 units)  
or POLI 2H Honors Comparative Government & Politics (4 units)  
POLI 3 Introduction to Political Philosophy/Political Theory (5 units)  
or POLI 3H Honors Introduction to Political Philosophy/  
Political Theory (5 units)  
POLI 15 International Relations/World Politics (4 units)  
or POLI 15H Honors International Relations/World Politics  
(4 units)

##### Support Courses: (9 units)<sup>[146]</sup>

ECON 1A Principles of Macroeconomics (5 units)  
HIST 9 History of Contemporary Europe (4 units)  
or HIST 9H Honors History of Contemporary Europe (4 units)  
HIST 17A History of the United States to 1816 (4 units)  
or HIST 17B History of the United States from 1812 to 1914  
(4 units)  
or HIST 17C History of the United States 1900 to the Present  
(4 units)  
POLI 9 Political Economy (4 units)  
or POLI 9H Honors Political Economy (4 units)

##### Elective Courses: (8 units)

ECON 25 Introduction to the Global Economy (4 units)  
HIST 8 History of Latin America (4 units)  
HIST 18 Introduction to Middle Eastern Civilization (4 units)  
HIST 20 History of Russia & The Soviet Union (4 units)  
PHIL 2 Introduction to Social & Political Philosophy (4 units)  
SOC 15 Law & Society (4 units)

## POPULAR CULTURE

### Program Type(s):

#### Certificate of Proficiency NON-TRANSCRIPTABLE<sup>[147]</sup>

Units required for certificate: 16

##### Certificate information

All courses pertaining to the major must be taken for a letter grade. In addition, a GPA of 2.0 or higher is required in all core and elective courses for the certificate.

[146] Students may also use courses listed under support courses for electives.

[147] Certificate completion will not appear on the student's transcript.

\*A minimum of 90 units required for the A.A./A.S. Degree, to include required courses, required electives, and graduation requirements, and these minimum proficiencies: ENGL 1A or ESLL 26, and MATH 105.

### Certificate of Proficiency in Popular Culture (16 units)

#### NON-TRANSCRIPTABLE<sup>[148]</sup>

#### Core Courses: (12 units)

FA 1 Introduction to Popular Culture (4 units)

FA 2 Popular Culture & U. S. History (4 units)

SOC 8 Popular Culture (4 units)

#### Electives: (4 units)

BUSI 57 Principles of Advertising (4 units)

or ADVT 57 Principles of Advertising (4 units)

CIS 2 Computers & Society (5 units)

COMM 10 Gender, Communication & Culture (4 units)

ENGL 26 Language, Mind & Society (4 units)

or LING 26 Language, Mind & Society (4 units)

GID 1 History of Graphic Design (4 units)

MUS 7 Contemporary Musical Styles: Rock, Pop & Jazz (4 units)

MUS 85A Music & Media: Edison to Hendrix (4 units)

or MUS 85B Music & Media: Hendrix to Hip-Hop (4 units)

PHED 2 Sport in Society (4 units)

VART 2C Current Trends in Film, TV & Internet (4 units)

VART 3 American Cinema (4 units)

## PRIMARY CARE ASSOCIATE PROGRAM

### Program Type(s):

#### AS Degree; Certificate of Achievement

Units required for major: 88.5, certificate: 88.5

#### Associate Degree Requirements\*

#### Core Courses: (88.5 units)<sup>[149]</sup>

#### Summer Quarter

PC 190 Directed Study in Primary Care Medicine (.5 unit)

Student completes personal portfolio. Complete online training.

#### Fall Quarter<sup>[150]</sup>

PC 80 Family Medicine Didactic (14 units)

PC 190Z Directed Studies in Primary Care Medicine (2 units)

PC 80P Family Medicine Clinical (5 units)

#### Winter Quarter<sup>[151]</sup>

PC 81 Family Medicine Didactic (8 units)

PC 81P Family Medicine Clinical (8 units)

#### Spring Quarter<sup>[152]</sup>

PC 82 Family Medicine Didactic (8 units)

PC 82P Family Medicine Clinical (9 units)

[148] Certificate completion will not appear on the student's transcript.

[149] The program is 16 months in length, presented in five quarters (with a possibility of extending into a sixth quarter) and leads to a Certificate of Achievement. All courses must be taken in sequence.

[150] Students attend classes at Stanford Monday–Friday. Each week a different system is highlighted with lectures that focus on common primary health care problems. Participate in clinical skills sessions and workshops.

[151] Students are in preceptorships for 12 days per month and attend classes one week/month. Learn the diagnosis and management of common primary health care problems covered in lectures.

[152] Students continue to learn about management of acute and chronic primary health care problems. Learn about pediatric and women's health issues including pre-natal care.

### Summer Session<sup>[153]</sup>

PC 83 Family Medicine Didactic (6 units)

PC 83P Family Medicine Clinical (9 units)

### Fall Quarter (5th Quarter)<sup>[154]</sup>

PC 84 Family Medicine Didactic (8 units)

PC 84P Family Medicine Clinical (9 units)

### Support Courses:<sup>[155]</sup>

PC 85 Special Clinical Projects in Primary Care Medicine (4 units)

PC 85X Special Clinical Projects in Primary Care Medicine (5 units)

PC 85Y Special Clinical Projects in Primary Care Medicine (6 units)

PC 86 Special Didactic Projects in Primary Care Medicine (4 units)

PC 86X Special Didactic Projects in Primary Care Medicine (5 units)

PC 86Y Special Didactic Projects in Primary Care Medicine (6 units)

PC 87 Extended Clinical Internship (1 unit)

PC 88 Extended Clinical Internship (2 units)

PC 89 Extended Clinical Internship (3 units)

PC 190X Directed Study in Primary Care Medicine (1 unit)

PC 190Y Directed Study in Primary Care Medicine (1.5 units)

### Certificate of Achievement (88.5 units)

Awarded at the completion of all program prerequisites and core course requirements taken in sequence. General education courses are not required.

## PSYCHOLOGY

### Program Type(s):

#### AA Degree

Units required for major: 33

#### Associate Degree Requirements\*

#### Core Courses: (25 units)

Required: PSYC 1 General Psychology (5 units)

#### Select any combination of the following to complete 20 units:

MATH 10 Elementary Statistics (5 units)

PSYC 4 Introduction to Psychobiology (4 units)

PSYC 10 Introduction to Social Research (4 units)

PSYC 14 Childhood & Adolescence (4 units)

PSYC 21 Psychology of Women: Sex & Gender Differences (4 units)

PSYC 22 Psychology of Prejudice (4 units)

PSYC 25 Introduction to Abnormal Psychology (4 units)

PSYC 30 Social Psychology (4 units)

PSYC 33 Introduction to the Concepts of Personality (4 units)

PSYC 40 Human Development (4 units)

PSYC 49 Human Sexuality (4 units)

PSYC 50 Psychology of Crisis (5 units)

PSYC 55 Psychology of Sports (4 units)

[153] Students learn to recognize and initiate treatment for life-threatening emergencies, and participate in the care of hospitalized and surgical patients.

[154] Integration of medical conditions presented in previous quarters with a continued emphasis on primary health care and family medicine. Emphasize information on preparation for practice and PA licensure.

[155] Offered only by special arrangement.

\*A minimum of 90 units required for the A.A./A.S. Degree, to include required courses, required electives, and graduation requirements, and these minimum proficiencies: ENGL 1A or ESLL 26, and MATH 105.

**Support Courses: (8 units)<sup>[156]</sup>**

ANTH 2A Cultural Anthropology (4 units)  
 BIOL 10 General Biology: Basic Principles (5 units)  
 or BIOL 14 Human Biology (5 units)  
 HIST 4C History of Western Civilization 1789–Present (4 units)  
 or HIST 4CH Honors History of Western Civilization (4 units)  
 or HIST 9 History of Contemporary Europe (4 units)  
 or HIST 9H Honors History of Contemporary Europe (4 units)  
 PHIL 4 Introduction to Philosophy (4 units)  
 PSYC 34H Honors Institute Seminar in Psychology (1 unit)  
 PSYC 35 Department Honors Projects in Psychology (1 unit)  
 PSYC 36 Special Projects in Psychology (1 unit)  
 SOC 40 Aspects of Marriage & Family (4 units)  
 WMN 5 Introduction to Women's Studies (4 units)

**RADIO BROADCASTING****Program Type(s):****AA Degree; Certificate of Achievement; Skills Certificate**

Units required for major: 37, certificate: 17.5–37

**Associate Degree Requirements\*****Core Courses: (22 units)**

RAD 80 Fundamentals of Radio Production & Station Operations (3 units)  
 RAD 81 History of Radio 1920–Present (4 units)  
 RAD 90A News & Information Production I (3 units)

**And any 4 courses from the following:**

RAD 90B News & Information Production II (3 units)  
 RAD 90C News & Information Production III (3 units)  
 RAD 90D News & Information Production IV (3 units)  
 RAD 91A Radio Station Sales & Marketing I (3 units)  
 RAD 91B Radio Station Sales & Marketing II (3 units)  
 RAD 91C Radio Station Sales & Marketing III (3 units)  
 RAD 91D Radio Station Sales & Marketing IV (3 units)  
 RAD 92A Radio Programming & Production I (3 units)  
 RAD 92B Radio Programming & Production II (3 units)  
 RAD 92C Radio Programming & Production III (3 units)  
 RAD 92D Radio Programming & Production IV (3 units)  
 RAD 93A Music Industry Relations & Engineering I (3 units)  
 RAD 93B Music Industry Relations & Engineering II (3 units)  
 RAD 93C Music Industry Relations & Engineering III (3 units)  
 RAD 93D Music Industry Relations & Engineering IV (3 units)

**Support Courses: (15 units)**

Select any 15 units from one emphasis:

**Broadcast Performance Emphasis**

COMM 1A Public Speaking (5 units)  
 or COMM 1AH Honors Public Speaking (5 units)  
 COMM 24 Readers' Theatre (5 units)  
 COMM 30 Oral Interpretation of Literature (5 units)  
 COMM 46 Voice & Diction (5 units)  
 MUS 1 Introduction to Music (4 units)

MUS 7 Contemporary Musical Styles: Rock, Pop & Jazz (4 units)  
 MUS 7D Contemporary Musical Styles: The Beatles in the Culture of Popular Music (4 units)  
 MUS 7E History of the Blues (4 units)  
 MUS 8 Music of Multicultural America (4 units)  
 or MUS 8H Honors Music of Multicultural America (4 units)  
 MUS 80A Recording Studio Basics (4 units)  
 RAD 70, X–Z Special Projects in Radio (1–4 units)  
 RAD 190, X–Z Directed Study (.5–2 units)

**Broadcast Journalism Emphasis**

CIS (one 4-unit CIS course) (4 units)  
 COMM 1A Public Speaking (5 units)  
 or COMM 1AH Honors Public Speaking (5 units)  
 COMM 46 Voice & Diction (5 units)  
 COMM 55 Career Leadership Communication in the Global Workplace (5 units)  
 ENGL 4 Journalism (4 units)  
 RAD 70, X–Z Special Projects in Radio (1–4 units)  
 RAD 190, X–Z Directed Study (.5–2 units)

**Broadcast Business Management Emphasis**

ACTG 1A Financial Accounting I (5 units)  
 ADVT 57 Principals of Advertising (4 units)  
 or BUSI 57 Principals of Advertising (4 units)  
 BUSI 22 Principals of Business (4 units)  
 BUSI 97, X, Y or Z Management Seminar (.5–3 units)  
 CIS (one 4-unit CIS course) (4 units)  
 COMM 1A Public Speaking (5 units)  
 or COMM 1AH Honors Public Speaking (5 units)  
 COMM 55 Career Leadership Communication in the Global Workplace (5 units)  
 MUS 50A Music Business (4 units)  
 MUS 50B Entertainment Law & New Media (4 units)  
 RAD 70, X–Z Special Projects in Radio (1–4 units)  
 RAD 190, X–Z Directed Study (.5–2 units)

**Certificate of Achievement: (37 units)**

Awarded upon completion of the degree core and support courses. General education courses are not required.

**Skills Certificate: (20 units) NON-TRANSCRIPTABLE<sup>[157]</sup>**

RAD 80 Fundamentals of Radio Production & Station Operations (3 units)  
 RAD 90A News & Information Production (3 units)

**And two courses from the following:**

RAD 90B News & Information Production II (3 units)  
 RAD 90C News & Information Production III (3 units)  
 RAD 90D News & Information Production IV (3 units)  
 RAD 91A Radio Station Sales & Marketing I (3 units)  
 RAD 91B Radio Station Sales & Marketing II (3 units)  
 RAD 91C Radio Station Sales & Marketing III (3 units)  
 RAD 91D Radio Station Sales & Marketing IV (3 units)  
 RAD 92A Radio Programming & Production I (3 units)

[156] May also use courses listed as core courses for support courses.

[157] Certificate completion will not appear on the student's transcript.

\*A minimum of 90 units required for the A.A./A.S. Degree, to include required courses, required electives, and graduation requirements, and these minimum proficiencies: ENGL 1A or ESLL 26, and MATH 105.

RAD 92B Radio Programming & Production II (3 units)  
RAD 92C Radio Programming & Production III (3 units)  
RAD 92D Radio Programming & Production IV (3 units)  
RAD 93A Music Industry Relations & Engineering I (3 units)  
RAD 93B Music Industry Relations & Engineering II (3 units)  
RAD 93C Music Industry Relations & Engineering III (3 units)  
RAD 93D Music Industry Relations & Engineering IV (3 units)

**And 8 units from one of the three areas of emphasis.**

**Broadcast Business Sales Skill Certificate (17.5 units)**

**NON-TRANSCRIPTABLE<sup>[158]</sup>**

ACTG 1A Financial Accounting I (5 units)  
ADVT 57 Principles of Advertising (4 units)  
or BUSI 57 Principles of Advertising (4 units)  
BUSI 59 Principles of Marketing (4 units)  
BUSI 97, X, Y or Z Management Seminar (.5–3 units)  
CIS (one 4-unit CIS course) (4 units)

## RADIOLOGIC TECHNOLOGY

**Program Type(s):**

AS Degree

Units required for major: 101

**Associate Degree Requirements\***

**Core Courses: (101 units)<sup>[159]</sup>**

**First Year**

**Summer Session**

R T 50 Orientation to Radiation Science Technologies (2 units)  
R T 53 Orientation to Radiologic Technology (1 unit)

**Fall Quarter**

R T 54A Basic Patient Care for Imaging Technology (2 units)  
R T 51A Fundamentals of Radiologic Technology I (3 units)  
R T 52A Principles of Radiologic Technology I (3 units)  
R T 53A Applied Radiographic Technology I (3 units)  
R T 53AL Applied Radiographic Technology Laboratory I (1 unit)

**Winter Quarter**

R T 54B Law & Ethics in Medical Imaging (2 units)  
R T 51B Fundamentals of Radiologic Technology II (3 units)  
R T 52B Principles of Radiologic Technology II (3 units)  
R T 53B Applied Radiologic Technology II (3 units)  
R T 53BL Applied Radiologic Technology Laboratory II (1 unit)

**Spring Quarter**

R T 51C Fundamentals of Radiologic Technology III (3 units)  
R T 52C Principles of Radiologic Technology III (3 units)  
R T 53C Applied Radiologic Technology III (3 units)  
R T 53CL Applied Radiologic Technology Laboratory III (1 unit)  
R T 54C Radiographic Pathology (3 units)  
PSYC 1 General Psychology (5 units)

**Summer Session (8 weeks)**

R T 72 Venipuncture (2 units)

<sup>[158]</sup> Certificate completion will not appear on the student's transcript.

<sup>[159]</sup> All courses must be completed in sequence with a grade of C or better.

RT 64 Fluoroscopy (4.5 units)  
RT 53D Applied Radiologic Technology IV (8 units)

**Second Year**

**Fall Quarter**

R T 62A Radiographic Positioning (3 units)  
R T 63A Radiographic Clinical Practicum I (7.5 units)  
R T 52D Digital Image Acquisition & Display (3 units)

**Winter Quarter**

R T 62B Special Procedures & Equipment (3 units)  
R T 63B Radiographic Clinical Practicum II (7.5 units)  
R T 65 Mammography (3 units)

**Spring Session**

R T 61B Radiology Research Project (1 unit)  
R T 62C Advanced Radiographic Positioning (3 units)  
R T 63 Advanced Radiographic Principles (3 units)  
R T 63C Radiographic Clinical Practicum III (7.5 units)

## REAL ESTATE

**Program Type(s):**

AA Degree; Certificate of Achievement; Career Certificate

Units required for major: 33, certificate: 12–33

**Associate Degree Requirements\***

**Core Courses: (33 units)**

BUSI 18 Business Law I (5 units)  
R E 50 Real Estate Principles (4 units)  
R E 51 Real Estate Practices (4 units)  
R E 52A Legal Aspects of Real Estate I (4 units)  
R E 53 Real Estate Finance (4 units)  
R E 54 Real Estate Economics (4 units)  
R E 56A Real Estate Appraisal I (4 units)  
R E 59 Survey of Real Estate Property Management (4 units)

**Real Estate Broker Certificate of Achievement (33 units)**

Awarded upon completion of the degree core courses. General education courses are not required. Meets the California Department of Real Estate course requirements for a broker license.

**Real Estate Salesperson Career Certificate (12 units)**

**NON-TRANSCRIPTABLE<sup>[160]</sup>**

Meets the California Department of Real Estate course requirements for a salesperson license.

**Core Courses: (8 units)**

R E 50 Real Estate Principles (4 units)  
R E 51 Real Estate Practices (4 units)

**Support Courses: (4 units)**

R E 52A Legal Aspects of Real Estate I (4 units)  
R E 53 Real Estate Finance (4 units)  
R E 54 Real Estate Economics (4 units)  
R E 56A Real Estate Appraisal I (4 units)  
R E 59 Survey of Real Estate Property Management (4 units)  
BUSI 18 Business Law I (5 units)

<sup>[160]</sup> Certificate completion will not appear on the student's transcript.

\*A minimum of 90 units required for the A.A./A.S. Degree, to include required courses, required electives, and graduation requirements, and these minimum proficiencies: ENGL 1A or ESLL 26, and MATH 105.

## RESPIRATORY THERAPY

### Program Type(s):

#### AS Degree

Units required for major: 104

#### Associate Degree Requirements\*

##### Core Courses: (104 units)

##### First Year

###### Fall Quarter

RSPT 50A Respiratory Therapy Procedures (4.5 units)  
RSPT 51A Introduction to Respiratory Anatomy & Physiology (2 units)  
RSPT 52 Applied Science for Respiratory Therapy (3 units)  
RSPT 54 Orientation to Respiratory Care (1.5 units)  
RSPT 55A Directed Studies in Respiratory Therapy I (.5 unit)  
BIOL 40A Human Anatomy & Physiology I (5 units)

###### Winter Quarter

RSPT 50B Introduction to Procedures & Hospital Orientation (6 units)  
RSPT 53A Introduction to Respiratory Therapy Pharmacology (2 units)  
RSPT 55B Directed Studies in Respiratory Therapy II (.5 unit)  
BIOL 40B Human Anatomy & Physiology II (5 units)  
BIOL 41 Microbiology (6 units)

###### Spring Quarter

RSPT 50C Therapeutics & Introduction to Mechanical Ventilation (4.5 units)  
RSPT 51B Respiratory Physiology (3 units)  
RSPT 51C Patient Assessment & Pulmonary Disease (4.5 units)  
RSPT 55C Directed Studies in Respiratory Therapy III (.5 unit)  
BIOL 40C Human Anatomy & Physiology III (5 units)

###### Summer Session (6 weeks)

RSPT 55D Directed Studies in Respiratory Therapy IV (.5 unit)  
RSPT 61A Adult Mechanical Ventilation (4 units)  
RSPT 70A Clinical Rotation I (2 units)

##### Second Year

###### Fall Quarter

RSPT 53B Advanced Respiratory Therapy Pharmacology (2 units)  
RSPT 55E Directed Studies in Respiratory Therapy V (.5 unit)  
RSPT 60A Cardiology for Respiratory Therapists (2 units)  
RSPT 61B Neonatal & Pediatric Intensive Care (4 units)  
RSPT 70B Clinical Rotation II (6 units)  
PSYC 1 General Psychology (5 units)

###### Winter Quarter

RSPT 55F Directed Studies in Respiratory Therapy VI (.5 unit)  
RSPT 60B Advanced Cardiac Life Support (2 units)  
RSPT 61C Home & Rehabilitative Respiratory Care (2 units)  
RSPT 63A Advanced Pathophysiology & Patient Management (3 units)  
RSPT 65 Computer Patient Simulations (.5 unit)  
RSPT 70C Clinical Rotation III (6 units)

##### Spring Quarter

RSPT 55G Directed Studies in Respiratory Therapy VII (.5 unit)  
RSPT 60C Pulmonary Diagnostics (3 units)  
RSPT 62 Management, Resume & National Board Examination (1 unit)  
RSPT 70D Clinical Rotation IV (6 units)

##### Optional

RSPT 71A–G Extended Clinical Internship in Respiratory Therapy (1 unit each)  
RSPT 72A–G Extended Clinical Internship in Respiratory Therapy (2 units each)  
RSPT 73A–G Extended Clinical Internships in Respiratory Therapy (3 units each)  
RSPT 190, X, Y or Z Directed Study (.5–2 units)

## SOCIOLOGY

### Program Type(s):

#### AA Degree; Certificate of Specialization

Units required for major: 30, certificate: 13–26

#### Associate Degree Requirements\*

##### Required Courses: (5 units)

SOC 1 Introduction to Sociology (5 units)

##### Core Courses: (12 units)

SOC 8 Popular Culture (4 units)  
SOC 10 Introduction to Social Research (4 units)  
SOC 11 Introduction to Social Welfare (5 units)  
SOC 15 Law & Society (4 units)  
SOC 19 Alcohol & Drug Abuse (4 units)  
SOC 20 Major Social Problems (4 units)  
SOC 23 Race & Ethnic Relations (4 units)  
SOC 30 Social Psychology (4 units)  
SOC 40 Aspects of Marriage & Family (4 units)  
SOC 57 Child Advocacy (4 units)

##### Support Courses: (13 units)

ANTH 2A Cultural Anthropology (4 units)  
ECON 1A Principles of Macroeconomics (5 units)  
GEOG 10 World Regional Geography (4 units)  
HIST 4A History of Western Civilization to 800 AD (4 units)  
or HIST 4B History of Western Civilization II (4 units)  
or HIST 4C History of Western Civilization 1789–Present (4 units)  
or HIST 4CH Honors History of Western Civilization (4 units)  
MATH 10 Elementary Statistics (5 units)  
PHIL 1 Critical Thinking & Writing (5 units)  
PSYC 22 Psychology of Prejudice (4 units)  
SOC 34H Honors Institute Seminar in Sociology (1 unit)  
SOC 35 Department Honors Projects in Sociology (1 unit)  
SOC 36 Special Projects in Sociology (1 unit)  
WMN 5 Introduction to Women's Studies (4 units)  
WMN 21 Psychology of Women: Sex & Gender Differences (4 units)  
or SOC 21 Psychology of Women: Sex & Gender Differences (4 units)

\*A minimum of 90 units required for the A.A./A.S. Degree, to include required courses, required electives, and graduation requirements, and these minimum proficiencies: ENGL 1A or ESLL 26, and MATH 105.

### Certificate information

Request forms at [www.foothill.edu/bss/cert/index.php](http://www.foothill.edu/bss/cert/index.php)

### Certificate of Specialization in General Sociology (13 units) NON-TRANSCRIPTABLE<sup>[161]</sup>

#### Required Courses: (5 units)

SOC 1 Introduction to Sociology (5 units)

#### Core Courses: (4 units)

SOC 8 Popular Culture (4 units)  
SOC 10 Introduction to Social Research (4 units)  
SOC 11 Introduction to Social Welfare (5 units)  
SOC 15 Law & Society (4 units)  
SOC 19 Alcohol & Drug Abuse (4 units)  
SOC 20 Major Social Problems (4 units)  
SOC 23 Race & Ethnic Relations (4 units)  
SOC 30 Social Psychology (4 units)  
SOC 40 Aspects of Marriage & Family (4 units)

#### Support Courses (4 units)

ANTH 2A Cultural Anthropology (4 units)  
ECON 1A Principles of Macroeconomics (5 units)  
GEOG 10 World Regional Geography (4 units)  
HIST 4A History of Western Civilization to 800 AD (4 units)  
or HIST 4B History of Western Civilization II (4 units)  
or HIST 4C History of Western Civilization 1789–Present  
(4 units)  
or HIST 4CH Honors History of Western Civilization (4 units)  
MATH 10 Elementary Statistics (5 units)  
PHIL 1 Critical Thinking (5 units)  
PSYC 22 Psychology of Prejudice (4 units)  
WMN 5 Introduction to Women's Studies (4 units)  
WMN 21 Psychology of Women: Sex & Gender Differences (4 units)  
or SOC 21 Psychology of Women: Sex & Gender Differences  
(4 units)

### Certificate of Specialization in Sociology: Social Welfare (26 units) NON-TRANSCRIPTABLE<sup>[162]</sup>

#### Required Courses (9 units)

SOC 11 Introduction to Social Welfare (5 units)  
SOC 19 Alcohol & Drug Abuse (4 units)

#### Core Courses (12 units)

SOC 1 Introduction to Sociology (5 units)  
SOC 8 Popular Culture (4 units)  
SOC 15 Law & Society (4 units)  
SOC 20 Major Social Problems (4 units)  
SOC 23 Race & Ethnic Relations (4 units)  
SOC 40 Aspects of Marriage & Family (4 units)  
SOC 57 Child Advocacy (4 units)

#### Support Courses (5 units)

BUSI 18 Business Law I (4 units)  
HLTH 21 Health Education (3 units)  
PSYC 22 Psychology of Prejudice (4 units)

[161] Certificate completion will not appear on the student's transcript.

[162] Certificate completion will not appear on the student's transcript.

SOC 30 Social Psychology (4 units)  
SOSC 36 Special Projects in Social Science (1 unit)  
COMM 12 Intercultural Communication (5 units)  
WMN 5 Introduction to Women's Studies (4 units)

## SPANISH

### Program Type(s):

AA Degree; Certificate of Proficiency; Career Certificate;  
Certificate of Specialization

Units required for major: 30, certificate: 12–30

### Associate Degree Requirements\*

#### Core Courses: (30 units)<sup>[163]</sup>

SPAN 1 Elementary Spanish I (5 units)  
SPAN 2 Elementary Spanish II (5 units)  
SPAN 3 Elementary Spanish III (5 units)  
SPAN 4 Intermediate Spanish I (5 units)  
SPAN 5 Intermediate Spanish II (5 units)  
SPAN 6 Intermediate Spanish III (5 units)

#### Support Courses: (optional)

SPAN 13A Intermediate Conversation I (4 units)  
SPAN 13B Intermediate Conversation II (4 units)  
SPAN 14A Advanced Conversation I (4 units)  
SPAN 14B Advanced Conversation II (4 units)  
SPAN 25A Advanced Composition & Reading I (4 units)  
SPAN 25B Advanced Composition & Reading II (4 units)

### Certificate of Proficiency in Spanish Conversation (16 units)<sup>[164]</sup> NON-TRANSCRIPTABLE<sup>[165]</sup>

SPAN 13A Intermediate Conversation I (4 units)  
SPAN 13B Intermediate Conversation II (4 units)  
SPAN 14A Advanced Conversation I (4 units)  
SPAN 14B Advanced Conversation II (4 units)

### Certificate of Specialization in Spanish Language (15 units)<sup>[166]</sup> NON-TRANSCRIPTABLE<sup>[167]</sup>

SPAN 1 Elementary Spanish I (5 units)  
SPAN 2 Elementary Spanish II (5 units)  
SPAN 3 Elementary Spanish III (5 units)

### Career Certificate in Spanish Language (30 units)<sup>[168]</sup>

#### NON-TRANSCRIPTABLE<sup>[169]</sup>

#### Choose 30 units from the following:

SPAN 1 Elementary Spanish I (5 units)  
SPAN 2 Elementary Spanish II (5 units)  
SPAN 3 Elementary Spanish III (5 units)  
SPAN 4 Intermediate Spanish I (5 units)

[163] Students who can demonstrate proficiency equivalent to 1 year of college Spanish, SPAN 1, 2 and 3 can be eliminated from the core courses. 18 units must be completed in residence at Foothill College.

[164] 8 units must be completed in residence at Foothill College.

[165] Certificate completion will not appear on the student's transcript.

[166] 10 units must be completed in residence at Foothill College.

[167] Certificate completion will not appear on the student's transcript.

[168] Students who can demonstrate proficiency equivalent to 1 year of college Spanish, SPAN 1, 2 and 3 can be eliminated from the core courses. 18 units must be completed in residence at Foothill College.

[169] Certificate completion will not appear on the student's transcript.

\*A minimum of 90 units required for the A.A./A.S. Degree, to include required courses, required electives, and graduation requirements, and these minimum proficiencies: ENGL 1A or ESL 26, and MATH 105.

SPAN 5 Intermediate Spanish II (5 units)  
SPAN 6 Intermediate Spanish III (5 units)  
SPAN 13A Intermediate Conversation I (4 units)  
SPAN 13B Intermediate Conversation II (4 units)

## SPECIAL EDUCATION

### Program Type(s):

#### AA Degree; Certificate of Achievement

Units required for major: 35, certificate: 27

#### Associate Degree Requirements\*

Core Courses: (27 units)

SPED 57 Working with Special Populations (3 units)  
SPED 61 Introduction to Disabilities (4 units)  
SPED 62 Psychological Aspects of Disability (4 units)  
SPED 63 Learning Disabilities (4 units)  
SPED 64 Disability & The Law (4 units)  
SPED 66 Disability & Technology Access (4 units)  
SPED 69 Special Education Strategies & Practicum (4 units)

#### Support Courses: (8 units)

BIOL 14 Human Biology (5 units)  
BIOL 45 Introduction to Human Nutrition (4 units)  
COMM 3 Fundamentals of Oral Communication (5 units)  
EDUC 50 Principles of Education: The Teaching Challenge (4 units)  
GERN 50 Sociology of Aging (3 units)  
GERN 51 Psychology of Aging (3 units)  
GERN 52 Health & Aging (3 units)  
HLTH 55 Emergency Response (5 units)  
PSYC 1 General Psychology (5 units)  
PSYC 25 Introduction to Abnormal Psychology (4 units)  
SPED 50 Introduction to Adaptive Fitness Techniques (3 units)  
SPED 52 Positive Aging (3 units)  
SPED 54 Principles of Therapeutic Exercise (3 units)  
SPED 55 Geriatric Fitness Concepts (3 units)  
SPED 56 Functional Aspects of Adaptive Fitness (3 units)  
SPED 65 Fundamentals of Attention Deficit Disorders (4 units)<sup>[170]</sup>  
SPED 72 Stress, Wellness & Coping (3 units)  
SPED 73 Introduction to Aquatic Exercise (3 units)  
SPED 74 Principles of Adaptive Aqua Fitness (3 units)

#### Special Education Paraprofessional Certificate of Achievement (27 units)

Awarded upon completion of the core courses. General education courses are not required.

## THEATRE ARTS

### Program Type(s):

#### AA Degree; Certificate of Proficiency

Units required for major: 54, certificate: 100

#### Associate Degree Requirements\*

#### Core Courses: (26 Core & 12 Master units)

THTR 2A Introduction to Dramatic Literature (4 units)

[170] Recommended.

THTR 2B Introduction to Dramatic Literature (4 units)  
THTR 2C Introduction to Dramatic Literature (4 units)  
THTR 20A Acting I (4 units)  
THTR 20B Acting II (4 units)  
THTR 20C Acting III (4 units)  
THTR 71X Fundamentals of Stage Management (2 units)

#### Master Courses (12 units)<sup>[171]</sup>

THTR 1 Theatre Arts Appreciation (4 units)  
THTR 5B Playwriting (4 units)  
or CRWR 36B Playwriting (4 units)  
or VART 5B Playwriting (4 units)  
THTR 7 Introduction to Directing (4 units)  
THTR 8 Multicultural Performing Arts in Modern America (4 units)  
THTR 20D Acting IV (4 units)  
THTR 20E Advanced Acting V (4 units)  
THTR 21 Introduction to Technical Theatre (1 unit)  
THTR 21A Scenery & Property Construction (3 units)  
THTR 38 Movement Practicum for the Actor (2 units)  
THTR 40A Basic Theatrical Make-Up (4 units)  
THTR 40B Theatrical Make-up for Production (4 units)  
THTR 46 Voice & Diction (4 units)  
THTR 48 Voice Practicum for the Actor (2 units)  
THTR 53 Auditioning for Theatre (2 units)  
THTR 54 Actor's Workshop (4 units)  
THTR 58 Movement for the Actor: Stage Combat (1 unit)  
THTR 62 Acting for Film & Television (2 units)  
THTR 71 Fundamentals of Stage Management (4 units)  
THTR 75 Introduction to Fashion & Costume Construction (4 units)  
THTR 76 Introduction to Fashion History & Costume Design (4 units)

#### Support Courses: (12 units)

THTR 44 Production Projects (4 units)  
THTR 47, X, Y Music Theatre Production Workshop (3–10 units)  
THTR 49, X, Y or Z Rehearsal & Performance (2–8 units)  
THTR 50 Production Projects in Theatre (2 units)  
THTR 95 & X Theatre Summer Stock Workshop (3–6 units)

#### Elective Courses: (4 units)<sup>[172]</sup>

THTR 6 Advanced Playwriting (4 units)  
THTR 21B Intermediate Scenery & Property Construction (3 units)  
THTR 21C Advanced Scenery & Property Construction (3 units)  
THTR 34H Honors Institute Seminar in Theatre Arts (1 unit)  
THTR 35 Department Honors Projects in Drama (2 units)  
THTR 42A Introduction to Scene Design (4 units)  
THTR 61 The Theatre Live-On Stage (2 units)  
THTR 72B Beginning CAD Drafting for the Theatre, Film & Television (4 units)  
THTR 77 Introduction to Lighting Design & Technology (4 units)

[171] Many master courses are offered through the Foothill Theatre Conservatory, subject to audition approval, and taught on a two-year cycle. They are designed to give a thorough and comprehensive investigation of a specific area of the actor's training. They also may be used as electives upon completion of the requisite master courses.

[172] Master courses may also be used as electives, however no single course may be used to fulfill a master course requirement and an elective course requirement.

\*A minimum of 90 units required for the A.A./A.S. Degree, to include required courses, required electives, and graduation requirements, and these minimum proficiencies: ENGL 1A or ESLL 26, and MATH 105.

THTR 81 Contemporary Issues in Performance Seminar (1 unit)  
 THTR 85, X, Y & Z Directed Field Study in Theatre (1–4 units)  
 THTR 97, X, Y & Z Actor's Ensemble (1–6 units)  
 THTR 99, X, Y Theatre Workshop (3–9 units)  
 DANC 9 Movement for Actors (2 units)  
 MUS 13A Class Voice I (1 unit)

**Theatre Conservatory Certificate of Proficiency (100 units)<sup>[173]</sup>**

**NON-TRANSCRIPTABLE<sup>[174]</sup>**

Awarded upon successful completion of the Foothill Theatre Conservatory Program.

**THEATRE TECHNOLOGY**

**Program Type(s):**

**AA Degree; Certificate of Achievement; Career Certificate**

Units required for major: 43, certificate: 25–43

**Associate Degree Requirements\***

**Core Courses: (26 units)**

THTR 1 Theatre Arts Appreciation (4 units)  
 THTR 20A Acting I (4 units)  
 THTR 21 Introduction to Technical Theatre (1 unit)  
 THTR 21A Scenery & Property Construction (3 units)  
 THTR 49 Rehearsal & Performance (2 units)  
 THTR 71 Fundamentals of Stage Management (4 units)  
 THTR 75 Introduction to Fashion & Costume Construction (4 units)  
 THTR 77 Introduction to Lighting Design & Technology (4 units)

**Support Courses: (17 units)**

THTR 21B Intermediate Scenery & Property Construction (3 units)  
 THTR 21C Advanced Scenery & Properties Construction (3 units)  
 THTR 72B Beginning CAD Drafting for the Theatre, Film & Television (4 units)  
 ART 4A Drawing I (3 units)  
 GID 50 Graphic Design Studio I (4 units)

**Certificate of Achievement (43 units)**

Awarded upon completion of the core and support courses.  
 General education courses are not required.

**Career Certificate in Theatre Technology (25 units)**

**NON-TRANSCRIPTABLE<sup>[175]</sup>**

THTR 1 Theatre Arts Appreciation (4 units)  
 THTR 21 Introduction to Technical Theatre (1 unit)  
 THTR 21A Scenery & Property Construction (3 units)  
 THTR 49 Rehearsal & Performance (2 units)  
 THTR 71 Fundamentals of Stage Management (4 units)  
 THTR 75 Introduction to Fashion & Costume Construction (4 units)  
 THTR 77 Introduction to Lighting Design & Technology (4 units)  
 ART 4A Drawing I (3 units)

[173] Core courses (26 units); master courses (54 units); support courses (14 units); electives (6 units)

[174] Certificate completion will not appear on the student's transcript.

[175] Certificate completion will not appear on the student's transcript.

**TRANSFER STUDIES: CSU GE**

**Program Type(s):**

**Certificate of Achievement<sup>[176]</sup>**

Units required for certificate: 56

**Certificate Course Requirements**

**Area A: Communication in the English Language & Critical Thinking (12 quarter units)**

One course required from A1, A2 and A3.<sup>[177]</sup>

A1. Oral Communication: COMM 1A, 1AH, 1B, 1BH, 2, 3, 4  
 A2. Written Communication: ENGL 1A, 1AH, 1B or ESLL 26  
 A3. Critical Thinking: ENGL 1B, 1BH, 1C, 1CH; PHIL 1, 7, 50

**Area B: Natural Sciences & Mathematics (12–15 quarter units)**

Complete one course from category B1, B2 and B4. One Physical or Biological Science must include a laboratory experience (noted with asterisk).

B1. Physical Science: ASTR 10A, 10B, 10BH, 10L\*; CHEM 1A\*, 1B\*, 1C\*, 12A\*, 12B\*, 12C\*, 25\*, 30A\*, 30B\*; GEOG 1\*; PHYS 2A\*, 2B\*, 2C\*, 4A\*, 4B\*, 4C\*, 4D\*, 6, 12.

B2. Biological & Life Science: ANTH 1, 1L\*; BIOL 1A\*, 1B\*, 1C\*, 1D, 9, 9L\*, 10\*, 12, 13\*, 14\*, 15\*, 17, 40A\*, 40B\*, 40C\*, 41\*, 45; BTEC 10\*; HORT 10\*.

B4. Mathematics/Quantitative Reasoning: (Required for CSU Admission) CIS 18; MATH 1A, 1B, 1C, 1D, 2A, 2B, 10, 11, 12, 22, 44, 49, 51.

**Area C: Arts, Literature, Philosophy & Foreign Language (12–15 quarter units)**

Completion of a minimum of three courses, to include at least one course from the Arts and one course from the Humanities.<sup>[178]</sup>

C1. Arts (Art, Dance, Music, Theater): ART 1, 2A, 2AH, 2B, 2BH, 2C, 2CH, 2D, 2E, 3, 4A with 4AX, 4C with 4CX, 6, 11, 12, 13, 14, 45A with 45AX, 80; COMM 24, 30; DANC 10; MUS 1, 2A, 2B, 2C, 2D, 3A, 3B, 3C, 7, 7D, 7E, 8, 8H, 10, 11A, 11B, 11C, 27, 85A, 85B;

[176] This Certificate of Achievement is designed for students who intend to transfer to the California State University system (CSU). Students who complete the requirements for the Certificate of Achievement—CSU GE/Breadth with a grade of "C" or better in each course will complete the lower-division requirements for the CSU General Education/Breadth pattern, as outlined and required by the California State University. Students should meet with a Foothill College counselor to determine whether the CSU GE/Breadth transfer pattern is the best option to meet their specific transfer goals.

The Certificate of Achievement will be noted on the student's transcript. To earn the Certificate of Achievement, students must complete the coursework outlined in this section. Residency requirement: a minimum of 16 units must be completed at Foothill College. Courses on this list are approved for a specific academic year. A course cannot be certified by Foothill College unless it was on the Foothill College CSU GE/Breadth Certification List when it was completed. For information regarding the year in which courses are approved, access [www.assist.org](http://www.assist.org).

To be eligible to transfer to a CSU campus, students must complete at least 90 units of CSU transferable courses with a GPA of 2.0 or better. Completion of the California State University General Education/Breadth curriculum (CSU GE) requirements as outlined satisfies the requirements of the Certificate of Achievement in Transfer Studies (CSU GE). In addition to completing the courses for the Certificate of Achievement, the student is responsible for completing major preparation and/or elective credits to complete the 90 quarter units required for admission for all CSU campuses. Students can use [www.assist.org](http://www.assist.org) to review major preparation courses and are strongly advised to consult with a counselor for educational planning to achieve successful admission to the university of their choice.

Students transferring to a university must also request a formal CSU GE/Breadth certification through the Foothill College Evaluation Office just prior to transfer.

[177] Required for CSU Admission

[178] Students who did not complete ENGL 1B for Area A3 should complete ENGL 1B as one of the Area C courses. Courses may not be counted in more than one area.

\*A minimum of 90 units required for the A.A./A.S. Degree, to include required courses, required electives, and graduation requirements, and these minimum proficiencies: ENGL 1A or ESLL 26, and MATH 105.

PHIL 11; PHOT 1, 8, 8H, 10, 10H, 11, 11H; THTR 1, 2A, 2B, 2C (same as ENGL 42A, 42B, 42C), 8, 20A (with THTR 20AL), 46; VART 1, 2C, 3; WMN 15.

C2. Humanities (Literature, Philosophy, Foreign Languages): CHIN 1, 2, 3, 4, 5, 6, 25A, 25B; COMM 12, 30, 46; CRWR 6, 39A, 39B, 40, 41A, 41B, 60; ENGL 1B, 1BH, 5, 5H, 7, 7H, 8, 11, 11H, 12, 14, 17, 22, 25, 25H, 26, 31, 40, 40H, 41, 42A, 42B, 42C (same as THTR 2A, 2B, 2C), 46A 46B, 46C, 48A, 48B, 48C; F A 1; GERM 1, 2, 3, 39; HIST 4A, 4B, 4C, 4CH; HUMN 1A, 1B; JAPN 1, 2, 3, 4, 5, 6, 25A, 25B, 33; LING 25, 25H, 26; PHIL 2, 4, 8, 20A, 20B, 22, 24, 25; SPAN 1, 2, 3, 4, 5, 6, 25A, 25B; THTR 2A, 2B, 2C; VART 2A, 2B.

**Area D: Social, Political & Economic Institutions** (12–15 quarter units)  
**Two CSU graduation requirements: minimum of three courses.**  
Requirement 1: HIST 17A, 17B or 17C and POLI 1 (F1 CSU American Institutions requirement)

**Requirement 2: One course, selected from D-1 through D-0**

D1. Anthropology & Archaeology: ANTH 2A, 2B, 3, 4, 5, 6, 8, 8L, 8LX, 8LY, 11, 50.

D2. Economics: ECON 1A, 1B, 9, 25; GEOG 5.

D3. Ethnic Studies:<sup>[179]</sup> ANTH 2B, 4, 6, 11; CHLD 11; COMM 12; ENGL 12, 31; HIST 10; MUS 8; PHIL 24, 25; PHOT 8, 8H; PSYCH 21, 22; SOC 21, 23; SOSC 20; WMN 21.

D4. Gender Studies: ART 2E; COMM 10; ENGL 22; PSYC 21; SOC 21; WMN 5, 11, 15, 21.

D5. Geography: GEOG 2, 5, 9, 10.

D6. History: HIST 4A, 4B, 4C, 4CH, 8, 9, 9H, 10, 15, 16, 16H, 17A, 17B, 17C, 18, 20.

D7. Interdisciplinary Social or Behavioral Science: CHLD 11, 55; ENGL 26; HIST 18; LING 26; PHED 2; SOC 8; SOSC 20.

D8. Political Science, Government & Legal Institutions: ECON 9; GERM 8; POLI 1, 2, 2H, 3, 3H, 9, 9H, 15, 15H; SPED 64.

D9. Psychology: CHLD 50A, 55; PSYC 1, 4, 10, 14, 21, 22, 25, 30, 33, 40, 49, 55; SOC 10, 21, 30; WMN 21.

D0. Sociology & Criminology: PSYC 10, 21, 30; SOC 1, 8, 10, 11, 15, 20, 21, 23, 30, 40; WMN 21.

**Area E: Lifelong Understanding & Self Development**

(4–5 quarter units)

E. BIOL 8; CNSL 2, 72; CRLP 70; DANC 1A, 1B, 3A, 3B, 4, 5, 6, 7, 9 (DANC limited as PE Activity); HLTH 21, any PHED/PE Activity course (limited to two units), PHED 4; PSYC 50; SOC 19, 40; SPED 52, 72.

**TRANSFER STUDIES: IGETC**

**Program Types(s):**

**Certificate of Achievement<sup>[180]</sup>**

Units required for certificate: 49 (minimum)

[179] Some CSU campuses may require additional courses after transfer to meet this requirement.

[180] This Certificate of Achievement is designed for students who intend to transfer to either the University of California (UC) or to the California State University (CSU). Students who satisfactorily complete the requirements for this Certificate of Achievement with a grade of "C" or better in each course will satisfy the Intersegmental General Education Transfer Curriculum (IGETC), thereby

**Certificate Course Requirements<sup>[181]</sup>**

Important Difference between CSU and UC Options

**IGETC CSU:**

The CSU does require one oral communication class (Area 1C). The CSU does not require Language Other Than English (Area 6). The CSU American Institutions requirement is outlined in Area 4.

**IGETC UC:**

The UC does require Language Other Than English proficiency (Area 6).

The UC does not require Oral Communication (Area 1C).

**Area 1: English Communication**

For UC: Complete one course from Group A and one course from Group B

For CSU: Complete one course from Group A, Group B and Group C

Group A: English Composition: ENGL 1A, 1AH (4–5 quarter units)

Group B: Critical Thinking/English Composition: ENGL 1B, 1BH, 1C, 1CH; PHIL 1 (4–5 quarter units)

Group C: Oral Communication (CSU only): COMM 1A, 1AH, 1B, 1BH, 2, 3, 4 (4–5 quarter units)

**Area 2: Mathematical Concepts & Quantitative Reasoning**

(4–5 quarter units)

CIS 18; MATH 1A, 1B, 1C, 1D, 2A, 2B, 10, 11, 12, 22, 44, 49

**Area 3: Arts & Humanities** (12–15 quarter units)

At least three courses: one course from the Arts and one course from Humanities, plus one more course.

Arts: ART 1, 2A, 2AH, 2B, 2BH, 2C, 2CH, 2D, 2E, 3, 11, 12, 13, 14; DANC 10; ENGL 42A, 42B, 42C; MUS 1, 2A, 2B, 2C, 2D, 3A, 3B, 3C, 7, 7D, 7E, 8, 8H, 10, 11A, 11B, 11C, 27, 85A, 85B; PHIL 11; PHOT 8, 8H, 10, 10H, 11; THTR 1, 2A, 2B, 2C, 8; VART 1, 2A, 2B, 2C, 3; WMN 15.

Humanities: CHIN 4, 5, 25A 25B; ENGL 5, 5H, 7, 7H, 8, 11, 11H, 12, 14, 17, 22, 25, 25H, 26, 31, 40, 40H, 41, 42A, 42B, 42C, 46A 46B, 46C, 48A, 48B, 48C; F A 1, 2; HIST 4A, 4B, 4C, 4CH; HUMN 1A, 1B; JAPN 4, 5, 6, 25A, 25B, 33; LING 25, 25H, 26; PHIL 2, 4, 8, 20A, 20B, 22, 24, 25; SPAN 4, 5, 6, 25A, 25B; THTR 2A, 2B, 2C.

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*completing all lower-division general education units required by both the CSU and UC. Students should meet with a Foothill College counselor to determine whether the IGETC is the best option to meet their specific transfer goals.*

*The Certificate of Achievement will be noted on the student's official transcript. To earn this certificate, students must complete the coursework as outlined in this section. Residency requirement: a minimum of 16 units must be completed at Foothill College. Courses on the list are approved for a specific academic year. A course cannot be certified by Foothill College unless it was on the Foothill College IGETC list when it was completed. For information regarding the year in which courses are approved, access [www.assist.org](http://www.assist.org).*

*To be eligible to transfer to a UC campus, students must complete at least 90 units of UC transferable courses with a GPA of 2.4 or better. To be eligible to transfer to a CSU campus, students must complete at least 90 units of CSU transferable courses with a GPA of 2.0 or better. Note that there are two differences between the IGETC requirements for CSU and UC. Students should follow the pattern of courses that meets their educational goals. Completion of the IGETC requirements as outlined satisfies the requirements of the Certificate of Achievement in Transfer Studies (IGETC). In addition to completing the courses for the Certificate of Achievement, the student is responsible for completing major preparation and/or elective credits to complete the 90 quarter units required for admission for all UC and CSU campuses. Students can use [www.assist.org](http://www.assist.org) to review major preparation courses and are strongly advised to consult with a counselor for educational planning to achieve successful admission to the university of their choice.*

[181] Students transferring to a university must also request a formal IGETC certification through the Foothill College Evaluations Office just prior to transfer.

\*A minimum of 90 units required for the A.A./A.S. Degree, to include required courses, required electives, and graduation requirements, and these minimum proficiencies: ENGL 1A or ESLL 26, and MATH 105.

#### Area 4: Social & Behavioral Sciences (12–15 quarter units)

Complete at least three courses from two different subjects  
ANTH 2A, 2B, 3, 4, 5, 6, 8; ART 2E; CHLD 55; COMM 10, 12;  
ECON 1A, 1B, 9, 25; GEOG 2, 5, 9, 10; GERM 8; HIST 4A, 4B, 4C,  
4CH, 8, 9, 9H, 10, 15, 16, 16H, 17A, 17B, 18, 20; PHED 2; PHOT  
8, 8H, POLI 1, 2, 2H, 3, 3H, 9, 9H, 15, 15H; PSYC 1, 4, 10, 14,  
21, 22, 25, 30, 33, 40, 49, SOC 1, 8, 10, 11, 15, 20, 21, 23, 30, 40;  
SOSC 20; WMN 5, 11, 15, 21.

#### American Institutions CSU Graduation Requirement:

For graduation from CSU, students must complete two courses in American history. The following Foothill courses may be used to satisfy this requirement. Students may complete these courses in partial fulfillment of Area 4 And satisfy the American Institutions requirement. Students should complete either HIST 17A, 17B or 17C and POLI 1.

#### Area 5: Physical & Biological Sciences (9–12 quarter units)<sup>[182]</sup>

Complete at least two courses, one Physical Science course and one Biological Science course; at least one must include a lab (courses with an asterisk\* include lab).

Physical Sciences: ASTR 10A, 10B, 10BH, 10L\*; CHEM 1A\*, 1B\*, 1C\*, 12A\*, 12B\*, 12C\*, 25\*, 30A\*, 30B\*; GEOG 1\*; PHYS 2A\*, 2B\*, 2C\*, 4A\*, 4B\*, 4C\*, 4D\*, 6, 12.

Biological Sciences: ANTH 1, 1L\*; BIOL 1A\*, 1B\*, 1C\*, 1D, 9, 9L\*, 10\*, 12, 13\*, 14\*, 15\*, 17, 40A\*, 40B\*, 40C\*, 41\*, 45; HORT 10\*.

#### Area 6: Language Other Than English (UC requirement only)

Proficiency equivalent to two years of high school study in the same language with a grade of C or better or completion of one of the following courses. If Foothill College courses are not used to satisfy this requirement, students must provide official documentation of completion elsewhere:  
CHIN 2, 3, 4, 5, 6; GERM 2, 3; JAPN 2, 3, 4, 5, 6; SPAN 2, 3, 4, 5, 6.

## VETERINARY TECHNOLOGY

### Program Type(s):

#### AS Degree; Career Certificate

Units required for major: 92.5, certificate: 13

#### Associate Degree Requirements\*

#### Core Courses: (92.5 units)<sup>[183]</sup>

##### First Year

#### Fall Quarter: (11.5 units)

V T 50 Current Topics in Veterinary Technology (.5 unit)  
V T 53A Medical Terminology (1 unit)  
V T 54A Comparative Veterinary Anatomy & Physiology for the Veterinary Technician (5 units)  
V T 55 Animal Management & Clinical Skills I (4 units)  
V T 75A Animal Care Skills (1 unit)

#### Winter Quarter: (13.5 units)

V T 50 Current Topics in Veterinary Technology (.5 unit)  
V T 53B Medical Calculations (1 unit)  
V T 60 Veterinary Office Practice (2 units)

<sup>[182]</sup> Either UC or CSU may limit credit.

<sup>[183]</sup> All courses must be taken in sequence and completed with a grade of C or better.

V T 56 Animal Management & Clinical Skills II (4 units)  
V T 75B Animal Care Skills (1 unit)  
CHEM 30A Survey of Inorganic & Organic Chemistry (5 units)

#### Spring Quarter: (14.5 units)

V T 50 Current Topics in Veterinary Technology (.5 unit)  
V T 53C Introduction to Large Animal Care (1 unit)  
V T 54B Comparative Veterinary Anatomy & Physiology for the Veterinary Technician (5 units)  
V T 75C Animal Care Skills (1 unit)  
V T 86 Laboratory Animal Technology (4 units)  
V T 89 Clinical Internship (3 units)

#### Summer Session: (6.5 units)

BIOL 41 Microbiology (6 units)  
V T 75D Animal Care (.5 unit)

### Second Year

#### Fall Quarter: (17.5 units)

V T 50 Current Topics in Veterinary Technology (.5 unit)  
V T 70 Fundamentals of Veterinary Diagnostic Imaging (4 units)  
V T 81 Clinical Pathology Methods (5 units)  
V T 83 Pharmacology for Technicians (4 units)  
V T 87A Advanced Animal Care Skills (1 unit)  
V T 91 Clinical Internship (3 units)

#### Winter Quarter: (14.5 units)

V T 50 Current Topics in Veterinary Technology (.5 unit)  
V T 61 Animal Diseases (5 units)  
V T 84 Anesthesiology for Technicians (5 units)  
V T 87B Advanced Animal Care Skills (1 unit)  
V T 92 Clinical Internship (3 units)

#### Spring Quarter: (14.5 units)

V T 50 Current Topics in Veterinary Technology (.5 unit)  
V T 72 Principles of Veterinary Dentistry (2 units)  
V T 85 Veterinary Emergency & Critical Care (4 units)  
V T 87B Advanced Animal Care Skills (1 unit)  
V T 93 Clinical Internship (4 units)  
V T 95 Veterinary Technician Proficiency (2 units)  
V T 95L Veterinary Technician Proficiency Laboratory (1 unit)

#### Certificate information

Entry-level education and training for those interested in starting a career in animal care and veterinary assisting. Stepping-stone into the AVMA-accredited Veterinary Technology Program for those interested in becoming a Registered Veterinary Technician (RVT).

#### Online Veterinary Assisting Career Certificate (13 units)

#### NON-TRANSCRIPTABLE<sup>[184]</sup>

V T 52A Veterinary Assisting I (5 units)  
V T 52B Veterinary Assisting II (5 units)  
V T 88A Clinical Preceptorship I (1.5 units)  
V T 88B Clinical Preceptorship II (1.5 units)

<sup>[184]</sup> Certificate completion will not appear on the student's transcript.

\*A minimum of 90 units required for the A.A./A.S. Degree, to include required courses, required electives, and graduation requirements, and these minimum proficiencies: ENGL 1A or ESLL 26, and MATH 105.

## VITICULTURE & ENOLOGY

### Pending State Approval

#### Program Type(s):

#### AS Degree; Certificate of Achievement

Units required for major: 48, certificate: 22–48

#### Associate Degree Requirements\*

##### Core Courses: (46 units)

VITI 51 Applied Plant Science (4 units)  
VITI 52 Fall Practices (4 units)  
VITI 53 Winter Practices (4 units)  
VITI 55 Spring Practices (4 units)  
HORT 52A Horticultural Practices: Soils (3 units)  
HORT 52H Horticulture Practices: Integrated Pest Management (3 units)  
VITI 61A Introduction to Winemaking (4 units)  
VITI 61B Intermediate Winemaking (4 units)  
VITI 61C Advanced Winemaking (4 units)  
VITI 63 Contemporary Issues in Winemaking (4 units)  
VITI 65 Wine & Culture (4 units)  
VITI 67 Retail Winery Management (4 units)

##### Elective Courses: (2 units)

VITI 90A Wine Appreciation (1 unit)  
VITI 90B Vineyard Establishment (2 units)  
VITI 90C Vineyard Management (2 units)  
VITI 90D Vine Pruning (1 unit)  
VITI 90E Basic Winemaking (2 units)  
HORT 80 Environmental Horticulture Skills (2 units)

#### Certificate information

Request a certificate information at [www.foothill.edu/bio/](http://www.foothill.edu/bio/)

#### Certificate of Achievement in Viticulture & Enology (48 units)

Awarded after completion of the core and elective courses.

#### Certificate of Achievement in Vineyard Management (22 units)

VITI 51 Applied Plant Science (4 units)  
VITI 52 Fall Practices (4 units)  
VITI 53 Winter Practices (4 units)  
VITI 55 Spring Practices (4 units)  
HORT 52A Horticultural Practices: Soils (3 units)  
HORT 52H Horticulture Practices: Integrated Pest Management (3 units)

#### Certificate of Achievement in Winemaking (24 units)

VITI 61A Introduction to Winemaking (4 units)  
VITI 61B Intermediate Winemaking (4 units)  
VITI 61C Advanced Winemaking (4 units)  
VITI 63 Contemporary Issues in Winemaking (4 units)  
VITI 65 Wine & Culture (4 units)  
VITI 67 Retail Winery Management (4 units)

## WOMEN'S STUDIES

### Program Type(s):

#### AA Degree

Units required for major: 33

#### Associate Degree Requirements\*

##### Core Courses: (17 units)

WMN 5 Introduction to Women's Studies (4 units)  
WMN 11 Women in Global Perspective (4 units)  
WMN 21 Psychology of Women: Sex & Gender Differences (4 units)  
COMM 10 Gender, Communication & Culture (5 units)

##### Support Courses: (16 units)

PSYC 14 Childhood & Adolescence (4 units)  
PSYC 22 Psychology of Prejudice (4 units)  
SOC 30 Social Psychology (4 units)  
    or PSYC 30 Social Psychology (4 units)  
SOC 40 Aspects of Marriage & Family (4 units)  
SOSC 20 Cross-Cultural Perspectives for a Multicultural Society (4 units)  
ENGL 22 Women Writers (4 units)  
WMN 15 A History of Women in Art (4 units)  
WMN 34H Honors Institute Seminar in Women's Studies (1 unit)  
WMN 35 Department Honors Projects in Women's Studies (1 unit)  
WMN 36, X–Z Special Projects in Women's Studies (1–4 units)

## Course Numbering System

The following course numbering system provides a detailed explanation regarding course number designations. When in doubt about the transferability of a course, always consult a counselor.

You are responsible for reviewing prerequisites and repeatability as noted in course descriptions. Only courses with substandard grades may be repeated. Consult a Foothill counselor for more information.

*Where there is a conflict between the catalog statements and published curriculum sheets, the latter will take precedence. Consult a counselor for the most current information.*

- Courses approved for transfer to the University of California are usually numbered 1–49. There are some exceptions to this rule; therefore, you should always consult with a counselor to verify course transferability. For more information, access [www.foothill.edu](http://www.foothill.edu) or [www.assist.org](http://www.assist.org). The term *degree applicable* signifies courses which apply to the associate degree and/or baccalaureate transfer degree.
- Courses designated 1–99 are baccalaureate in nature and are generally transferable to the California State University.
- Courses numbered 100 and above are not transferable.
- Courses numbered 200–99 are prerequisites for required courses that lead to the Associate in Arts and Associate in Science degree, and non-degree applicable credit courses.
- Courses numbered 300–399 are workshop, review and other courses offered to meet special collegiate needs of a community nature.
- Courses numbered 400–499 are non-credit, non-graded courses in senior education, special education or other areas that do not apply to the associate degree.
- Courses listed with an “S” suffix signify the first half of the course; a “T” suffix indicates the second half. Courses must be taken in sequential order; and both halves must be completed for credit.
- Community services courses are fee-based, and are scheduled and publicized separately from the state-supported courses identified in this catalog.

## Course Listings

### Course Numbering System

### Course Listings

### Other Approved Courses

## Course Listings

### ACADEMIC SKILLS

#### Language Arts

(650) 949-7452  
www.foothill.edu/la/

#### ACAD 102 PUNCTUATION IMPROVEMENT 1 Unit

Advisory: Pass/No Pass.  
May be taken 3 times for credit.  
3 hours laboratory.

Computerized or text-based instruction in punctuation skills. Students begin at their own level, based on diagnostic assessment. Areas covered can include analysis and application of punctuation rules, usage and grammar. Materials available at beginning, intermediate and advanced levels.

#### ACAD 104 SPELLING IMPROVEMENT 1 Unit

Advisory: Pass/No Pass.  
May be taken 3 times for credit.  
3 hours laboratory.

Computerized or text-based course designed to improve spelling skills. Students begin at their own level, based on diagnostic assessment. Areas covered can include review of phonics, homonyms and analysis, and application of spelling rules. Emphasis on integrating these rules into writing. Materials available at beginning and intermediate levels.

#### ACAD 105 WRITING BETTER SENTENCES 1 Unit

Advisory: Pass/No Pass.  
May be taken 3 times for credit.  
3 hours laboratory.

Computerized or text-based instruction in improving sentence skills. Areas covered can include review of grammar and punctuation rules as relevant to the writing process and introduction to simple, compound, complex and embedded sentence structures. Emphasis on integrating subskills into the whole writing process. Materials available at beginning, intermediate and advanced levels.

#### ACAD 108 RESEARCH PAPER ASSISTANCE 1 Unit

Advisory: Pass/No Pass.  
May be taken 3 times for credit.  
3 hours laboratory.

Individualized course designed to teach basic techniques for the research paper. Skills include selection of topic, collection of data, requirements of form, MLA documentation, and production of a short research paper. One-on-one instruction, conferences, and on-going assessment are the methods used.

#### ACAD 110 GRAMMAR IMPROVEMENT 1 Unit

Advisory: Pass/No Pass.  
May be taken 3 times for credit.  
3 hours laboratory.

Computerized or text-based instruction in grammar. Students begin at their own level, based on diagnostic assessment. Areas covered can include analysis and application of structural elements, punctuation rules and sentence boundaries. Materials available at beginning, intermediate and advanced levels.

#### ACAD 112 VOCABULARY IMPROVEMENT 1 Unit

Advisory: Pass/No Pass.  
May be taken 3 times for credit.  
3 hours laboratory.

Computerized or text-based instruction in improving vocabulary skills. Students begin at their own level, based on diagnostic assessment. Areas covered can include understanding of word parts, analysis of context clues, and learning of new words. Materials available at beginning, intermediate and advanced levels.

#### ACAD 122 LISTENING & PRONUNCIATION SKILLS FOR ESL 1 Unit

Advisory: Pass/No Pass.  
May be taken 3 times for credit.  
3 hours laboratory.

Computerized or text-based instruction in improving listening comprehension and pronunciation skills for non-native speakers of English. Materials available at beginning, intermediate and advanced levels.

#### ACAD 123 WORD PROCESSING & KEYBOARDING SKILLS 1 Unit

Advisory: Pass/No Pass.  
May be taken 3 times for credit.  
3 hours laboratory.

Computerized course in basic to intermediate word processing skills and keyboarding. Focus on increasing speed and accuracy using touch typing, entering and editing text, saving files, blocking and manipulating text, using spell check, and inserting graphics.

### ACCOUNTING

#### Business & Social Sciences

(650) 949-7322  
www.foothill.edu/bss/

#### ACTG 1A FINANCIAL ACCOUNTING I 5 Units

Advisory: Eligibility for MATH 220 and ESLL 26.  
5 hours lecture.

Introduction to accounting information systems for decision making. Original entry and posting, adjusting and closing entries, development of accounting system for computers, internal controls over assets, accounting for monetary assets and inventories, and the relationship among financial statements. [Transferability: UC/CSU]

#### ACTG 1B FINANCIAL ACCOUNTING II 5 Units

Prerequisite: ACTG 1A.  
Advisory: Eligibility for MATH 220 and ESLL 26  
5 hours lecture.

Continuing study of accounting information system for decision making. Fixed assets and intangible assets, current liabilities, corporations, bonds, investments, statement of cash flows and financial statement analysis. [Transferability: UC/CSU]

#### ACTG 1C MANAGERIAL ACCOUNTING 5 Units

Prerequisite: ACTG 1B.  
Advisory: MATH 10 or high school algebra.  
5 hours lecture.

Study of accounting information system for internal uses. Process costing, job-order costing, activity-based costing, cost behavior and cost-volume profit analysis, budgeting, performance evaluation, and capital investment analysis. [Transferability: UC/CSU]

#### ACTG 51A INTERMEDIATE ACCOUNTING I 4 Units

Prerequisite: ACTG 1B.  
4 hours lecture.

Review of financial accounting standards, accounting information processing systems and the resulting financial statements. Selected topics related to present value applications, valuation techniques, and revenue recognition. Also covered, accounting for cash, receivables, and inventory. [Transferability: CSU]

#### ACTG 51B INTERMEDIATE ACCOUNTING II 4 Units

Prerequisite: ACTG 51A.  
4 hours lecture.

Accounting for PP&E, intangible assets, current liabilities, long-term liabilities, and equity. [Transferability: CSU]

<b>ACTG 51C</b>	<b>INTERMEDIATE ACCOUNTING III</b>	<b>4 Units</b>
Prerequisite: ACTG 51B 4 hours lecture. Accounting for Investments, Income Taxes, Pensions and Post-retirement Benefits, Leases, and Accounting Changes and Error Analysis; also covered, the Cash Flows Statement, and Full Disclosure in Financial Reporting. [Transferability: CSU]		
<b>ACTG 60</b>	<b>ACCOUNTING FOR SMALL BUSINESS</b>	<b>5 Units</b>
5 hours lecture. Pre-professional accounting course introducing the theory of double-entry bookkeeping/accounting. Emphasis on basic accounting cycle, elementary accounting principles and procedures, and financial records. [Transferability: CSU]		
<b>ACTG 64A</b>	<b>COMPUTERIZED ACCOUNTING PRACTICE USING QUICKBOOKS</b>	<b>2 Units</b>
Prerequisite: ACTG 1A or equivalent experience. 4 hours lecture-laboratory. Focus on using QuickBooks to record financial data. Reviewing the accounting cycle, processing business transactions and preparing financial statements. [Transferability: CSU]		
<b>ACTG 64B</b>	<b>COMPUTERIZED ACCOUNTING PRACTICE USING EXCEL</b>	<b>2 Units</b>
Prerequisite: ACTG 1B or equivalent experience. 4 hours lecture-laboratory. Practice in using an electronic spreadsheet program to organize and process financial and managerial accounting data. Includes research on the Internet. [Transferability: CSU]		
<b>ACTG 65</b>	<b>PAYROLL &amp; BUSINESS TAX ACCOUNTING</b>	<b>4 Units</b>
Prerequisite: ACTG 1B. 4 hours lecture. Presentation of basic payroll procedures used in business today. Provides practice in recording procedures and preparation of tax returns. [Transferability: CSU]		
<b>ACTG 66</b>	<b>COST ACCOUNTING</b>	<b>5 Units</b>
Prerequisite: ACTG 1C or equivalent experience. 5 hours lecture. Fundamentals of activity-based costing, job-order, process cost, and standard cost accounting systems. [Transferability: CSU]		
<b>ACTG 67</b>	<b>TAX ACCOUNTING</b>	<b>5 Units</b>
Advisory: Eligibility for MATH 220 and ESLL 26. 5 hours lecture. Current Federal and California Income Tax Law as it relates to individuals, emphasizing practical application, tax planning and tax form preparation. [Transferability: CSU]		
<b>ACTG 68A</b>	<b>ADVANCED TAX ACCOUNTING I</b>	<b>4 Units</b>
Corequisite: Concurrent enrollment in ACTG 67 or equivalent experience. May be taken 3 times for credit. 4 hours lecture. Current federal income tax law as it relates to sole proprietorships and partnerships. [Transferability: CSU]		
<b>ACTG 68B</b>	<b>ADVANCED TAX ACCOUNTING II</b>	<b>4 Units</b>
Prerequisite: ACTG 68A. May be taken 3 times for credit. 4 hours lecture. Current federal income tax law as it relates to corporations, estate, trust, and gift taxes. [Transferability: CSU]		
<b>ACTG 68C</b>	<b>ADVANCED TAX ACCOUNTING III</b>	<b>3 Units</b>
Advisory: Eligibility for MATH 220 and ESLL 26. May be taken 3 times for credit. 3 hours lecture. Current federal income tax administration and procedures and review of Enrolled Agent Exam. [Transferability: CSU]		

## ADAPTIVE LEARNING: COMMUNITY BASED

### Adaptive Learning

(650) 949-7017  
[www.foothill.edu/al/](http://www.foothill.edu/al/)

<b>ALCB 201</b>	<b>BEGINNING LIP READING</b>	<b>.5 Unit</b>
<b>ALCB 201X</b>		<b>1 Unit</b>
Non-degree applicable credit course. Prerequisite: Medically verified disability. Any combination of ALCB 201 & 201X may be taken 6 times for credit, however, no single course may be taken more than 6 times for credit. 1.5 hours lecture-laboratory for each .5 unit of credit. Designed for adults with acquired, congenital or progressive hearing impairment. Includes basic sounds of the English language and how production of basic speech sounds appears on the lips and face of the speaker. Mechanics of the ear and sound will be presented. Physiological problems related to hearing will be discussed as well as some technological solutions. Practical experience in lip reading will be provided.		
<b>ALCB 202</b>	<b>INTERMEDIATE LIP READING &amp; MANAGING YOUR HEARING LOSS</b>	<b>.5 Unit</b>
<b>ALCB 202X</b>		<b>1 Unit</b>
Non-degree applicable credit course. Prerequisite: Medically verified disability. Any combination of ALCB 202 & 202X may be taken 6 times for credit, however, no single course may be taken more than 6 times for credit. 1.5 hours lecture-laboratory for each .5 unit of credit. Designed to meet the needs of the hearing impaired adult with acquired hearing impairment.		
<b>ALCB 203</b>	<b>ADVANCED LIP READING &amp; MANAGING YOUR HEARING LOSS</b>	<b>.5 Unit</b>
<b>ALCB 203X</b>		<b>1 Unit</b>
Non-degree applicable credit course. Prerequisite: Medically verified disability; ALCB 201, 202 or equivalent skills. Any combination of ALCB 203 & 203X may be taken 6 times for credit, however, no single course may be taken more than 6 times for credit. 1.5 hours lecture-laboratory for each .5 unit of credit. Designed to meet the needs of the hearing impaired adult with acquired hearing impairment.		
<b>ALCB 204</b>	<b>POST-ADVANCED LIP READING &amp; MANAGING YOUR HEARING LOSS</b>	<b>.5 Unit</b>
<b>ALCB 204X</b>		<b>1 Unit</b>
Non-degree applicable credit course. Prerequisite: Medically verified disability; ALCB 201, 202 or equivalent skills. Any combination of ALCB 204 & 204X may be taken 6 times for credit, however, no single course may be taken more than 6 times for credit. 1.5 hours lecture-laboratory for each .5 unit of credit. Designed for hard of hearing adults who exhibit substantial lip-reading skills and wish to upgrade and maintain their abilities.		
<b>ALCB 207</b>	<b>MOBILITY SKILLS FOR THE VISUALLY IMPAIRED</b>	<b>.5 Unit</b>
<b>ALCB 207X</b>		<b>1 Unit</b>
<b>ALCB 207Y</b>		<b>2 Units</b>
Non-degree applicable credit course. Prerequisite: Medically verified disability. Any combination of ALCB 207-207Y may be taken 6 times for credit, however, no single course may be taken more than 6 times for credit. 1.5 hours laboratory for each .5 unit of credit. Designed for low vision and blind adults to develop competence and confidence with independent orientation and mobility skills. Weekly field trips will enhance the understanding and appreciation for community resources while participating in skill building.		

ALCB 222	JOB SEARCH SKILLS	1 Unit	ALCB 231	CAREER PLANNING &	.5 Unit
ALCB 222X		2 Units	ALCB 231X	PERSONAL ASSESSMENT	1 Unit
ALCB 222Y		2.5 Units	ALCB 231Y		2 Units
ALCB 222Z		3 Units	ALCB 231Z		3 Units
<p>Non-degree applicable credit course. Prerequisite: Medically verified disability. Any combination of ALCB 222–222Z may be taken 6 times for credit, however, no single course may be taken more than 6 times for credit. 2 hours lecture-laboratory, .5 hour laboratory for each unit of credit. Preparation and skills necessary for re-entry into the job market. Emphasis on technological changes impacting the job search. Includes use of the Internet for job search.</p>			<p>Non-degree applicable credit course. Prerequisite: Medically verified disability. Any combination of courses ALCB 231–231Z may be taken 6 times for credit, however, no single course may be taken more than 6 times for credit. 1.5 hours laboratory for each .5 unit of credit. Designed to help students develop a personal profile that identifies sociological, psychological and physiological perspectives for success in work, education and personal life.</p>		
ALCB 223	CAREER RESOURCES	.5 Unit	ALCB 240	HEALTHIER LIVING WITH ARTHRITIS	1 Unit
ALCB 223X		1 Unit	Non-degree applicable credit course.		
ALCB 223Y		2 Units	Prerequisite: Medically verified disability.		
ALCB 223Z		3 Units	May be taken 6 times for credit.		
<p>Non-degree applicable credit course. Prerequisite: Medically verified disability. Any combination of ALCB 223–223Z may be taken 6 times for credit, however, no single course may be taken more than 6 times for credit. 3 hours laboratory for each unit of credit. Introduction and hands-on use of resources available to research and find employment in the Bay Area. Resources include daily job postings, fax, Internet, telephones, company leads, casual labor, videos and career library. Designed for the disabled student.</p>			<p>1 hour lecture-laboratory, 1 hour terminal time. Online self-management workshop for people with arthritis. Didactic, interactive content posted weekly with at least 2 additional log-on during the week to engage in discussions with classmates and moderators and complete online assignments.</p>		
ALCB 224	EMPLOYMENT ISSUES	.5 Unit	ALCB 403,X,Y	CHANGING GENERATIONS	0 Units
ALCB 224X		1 Unit	Non-degree applicable non-credit course.		
ALCB 224Y		2 Units	Prerequisite: Medically verified disability.		
ALCB 224Z		3 Units	Unlimited repeatability.		
<p>Non-degree applicable credit course. Prerequisite: Medically verified disability. Any combination of ALCB 224–224Z may be taken 6 times for credit, however, no single course may be taken more than 6 times for credit. 2 hours lecture-laboratory for each unit of credit. Exploration of work-related issues, situations and decision-making skills related to employment and job retention. Emphasis on problems facing the re-entry worker and the disabled.</p>			<p>1 hour laboratory. Designed to offer an opportunity for young and old to share a relationship.</p>		
ALCB 229	WORK ADJUSTMENT FOR	.5 Unit	ALCB 406,X,Y	WORLD NEWS DISCUSSION	0 Units
ALCB 229X	THE DISABLED	1 Unit	Non-degree applicable non-credit course.		
ALCB 229Y		2 Units	Prerequisite: Medically verified disability.		
ALCB 229Z		3 Units	Unlimited repeatability.		
<p>Non-degree applicable credit course. Prerequisite: Medically verified disability. Any combination of ALCB 229–229Z may be taken 6 times for credit, however, no single course may be taken more than 6 times for credit. 3 hours laboratory for each unit of credit. Designed to help the student develop realistic work behavior. Focus on group interaction, sharing of attitudes, fears, hopes and expectations as they relate to work. Student participation in vocational testing to assess interest and abilities.</p>			<p>1 hour laboratory. Designed for the disabled to study world news by examining turning points in history, comparing and contrasting them with current world events to enhance memory retention and self-esteem.</p>		
ALCB 229	WORK ADJUSTMENT FOR	.5 Unit	ALCB 407,X,Y	SOCIAL CHANGE	0 Units
ALCB 229X	THE DISABLED	1 Unit	Non-degree applicable non-credit course.		
ALCB 229Y		2 Units	Prerequisite: Medically verified disability.		
ALCB 229Z		3 Units	Unlimited repeatability.		
<p>Non-degree applicable credit course. Prerequisite: Medically verified disability. Any combination of ALCB 229–229Z may be taken 6 times for credit, however, no single course may be taken more than 6 times for credit. 3 hours laboratory for each unit of credit. Designed to help the student develop realistic work behavior. Focus on group interaction, sharing of attitudes, fears, hopes and expectations as they relate to work. Student participation in vocational testing to assess interest and abilities.</p>			<p>1 hour laboratory. Designed for the disabled to improve memory and understanding of changes in society to increase awareness of the impact of these changes and increase social interaction.</p>		
ALCB 230	INTRODUCTION TO THE COMPUTER FOR THE DISABLED	2 Units	ALCB 408,X,Y	ART APPRECIATION	0 Units
Non-degree applicable credit course.			Non-degree applicable non-credit course.		
Prerequisite: Medically verified disability.			Prerequisite: Medically verified disability.		
May be taken 6 times for credit.			Unlimited repeatability.		
4 hours lecture-laboratory, 2 hours terminal time.			1 hour laboratory.		
Introduction to the computer and its uses for the student with little or no computer experience with a word processor and file management techniques. Discussion of other software applications. This course is designed for the student with a medically verified disability.			Designed for the disabled student to acquire an appreciation of artists and their work. Provides opportunity for social interaction and intellectual stimulation made possible through shared knowledge of artists and their work.		
ALCB 230	INTRODUCTION TO THE COMPUTER FOR THE DISABLED	2 Units	ALCB 409,X,Y	MUSIC APPRECIATION	0 Units
Non-degree applicable credit course.			Non-degree applicable non-credit course.		
Prerequisite: Medically verified disability.			Prerequisite: Medically verified disability.		
May be taken 6 times for credit.			Unlimited repeatability.		
4 hours lecture-laboratory, 2 hours terminal time.			1 hour laboratory.		
Introduction to the computer and its uses for the student with little or no computer experience with a word processor and file management techniques. Discussion of other software applications. This course is designed for the student with a medically verified disability.			Designed for the disabled student to acquire appreciation of composers and their work. Emphasis on identification and recall of auditory input.		

<p><b>ALCB 411,X,Y HEALTH ISSUES</b> <b>0 Units</b>  Non-degree applicable non-credit course.  Prerequisite: Medically verified disability.  Unlimited repeatability.  1 hour laboratory.  Designed for the disabled to acquire information and develop strategies for managing the physical, social and psychological effects of illness.</p>	<p><b>ALCB 456,X-Z CRAFTS</b> <b>0 Units</b>  Non-degree applicable non-credit course.  Prerequisite: Medically verified disability.  Unlimited repeatability.  1 hour laboratory.  Designed for the disabled student to improve expressive capability, manipulatory skills and eye-hand coordination, increase self-esteem and increase social interaction through the use of seasonal, leather, wood, fabric, yarn and paper materials to create crafts projects in a group setting.</p>
<p><b>ALCB 413,X,Y RELAXATION TECHNIQUES</b> <b>0 Units</b>  Non-degree applicable non-credit course.  Prerequisite: Medically verified disability.  Unlimited repeatability.  1 hour laboratory.  Designed for the disabled student to acquire information about and develop techniques for achieving relaxation by releasing mental and physical tension.</p>	<p><b>ALCB 462,X-Z VERBAL EXPRESSION</b> <b>0 Units</b>  Non-degree applicable non-credit course.  Prerequisite: Medically verified disability.  Unlimited repeatability.  1 hour laboratory.  Designed for the disabled student to teach techniques in verbal communication specifically to improve family, social and work-related situations.</p>
<p><b>ALCB 414,X,Y STRESS MANAGEMENT</b> <b>0 Units</b>  Non-degree applicable non-credit course.  Prerequisite: Medically verified disability.  Unlimited repeatability.  1 hour laboratory.  Designed for the disabled student to recognize stress symptoms and become aware of signals which cause triggers in stress. Learn stress management skills from passive to active take-charge role.</p>	<p><b>ALCB 463,X,Y CREATIVE WRITING</b> <b>0 Units</b>  Non-degree applicable non-credit course.  Prerequisite: Medically verified disability.  Unlimited repeatability.  1 hour laboratory.  Designed for the disabled student to present written autobiographical, fictional and non-fictional experiences which are shared orally for both appreciation and constructive input to enhance self-esteem, memory retention and writing ability.</p>
<p><b>ALCB 421,X,Y AROUND THE WORLD IN TRAVEL STUDY</b> <b>0 Units</b>  Non-degree applicable non-credit course.  Prerequisite: Medically verified disability.  Unlimited repeatability.  1 hour laboratory.  Designed for the disabled student to recall personal travel. Focuses on the discussion of geography, history, religions and arts of other cultures to increase knowledge and social interaction, and improve memory retention.</p>	<p><b>ALCB 464,X,Y POETRY &amp; LITERATURE</b> <b>0 Units</b>  Non-degree applicable non-credit course.  Prerequisite: Medically verified disability.  Unlimited repeatability.  1 hour laboratory.  Designed for the disabled student to acquire knowledge and appreciation in poetry and literature with emphasis of its various forms and recall of auditory input.</p>
<p><b>ALCB 431,X-Z ANALYSIS OF CURRENT EVENTS</b> <b>0 Units</b>  Non-degree applicable non-credit course.  Prerequisite: Medically verified disability.  Unlimited repeatability.  1 hour laboratory.  Designed for the disabled student to acquire information about current events with an emphasis on comparing and contrasting current with past events to enhance memory retention and self-esteem.</p>	<p><b>ALCB 465,X-Z CREATIVE SELF-EXPRESSION</b> <b>0 Units</b>  Non-degree applicable non-credit course.  Prerequisite: Medically verified disability.  Unlimited repeatability.  1 hour laboratory.  Designed for the disabled student to provide directed experiences in self-expression. Emphasis on various activities designed to enhance physical and cognitive creative expression and enable the student to develop independent creative activities through adapted drama, music, art and writing.</p>
<p><b>ALCB 451,X-Z DRAWING &amp; PAINTING</b> <b>0 Units</b>  Non-degree applicable non-credit course.  Prerequisite: Medically verified disability.  Unlimited repeatability.  1 hour laboratory.  Designed for the disabled student to improve expressive capability, manipulatory skills and eye-hand coordination, increase self-esteem and increase social interaction through the use of painting, drawing and sketching materials, tools, and techniques to create two-dimensional art in a group setting.</p>	<p><b>ALCB 481,X-Z EXERCISE FOR THE OLDER DISABLED ADULT</b> <b>0 Units</b>  Non-degree applicable non-credit course.  Prerequisite: Medically verified disability.  Unlimited repeatability.  1 hour laboratory.  Designed for the disabled student to improve flexibility, range of movement, muscular strength and endurance.</p>
<p><b>ALCB 455,X-Z MUSIC &amp; MOVEMENT</b> <b>0 Units</b>  Non-degree applicable non-credit course.  Prerequisite: Medically verified disability.  Unlimited repeatability.  1 hour laboratory.  Designed for the disabled student to improve flexibility and mobility through exercise performed to music.</p>	

## ADAPTIVE LEARNING: COMPUTER ACCESS CENTER

### Adaptive Learning

(650) 949-7017  
www.foothill.edu/al/

#### ALCA 201 COMPUTER ACCESS EVALUATION 1 Unit

*Formerly: ALCA 101*

Non-degree applicable credit course.

Prerequisite: Medically verified disability or access limitation.

Advisory: Pass/No Pass.

May be taken 6 times for credit.

3 hours laboratory.

Evaluation with emphasis on determining the efficacy and appropriateness of accommodations required for parity with peers in regular college curricula.

## ADAPTIVE LEARNING: GERONTOLOGY

### Adaptive Learning

(650) 949-7332  
www.foothill.edu/aging

#### GERN 50 SOCIOLOGY OF AGING 3 Units

3 hours lecture.

This course is an introduction to the field of gerontology, the study of aging. It includes an examination of the history of the field and major theories in social gerontology. It explores myths and stereotypes of aging, demography of elders in the United States, patterns of work and retirement, family structures and issues, financial resources, housing options, ethnic and cultural diversity among elders, and federal policies affecting older Americans. [Transferability: CSU]

#### GERN 51 PSYCHOLOGY OF AGING 3 Units

3 hours lecture.

An introduction to normal emotional and psychological changes that typically occur in later life, including discussion of common mental health problems that elders can experience: how to recognize them, and what to do to assist the individual and the family. Throughout the class, ethnic and cultural differences in presentation, evaluation, and treatment of mental health problems in various culturally diverse groups will be highlighted. [Transferability: CSU]

#### GERN 52 HEALTH & AGING 3 Units

3 hours lecture.

An introduction to normal physical changes in older adults without significant disability, common diseases and disabilities that occur in old age, health promotion/disease prevention strategies, and health care policies and practices. [Transferability: CSU]

#### GERN 53 PRACTICUM IN SENIOR SERVICES 3 Units

2 hours lecture, 3 hours laboratory.

Work experience as volunteers or employees in age-related services to be taken after the course work is completed, or with permission of the instructor. Students must either: a) complete 40 hours of volunteer time in an agency approved by the instructor; or b) if already employed in an aging related program, design and implement a special project approved by the instructor. [Transferability: CSU]

#### GERN 54 CONTINUUM OF CARE OPTIONS 3 Units

3 hours lecture.

An overview of the types of care options available to serve independent and dependent elders; including senior centers, adult day care programs, assisted living and nursing homes. Regulations and management issues will be explored. Role of ombudsmen and advocacy organizations are discussed. [Transferability: CSU]

#### GERN 55 ISSUES IN DEATH, DYING & BEREAVEMENT ACROSS CULTURES 3 Units

3 hours lecture.

This course is intended to contribute to your understanding of your relationship with death, as an individual, as a health professional, and as a member of society. It explores the universal phenomena of dying,

death, and bereavement with a special emphasis on academic and interpersonal skills that allow individuals to increase their understanding and appreciation of cultural differences and similarities, within, among, and between groups. [Transferability: CSU]

#### GERN 56 AGING & DIVERSITY 3 Units

3 hours lecture.

The course introduces the student to the cross-cultural and diverse issues of aging, focusing on psychological and social aspects for diverse subgroups within the US. Students will learn to effectively communicate with aging clients of diverse ethnic, religious, gender, sexual orientation, and cultural backgrounds. Through readings, lectures, films, discussions, case studies, and other interactive learning tools, the course will help students to develop the necessary skills to engage and work with aging clients with diverse backgrounds and perspectives. Personal reflections, experiences, beliefs and behaviors will be explored. [Transferability: CSU]

## ADAPTIVE LEARNING: LEARNING DISABILITY

### Adaptive Learning

(650) 949-7017  
www.foothill.edu/al/

#### ALLD 206 PARAGRAPH REMEDIATION 1 Unit

ALLD 206X

2 Units

Non-degree applicable credit course.

Advisory: Pass/No Pass. Medically verified disability.

Any combination of ALLD 206 & 206X may be taken 6 times for credit, however, no single course may be taken more than 6 times for credit. 3 hours laboratory for each unit of credit.

A systematic and progressive paragraph development class with an emphasis on writing concisely with correct grammar. Designed for ALLD students.

#### ALLD 207 BASIC MATH REMEDIATION 1 Unit

ALLD 207X

2 Units

Non-degree applicable credit course.

Advisory: Pass/No Pass. Medically verified disability.

Any combination of ALLD 207 & 207X may be taken 6 times for credit, however, no single course may be taken more than 6 times for credit. 3 hours laboratory for each unit of credit.

A systematic and remedial math class with an emphasis on basic math skills. Designed for ALLD students.

#### ALLD 211 ENHANCING COLLEGE SUCCESS 2 Units

Non-degree applicable credit course.

Advisory: Medically verified disability.

May be taken 2 times for credit.

2 hours lecture, 2 hours of individualized assigned activities.

Define the characteristics of a successful college student, and practice developing behaviors and attitudes that increase academic success, including familiarity with campus resources. Basic aspects of various learning differences, including learning disabilities and attention deficit/hyperactive disorders and their impact on learning. Emphasis is on awareness and acceptance of individual learning differences. Demonstrate advocacy for learning requirements with instructional faculty. Evaluate and reinforce successful learning tools in areas such as time management, memory, processing information, and learning styles. Placement by Disability Resource Center counselors, counselors or faculty is accepted. Prior Learning Disabilities testing is not required.

#### ALLD 401 STUDENT SUCCESS STRATEGIES FOR 0 Units

ALLD 401X THE DISABLED STUDENT

0 Units

ALLD 401Y

0 Units

ALLD 401Z

0 Units

Non-degree applicable credit course.

Advisory: Medically verified disability.

Unlimited repeatability.

1 hour laboratory.

Provides information and assistance to accommodate students' needs and to increase student retention and success. Workshops and related follow-up activities designed to facilitate student success are provided.

**ALLD 601 UNDERSTANDING LEARNING DIFFERENCES 4 Units**

*Formerly: ALLD 201*

**Non-degree applicable credit course.**

**3 hours lecture, 3 hours laboratory.**

Focuses on learning differences, learning theory and strategies related to specific learning challenges. Create learning portfolio to identify learning style, strengths and weaknesses. Demonstrate understanding of learning differences, methods of retention and output of knowledge. Cognitive and achievement testing will be provided to identify students, learning profile.

**ALLD 602 MATH SUPPORT FOR PRE-ALGEBRA 1 Unit**

**Non-degree applicable basic skills course.**

**Corequisite: Student must be registered in a pre-algebra level math course.**

**May be taken 6 times for credit.**

**3 hours laboratory.**

Provides support and instruction on an individual/ small group basis to students with disabilities. Practice in understanding pre-algebra concepts and skills including but not limited to arithmetic, fractions, decimals, percentages and ratios.

**ALLD 603 STUDENT SUCCESS STRATEGIES .5 Unit**

*Formerly: ALLD 401*

**Non-degree applicable credit course.**

**May be taken 6 times for credit.**

**.5 hour lecture.**

In this course, students will develop awareness and understanding of their disabilities as they enter college life at Foothill College. All students who require services and accommodations for the first time are highly encouraged to take this course. Students will learn the policies and procedures for obtaining accommodations and other services at Disability Resource Center. Further the course will present techniques for students to self-advocate, utilize services outside of Disability Resource Center (DRC), develop relationships with faculty members to support learning.

**ADAPTIVE LEARNING: SPECIAL EDUCATION**

**Adaptive Learning**

**(650) 949-7332  
www.foothill.edu/al/**

**SPED 50 INTRODUCTION TO ADAPTIVE FITNESS TECHNIQUES 3 Units**

**2 hours lecture, 3 hours laboratory.**

This course is designed to give fitness professionals basic knowledge and skills necessary to work with the disabled and/or older adult client in an adaptive fitness setting. Provides requisite information about the field of adaptive fitness. Gives a basic understanding of the impact disability has on physical/motor function, focusing on muscles, movement, and gait. Covers contraindicated exercises and transfer techniques. Transportation to off-campus field work sites is required. [Transferability: CSU]

**SPED 52 POSITIVE AGING 3 Units**

**Advisory: SPED 55 is highly recommended.**

**2 hours lecture, 3 hours laboratory.**

Exploration of how aging is viewed in the U.S. and other parts of the world with emphasis on the physiological, psychological and sociological aspects. Differences between successful and unsuccessful aging will be scrutinized, including preparation for retirement and end of life issues. Considerations of aging across the lifespan and how different cultures view aging, death and dying. [Foothill GE: Lifelong Understanding; Transferability: CSU]

**SPED 54 PRINCIPLES OF THERAPEUTIC EXERCISE 3 Units**

**May be taken 3 times for credit at 3-year intervals.**

**2 hours lecture, 3 hours laboratory.**

Focuses on skills necessary for fitness professionals to design and implement a therapeutic exercise program for a person with a chronic condition after discharge from a clinical setting. Discusses a full range of chronic conditions seen in the adult population from arthritis to

Parkinson's disease. Covers recommended exercises, contraindicated exercises, determining therapy completion point and when to begin post-therapy. [Transferability: CSU]

**SPED 55 GERIATRIC FITNESS CONCEPTS 3 Units**

**2 hours lecture, 3 hours laboratory.**

Overview of fitness concepts and techniques necessary to work with older adults within the psycho-motor domain. Explores physiological aspects of aging and the role progressive exercise plays in slowing down the physical decline often displayed in many inactive older adults. [Transferability: CSU]

**SPED 56 FUNCTIONAL ASPECTS OF ADAPTIVE FITNESS 3 Units**

**2 hours lecture, 3 hours laboratory.**

Fundamental theories of functional fitness within the psycho-motor domain. Explores functional exercise programs and adapted exercises for persons with functional limitations. Case studies and sample exercise routines will be part of the student portfolio. [Transferability: CSU]

**SPED 57 WORKING WITH SPECIAL POPULATIONS 3 Units**

**2 hours lecture, 3 hours laboratory.**

Designed to develop effective techniques to meet the learning style of the atypical learner. Focus will be to provide student with skills and strategies to work with special populations. Application of principles through hands-on experience and internships. [Transferability: CSU]

**SPED 59 SELECTED TOPICS IN SPECIAL EDUCATION 2 Units**

**May be taken 2 times for credit.**

**2 hours lecture.**

Exploring the field of rehabilitation and special education, including a survey of upper division course work and graduate level degrees. An introduction to the variety of careers working with special populations in a variety of settings, including education, industry and non-profit organizations. Course will include a forum of guest speakers, field practicum and research project. [Transferability: CSU]

**SPED 61 INTRODUCTION TO DISABILITIES 4 Units**

**Advisory: Eligibility for ENGL 1A.**

**4 hours lecture.**

Overview of all major categories and characteristics of disabilities. Physical, Sensory, Developmental and Learning Disabilities discussed. Cultural/experiential aspects of disabilities from the perspectives of disabled individuals explored through readings and guest speakers. Contrasts disabled with non-disabled culture including cross-cultural perspectives of the disabled experience. Emphasis placed on recognition of strengths and abilities to provide strategies for instruction and accommodations. [Foothill GE: United States Cultures & Communities, Lifelong; Transferability: CSU]

**SPED 62 PSYCHOLOGICAL ASPECTS OF DISABILITY 4 Units**

**4 hours lecture.**

Psychological aspects of disability, including psychosocial, cultural, and physical considerations of disability and illness. [Transferability: CSU]

**SPED 63 LEARNING DISABILITIES 4 Units**

**4 hours lecture.**

Focuses on the field of learning disabilities in terms of function of the information processing system for learning theories and practices that have influenced the field. Explores best practices for effective instruction for people with learning disabilities. [Transferability: CSU]

**SPED 64 DISABILITY & THE LAW 4 Units**

**4 hours lecture.**

Legal rights of the disabled, beginning with historical roots of the disability movement in the United States. Earliest to current legislation governing access to education, employment, public and private facilities. Legal definitions of disability. Brings student up to the present with federal, state and local legal mandates and explores in detail the

Americans With Disabilities Act, Individuals with Disabilities Act and California Special Education Law using case studies and current actions in the court system. [Transferability: CSU]

**SPED 65 FUNDAMENTALS OF ATTENTION DEFICIT DISORDERS 4 Units**

**4 hours lecture.**

An overview of attention deficit disorders, subtypes, etiology, presenting symptoms, interventions and management, classroom teaching strategies, medical treatment strategies, workplace and educational accommodations, and disability law ramifications. Intended for educators, individuals with ADD and their families, or any interested student. [Transferability: CSU]

**SPED 66 DISABILITY & TECHNOLOGY ACCESS 4 Units**

**4 hours lecture.**

Philosophy, legal requirements, design and use of accessible technology. [Transferability: CSU]

**SPED 67 ADAPTIVE FITNESS DIRECTED STUDY 1 Unit**  
**SPED 67X 2 Units**  
**SPED 67Y 3 Units**

**Any combination of SPED 67–67Y may be taken 6 times for credit, however, no single course may be taken more than 6 times for credit. 3 hours laboratory for each unit of credit.**

Designed to provide the Adaptive Fitness Technician student an opportunity to augment skills, experience and knowledge base through additional practical work experience, directed readings, and/or by viewing instructional videos. The student will have the opportunity to work independently to increase their understanding of a variety of chronic medical conditions as related to fitness. [Transferability: CSU]

**SPED 69 SPECIAL EDUCATION STRATEGIES & PRACTICUM 4 Units**

**3 hours lecture, 3 hours laboratory.**

An overview of the field of special education. Focuses on components of instruction for students with disabilities. Field work activity required. [Transferability: CSU]

**SPED 71 SPECIAL TOPICS IN THE FIELD OF FITNESS THERAPY 3 Units**

**2 hours lecture, 3 hours laboratory.**

Designed to provide the Adaptive Fitness Technician student an opportunity to augment skills, experience and knowledge base through additional specialized short course. Practical work experience, directed readings, and/or the viewing of instructional videos will be used to compliment the learning experience. The student will have the opportunity to work to attend highly specialized classes to enhance their knowledge base in the expanding field of Adaptive Fitness. Topics will range from the theory of balance training, adapted aquatics, fitness evaluation, and living topics to any issue that is pertinent to fitness therapy. Special assignments will be offered to provide deeper learning into knowledge base and understanding of fitness therapy topics and medical conditions related to fitness. [Transferability: CSU]

**SPED 72 STRESS, WELLNESS & COPING 3 Units**

**3 hours lecture.**

Explore and become familiar with symptoms of stress, depression, and anxiety. Examine the social and psychological factors that contribute to these problems and the patterns of behavior which result. Learn, utilize, and understand effective coping strategies to promote self awareness, personal wellness, and academic success and model these strategies for members of the community. Emphasis placed on mental health and application of self-help skills. [Foothill GE: Lifelong Understanding; Transferability: CSU]

**SPED 73 INTRODUCTION TO AQUATIC EXERCISE 3 Units**

**2 hours lecture, 3 hours laboratory**

This course provides foundation information for water exercise instruction. The course includes essential anatomy, physiology, kinesiology and aquatic principles. Successful completion of this class will prepare the student to apply for the Aquatic Exercise Association Certification. [Transferability: CSU]

**SPED 74 PRINCIPLES OF ADAPTIVE AQUA FITNESS 3 Units**

**2 hours lecture, 3 hours laboratory.**

This course provides the essential information needed to provide adaptive aquatics exercise instruction. The student will develop an understanding of how water training principles can be used with individuals with chronic conditions, adaptive teaching techniques will be addressed, and the application of deep and shallow water fitness routines for the disabled will be explored. Additionally, techniques of how to assist a disabled client to enter and exit a pool safely will be demonstrated. [Transferability: CSU]

**SPED 75 INTERNSHIP IN ADAPTIVE AQUATICS 3 Units**

**May be taken 2 times for credit.**

**2 hours lecture, 3 hours laboratory.**

The internship is designed to provide the adaptive aquatics trainee with hands-on skills and experience with clients. The internship will include performing client assessments and receiving feedback from lead teachers. [Transferability: CSU]

**SPED 80 INTRODUCTION TO COLLEGE & ACCOMMODATIONS 1 Unit**

**1 hour lecture.**

Orientation to college for the first time college student. Includes Foothill College academic policies, resources, campus, programs and services; transition concerns from high school to post-secondary for students with disabilities; California system of higher education; educational goals and program planning. This course satisfies the college orientation requirement for new students. [Transferability: CSU]

**ADAPTIVE LEARNING:  
TRANSITION TO WORK**

**Adaptive Learning**

**(650) 949-7017  
www.foothill.edu/al/**

**ALTW 201 BASIC ENGLISH FOR THE DISABLED STUDENT 1 Unit**

**Formerly: ALTW 105**

**Non-degree applicable credit course.**

**Prerequisite: Medically verified disability.**

**May be taken 2 times for credit.**

**2 hours lecture-laboratory.**

Basic English skills for the disabled. Emphasis on grammar, sentence and paragraph structure and practical applications.

**ALTW 202 BASIC MATH SKILLS FOR THE DISABLED STUDENT 1 Unit**

**Formerly: ALTW 104**

**Non-degree applicable credit course.**

**Prerequisite: Medically verified disability.**

**May be taken 2 times for credit.**

**2 hours lecture-laboratory.**

Basic math skills for the disabled. Emphasis on basic math functions, moneyhandling and practical applications.

**ALTW 203 LEARNING STYLES & STRATEGIES FOR THE DISABLED STUDENT 1 Unit**

**Formerly: ALTW 102**

**Non-degree applicable credit course.**

**Prerequisite: Medically verified disability.**

**May be taken 2 times for credit.**

**2 hours lecture-laboratory.**

Identification of learning styles and patterns, the development of a personal profile and compensatory strategies, study skills and test-taking will be explored.

<p><b>ALTW 204</b>      <b>COMMUNICATION SKILLS FOR THE DISABLED STUDENT</b>      <b>1 Unit</b></p> <p><i>Formerly: ALTW 108</i>  Non-degree applicable credit course.  Prerequisite: Medically verified disability.  May be taken 2 times for credit.  2 hours lecture-laboratory.  Enhancement of self-esteem and communication skills in order to increase confidence in interpersonal interactions.</p>	<p><b>ALTW 211</b>      <b>INTRODUCTION TO EXCEL FOR THE DISABLED STUDENT</b>      <b>3 Units</b></p> <p>Non-degree applicable credit course.  Prerequisite: Medically verified disability.  May be taken 2 times for credit.  2 hours lecture, 2 hours lecture-laboratory, 2 hours terminal time.  Introduction to Excel and its uses for the student with little computer experience. Emphasis on spreadsheets, charts and tables. Designed for the disabled student.</p>
<p><b>ALTW 205</b>      <b>OFFICE SKILLS FOR THE DISABLED STUDENT</b>      <b>2 Units</b></p> <p><i>Formerly: ALTW 110</i>  Non-degree applicable credit course.  Prerequisite: Medically verified disability.  May be taken 2 times for credit.  4 hours lecture-laboratory, 1 hour terminal time.  Practical office skills needed for successful employment. Focuses on filing systems, records management and mail handling. Designed for the disabled student.</p>	<p><b>ALTW 212</b>      <b>JOB SEARCH SKILLS: THE RESUME FOR THE DISABLED STUDENT</b>      <b>1 Unit</b></p> <p>Non-degree applicable credit course.  Prerequisite: Medically verified disability.  May be taken 2 times for credit.  2 hours lecture-laboratory.  Focuses on resume writing techniques and filling out practice job applications.</p>
<p><b>ALTW 206</b>      <b>BEGINNING WORD PROCESSING FOR THE DISABLED STUDENT</b>      <b>3 Units</b></p> <p><i>Formerly: ALTW 112</i>  Non-degree applicable credit course.  Prerequisite: Medically verified disability.  May be taken 2 times for credit.  2 hours lecture, 2 hours lecture-laboratory, 2 hours terminal time.  Introduction to the computer and its uses for the student with little or no computer experience. Emphasis on word processing. Designed for the disabled student.</p>	<p><b>ALTW 213</b>      <b>WORK ATTITUDES &amp; BEHAVIOR FOR THE DISABLED STUDENT</b>      <b>1 Unit</b></p> <p>Non-degree applicable credit course.  Prerequisite: Medically verified disability.  May be taken 2 times for credit.  2 hours lecture-laboratory.  Designed to help the students develop appropriate work behavior and attitudes. Focuses on attitudes, fears, and expectations as they relate to work.</p>
<p><b>ALTW 207</b>      <b>RESOURCES IN THE COMMUNITY FOR THE DISABLED STUDENT</b>      <b>1 Unit</b></p> <p><i>Formerly: ALTW 115</i>  Non-degree applicable credit course.  Prerequisite: Medically verified disability.  May be taken 2 times for credit.  2 hours lecture-laboratory.  Overview of community resources for the disabled student.</p>	<p><b>ALTW 214</b>      <b>JOB SEARCH SKILLS: THE INTERVIEW FOR THE DISABLED STUDENT</b>      <b>1 Unit</b></p> <p>Non-degree applicable credit course.  Prerequisite: Medically verified disability.  May be taken 2 times for credit.  2 hours lecture-laboratory.  Focuses on interviewing techniques and the special problems faced by the disabled in seeking employment. The informational interview procedure will be explored through lectures and role-play.</p>
<p><b>ALTW 208</b>      <b>JOB TRAINING/INTERNSHIP FOR THE DISABLED STUDENT</b>      <b>1.5 Units</b></p> <p>Non-degree applicable credit course.  Prerequisite: Medically verified disability.  May be taken 6 times for credit.  4.5 hours laboratory.  Practical skills needed for successful employment. Emphasis on on-the-job training experiences; discussion and evaluation of one's performance.</p>	<p><b>ALTW 215</b>      <b>TRANSITION TO WORK FOR THE DISABLED STUDENT</b>      <b>1 Unit</b></p> <p>Non-degree applicable credit course.  Prerequisite: Medically verified disability.  May be taken 2 times for credit.  2 hours lecture-laboratory.  Prepare and evaluate personal, educational and vocational information for transition to work.</p>
<p><b>ALTW 209</b>      <b>SOCIAL SKILLS FOR THE DISABLED STUDENT</b>      <b>1 Unit</b></p> <p><i>Formerly: ALTW 117</i>  Non-degree applicable credit course.  Prerequisite: Medically verified disability.  May be taken 2 times for credit.  2 hours lecture-laboratory.  Enhancement of self-esteem and socialization skills in order to increase confidence in personal and social interactions.</p>	<p><b>ALTW 216</b>      <b>DISABILITY &amp; THE LAW FOR THE DISABLED STUDENT</b>      <b>1 Unit</b></p> <p>Non-degree applicable credit course.  Prerequisite: Medically verified disability.  May be taken 2 times for credit.  2 hours lecture-laboratory.  Understanding basic citizens' rights and responsibilities. Emphasis on the Americans with Disabilities Act (ADA).</p>
<p><b>ALTW 210</b>      <b>OFFICE APPLICATIONS FOR THE DISABLED STUDENT</b>      <b>2 Units</b></p> <p><i>Formerly: ALTW 120</i>  Non-degree applicable credit course.  Prerequisite: Medically verified disability.  May be taken 2 times for credit.  4 hours lecture-laboratory, 1 hour internship.  Practical office applications needed for successful employment. Focuses on business etiquette, office equipment and adaptations.</p>	<p><b>ALTW 217</b>      <b>INTERMEDIATE COMPUTER APPLICATIONS FOR THE DISABLED STUDENT</b>      <b>3 Units</b></p> <p>Non-degree applicable credit course.  Prerequisite: Medically verified disability.  May be taken 2 times for credit.  2 hours lecture, 2 hours lecture-laboratory, 2 hours terminal time.  Intermediate word processing, spreadsheet and file management skills for the disabled student. Emphasis on office applications needed for employment.</p>

**ALTW 218 CURRENT EVENTS FOR THE DISABLED STUDENT 1 Unit**  
 Non-degree applicable credit course.  
 Prerequisite: Medically verified disability.  
 May be taken 2 times for credit.  
 2 hours lecture-laboratory.  
 Survey of current events for the disabled student.

**ALTW 219 USING THE INTERNET FOR THE DISABLED STUDENT 1 Unit**  
 Non-degree applicable credit course.  
 Prerequisite: Medically verified disability.  
 May be taken 2 times for credit.  
 2 hours lecture-laboratory.  
 Hands-on introduction and use of the Internet for the disabled student.

**ALTW 220 BANKING FOR THE DISABLED STUDENT 1 Unit**  
 Non-degree applicable credit course.  
 Prerequisite: Medically verified disability.  
 May be taken 2 times for credit.  
 2 hours lecture-laboratory.  
 Banking skills for the disabled student with emphasis on checking accounts.

**ALTW 401 ELIGIBILITY ASSESSMENT FOR THE DISABLED STUDENT 0 Units**  
 Non-degree applicable non-credit course.  
 Prerequisite: Medically verified disability.  
 Unlimited repeatability.  
 12 hours total.  
 Evaluation and assessment to determine eligibility for the Transition to Work (TTW) Program.

**ALTW 402 TRANSITION TO WORK ORIENTATION 0 Units**  
 Non-degree applicable non-credit course.  
 Prerequisite: Medically verified disability.  
 Unlimited repeatability.  
 18 hours total.  
 Orientation to the Transition to Work Program and campus policies, resources and services. Formulation of the Student Educational Contract (SEC).

## ADAPTIVE PHYSICAL EDUCATION

**Adaptive Learning (650) 949-7017  
[www.foothill.edu/al/](http://www.foothill.edu/al/)**

**ALAP 52 INTRODUCTION TO CONCEPTS OF .5 Unit**  
**ALAP 52X PHYSICAL FITNESS FOR THE DISABLED 1 Unit**  
**ALAP 52Y 1.5 Units**  
 Prerequisite: Medically verified disability.  
 Any combination of ALAP 52–52Y may be taken 6 times for credit, however, no single course may be taken more than 6 times for credit.  
 2 hours lecture-laboratory for each unit of credit.  
 Designed to develop an understanding of the concept of physical fitness and its components. Learn to measure and evaluate present level of physical fitness. Develop understanding and skill involved in injury prevention and first aid. [Transferability: CSU]

**ALAP 60 GENERAL CONDITIONING FOR .5 Unit**  
**ALAP 60X THE DISABLED 1 Unit**  
 Prerequisite: Medically verified disability.  
 Any combination of ALAP 60 & 60X may be taken 6 times for credit, however, no single course may be taken more than 6 times for credit.  
 2 hours laboratory for each .5 unit of credit.  
 Personal instruction in exercise programs to develop a comprehensive exercise program based on physician's recommendations, physical abilities and individual goals. Cardiovascular endurance, flexibility, muscular strength and endurance, balance and/ or motor skills, as appropriate. Exercise program include circuit training. [Foothill GE: Lifelong; Transferability: CSU]

**ALAP 61 RESISTIVE EXERCISE FOR .5 Unit**  
**ALAP 61X THE DISABLED 1 Unit**  
 Prerequisite: Medically verified disability.  
 Any combination of ALAP 61 & 61X may be taken 6 times for credit, however, no single course may be taken more than 6 times for credit.  
 2 hours laboratory for each .5 unit of credit.  
 Designed to instruct students in methodologies for increasing muscular strength. Uses free weights, weight machines, as appropriate. Teaches skills necessary to prepare students for mainstreamed physical education. [Foothill GE: Lifelong; Transferability: CSU]

**ALAP 62 INDIVIDUALIZED EXERCISE FOR .5 Unit**  
**ALAP 62X THE DISABLED 1 Unit**  
 Prerequisite: Medically verified disability.  
 Any combination of ALAP 62 & 62X may be taken 6 times for credit, however, no single course may be taken more than 6 times for credit.  
 2 hours laboratory for each .5 unit of credit.  
 Cardiovascular endurance, muscular endurance and strength, flexibility, balance and coordination activities, motor skills, as appropriate. Emphasis on adapting and developing an exercise program to meet individual needs and goals. [Foothill GE: Lifelong; Transferability: CSU]

**ALAP 63 POSTURAL FITNESS FOR .5 Unit**  
**ALAP 63X THE DISABLED 1 Unit**  
 Prerequisite: Medically verified disability.  
 Any combination of ALAP 63 & 63X may be taken 6 times for credit, however, no single course may be taken more than 6 times for credit.  
 2 hours laboratory for each .5 unit of credit.  
 Exercises for improving body mechanics for those with musculo-skeletal impairments. Body mechanics and lumbar spine stabilization. [Foothill GE: Lifelong; Transferability: CSU]

**ALAP 64 AEROBIC DANCE FOR THE DISABLED .5 Unit**  
**ALAP 64X 1 Unit**  
 Prerequisite: Medically verified disability.  
 Any combination of ALAP 64 & 64X may be taken 6 times for credit, however, no single course may be taken more than 6 times for credit.  
 2 hours laboratory for each .5 unit of credit.  
 Aerobic dance, individually modified for those with physical limitations, designed to increase cardiovascular and muscular endurance. Combination of exercise and low-impact dance movements. Emphasis on rhythm, balance, locomotor and coordination activities, as appropriate. [Foothill GE: Lifelong; Transferability: CSU]

**ALAP 66 FUNCTIONAL FITNESS FOR .5 Unit**  
**ALAP 66X THE DISABLED 1 Unit**  
 Prerequisite: Medically verified disability.  
 Any combination of ALAP 66 & 66X may be taken 6 times for credit, however, no single course may be taken more than 6 times for credit.  
 2 hours laboratory for each .5 unit of credit.  
 Exercises for improving activities of daily living. Emphasis on proper body mechanics, postures and movement patterns. Development of joint mobility, muscular strength, muscular endurance, balance, coordination and locomotion as it relates to daily activities. [Foothill GE: Lifelong; Transferability: CSU]

**ALAP 67 BALANCE & FUNCTIONAL MOVEMENT .5 Unit**  
**ALAP 67X FOR THE DISABLED 1 Unit**  
 Prerequisite: Medically verified disability.  
 Any combination of ALAP 67 & 67X may be taken 6 times for credit, however, no single course may be taken more than 6 times for credit.  
 2 hours laboratory for each .5 unit of credit.  
 Balance training to enhance coordination, balance and neuromuscular function. Emphasis on enhancing functional movement, movement efficiency resulting in improved posture, and functional movement experiences. [Transferability: CSU]

**ALAP 68 FUNCTIONAL TRAINING FOR THE ADAPTIVE ENDURANCE ATHLETE 1 Unit**

Prerequisite: Medically verified disability.  
 Maybe taken 6 times for credit  
 3 hours laboratory.

Explore the concept of functional training as it applies to the Adaptive Endurance athlete. Learn, utilize and understand effective training strategies to promote improved performance by the student. Emphasis placed on the application of skills and improved fitness. The importance of proper nutrition to improve performance will also be included. [Transferability: CSU]

**ALAP 70 ADAPTIVE AQUATICS FOR .5 Unit**  
**ALAP 70X THE DISABLED 1 Unit**

Prerequisite: Medically verified disability.  
 Any combination of ALAP 70 & 70X may be taken 6 times for credit, however, no single course may be taken more than 6 times for credit. 2 hours laboratory for each .5 unit of credit. Individualized swimming instruction to improve cardiovascular endurance. [Foothill GE: Lifelong; Transferability: CSU]

**ALAP 71 AQUACIZE FOR THE DISABLED .5 Unit**  
**ALAP 71X 1 Unit**

Prerequisite: Medically verified disability.  
 Any combination of ALAP 71 & 71X may be taken 6 times for credit, however, no single course may be taken more than 6 times for credit. 2 hours laboratory for each .5 unit of credit. Individually prescribed aquatic exercises to increase muscular strength and endurance, flexibility, cardiovascular endurance, gross motor coordination, relaxation, as appropriate. [Foothill GE: Lifelong; Transferability: CSU]

**ALAP 80 TEAM SPORTS FOR THE DISABLED .5 Unit**  
**ALAP 80X 1 Unit**

Prerequisite: Medically verified disability.  
 Any combination of ALAP 80 & 80X may be taken 6 times for credit, however, no single course may be taken more than 6 times for credit. 2 hours laboratory for each .5 unit of credit. A variety of team sports, adapted for the physically limited adult. Team activity and rules of play for team sports, including, but not limited to, soccer, basketball, track and field, softball. [Foothill GE: Lifelong; Transferability: CSU]

**ADVERTISING**

**Business & Social Sciences (650) 949-7322**  
**www.foothill.edu/bss/**

**ADVT 57 PRINCIPLES OF ADVERTISING 4 Units**  
 Advisory: Not open to students with credit in BUSI 57.  
 4 hours lecture.

Introduction to the relationship between advertising and society, the consumer and business. Analysis of markets and direction of advertising campaigns toward them. Selection of media. Evaluation and proper use of the creative aspects of advertising. Actual creation of an advertising campaign and pro forma budget. [Transferability: CSU]

**ALLIED HEALTH SCIENCES**

**Biological & Health Sciences (650) 949-7249**  
**www.foothill.edu/bio/**

**AHS 200 ORIENTATION TO HEALTH CARE CAREERS 3 Units**  
 3 hours lecture.

Orientation to Foothill College health care programs preparing students to differentiate among the health care professions and to enter the profession of their choice. Defining the American health care system. Discussion of professionalism, ethics, legal issues, death and dying, medical terminology, infection control, governmental regulations, cultural diversity, and academic skills, related to allied health careers.

**ANTHROPOLOGY**

**Business & Social Sciences**

**(650) 949-7322**  
**www.foothill.edu/bss/**

**ANTH 1 INTRODUCTION TO PHYSICAL ANTHROPOLOGY 4 Units**

4 hours lecture.  
 Survey of the basic processes of evolution and investigation and their application to the development of modern humans. Impact of natural selection and genetics on development of new species. Evolutionary processes behind the physical and behavioral development of primates. History of the human lineage by reconstructing the fossil record, using investigations by paleoanthropologists, geologists, biologists, and archaeologists. Relationship between contemporary biology and behavior, facilitating an understanding of the affect of them upon future humankind. [Foothill GE: Social & Behavioral Sciences; Transferability: UC/CSU]

**ANTH 1L PHYSICAL ANTHROPOLOGY LABORATORY 1 Unit**

Corequisite: Completion of, or concurrent enrollment in ANTH 1.  
 1 hour lecture-laboratory, 2 hours laboratory.  
 Introductory laboratory course focusing on scientific methodology to explore/experiment with topics from Anthropology lecture sections. Topics include Mendelian genetics, population genetics, human variability, forensics, medical anthropology, epidemiology, hominid dietary patterns, non-human primates, primate dental and skeletal anatomy, fossil hominids, chronometric dating, environmental challenges to hominids, environmental impact of hominid behavior, general methodologies utilized in physical anthropological research, and the general study of hominids as bio-culturally adapting animals. [Transferability: UC/CSU]

**ANTH 2A CULTURAL ANTHROPOLOGY 4 Units**

4 hours lecture.  
 Introduction to the study of human culture and the concepts, theories, and methods used in the comparative study of sociocultural systems. Subjects include subsistence, political organization, language, kinship, religion, social inequality, ethnicity, gender, and culture change. Discussion of anthropological perspectives to contemporary issues. [Foothill GE: Social & Behavioral Sciences; Transferability: UC/CSU]

**ANTH 2B PATTERNS OF CULTURE 4 Units**

4 hours lecture.  
 Comparative study of patterns in culture. Introduction to ethnographic research and applications of different methods and theories for studying and interpreting societies. [Foothill GE: Social & Behavioral Sciences; Transferability: UC/CSU]

**ANTH 3 PREHISTORY: THE SEARCH FOR LOST CIVILIZATIONS 4 Units**

4 hours lecture.  
 Survey of world prehistory as reconstructed by archaeologists. Human culture history from Stone Age beginnings to establishment and collapse of the world's first major civilizations. Covers societies from Asia and Africa to Europe and the Americas. Introduction to archaeological methods and interpretation. First use of tools, social complexity, urbanization, domestication of plants and animals, and the rise and fall of civilizations. [Foothill GE: Social & Behavioral Sciences; Transferability: UC/CSU]

**ANTH 4 FIRST PEOPLES OF NORTH AMERICA 4 Units**

4 hours lecture.  
 Survey of Indian societies and cultures, north of Mexico, from a cultural perspective. Includes social organization, economics, technology and belief systems. Historic and current relationship between the federal government and the Native Americans. Contemporary issues of Native American communities. [Foothill GE: United States Cultures & Communities, Social & Behavioral Sciences; Transferability: UC/CSU]



## APPRENTICESHIP: ELECTRICIAN

Computers, Technology & Information Systems (650) 949-7236

**APEL 112 RESIDENTIAL ELECTRICAL AIR CONDITIONING & REFRIGERATION; TELEPHONE SYSTEMS 3 Units**

**Formerly: APRT 112**

**Prerequisite:** Admission to the Electrical Apprenticeship Program; current employment in the electrical trades industry.

**Advisory:** Not open to students with credit in APRT 112.

6.25 hours lecture-laboratory.

An introduction to air conditioning and refrigeration systems used in residential applications; telephone systems. Students will study the wiring, circuitry and controls in these systems. Continued study of the National Electrical Code as it relates to current and load calculations. Review of A/C and D/C theory.

**APEL 113 RESIDENTIAL ELECTRICAL SYSTEMS: BASIC SECURITY, SOLAR POWER, HOME AUTOMATION & LIFE SAFETY 3 Units**

**Formerly: APRT 113**

**Prerequisite:** Admission to the Electrical Apprenticeship Program; current employment in the electrical trades industry.

**Advisory:** Not open to students with credit in APRT 113.

6.25 hours lecture-laboratory.

A study of residential electrical systems and installation practices. Home automation including home theater. Fundamentals of solar power systems and recommended practices. Life safety systems. Expanded study of the National Electrical Code as it relates to communication circuits, and water applications such as pools and fountains.

**APEL 120 ORIENTATION TO THE ELECTRICAL TRADE 4 Units**

**Formerly: APRT 120**

**Prerequisite:** Admission to the Electrical Apprenticeship Program; current employment in the electrical trades industry. MATH 105 or equivalent.

**Advisory:** Not open to students with credit in C E 120 or APRT 120.

8 hours lecture-laboratory.

Orientation to the commercial/industrial electrical industry with an introduction to electrical theory, tools, materials, wiring methods, and job skills. Review of mathematics as applied in the electrical construction trades.

**APEL 121 ELECTRON THEORY; BASIC BLUEPRINT READING; DC THEORY; NATIONAL ELECTRICAL CODE INTRODUCTION 4 Units**

**Formerly: APRT 121**

**Corerequisite:** Completion of, or concurrent enrollment in APEL 120 or equivalent.

**Advisory:** Not open to students with credit in C E 121 or APRT 121.

8 hours lecture-laboratory.

Introduction to the National Electrical Code (NEC), DC theory, principles of magnetism and electromagnetism, basic blueprint reading. Discussion of job skills and wiring methods.

**APEL 122 CODEOLOGY; TEST EQUIPMENT; PIPE BENDING; BLUEPRINTS 4 Units**

**Formerly: APRT 122**

**Advisory:** Not open to students with credit in APRT 122 or C E 122.

**Corequisite:** Completion of, or concurrent enrollment in APEL 120.

8 hours lecture-laboratory.

Study of the National Electrical Code, DC and AC generators, and basic fundamentals of using blueprints. Instruction on usage of test equipment and pipe bending tools. Orientation to job responsibility and safety. Review of wiring methods on-the-job.

**APEL 123 AC THEORY; TRANSFORMERS; INTERMEDIATE NATIONAL ELECTRICAL CODE 4 Units**

**Formerly: APRT 123**

**Advisory:** Not open to students with credit in APRT 123 or C E 123.

**Corequisite:** Completion of, or concurrent enrollment in APEL 122.

8 hours lecture-laboratory.

Study of AC theory, transformer fundamental design and function.

Expanded study of the National Electrical Code.

**APEL 124 DC/AC THEORY REVIEW; ELECTRONICS; INDUSTRIAL BLUEPRINTS 4 Units**

**Formerly: APRT 124**

**Prerequisite:** Admission to the Electrical Apprenticeship Program; current employment in the electrical trades industry.

**Advisory:** Not open to student with credit in C E 124 or APRT 124.

8 hours lecture-laboratory.

Review of DC/AC theory. Study of electronics principles and applications, and industrial blueprint reading.

**APEL 125 NEC GROUNDING; OVERCURRENT PROTECTION; TRANSFORMER CONNECTIONS 4 Units**

**Formerly: APRT 125**

**Prerequisite:** Admission to the Electrical Apprenticeship Program; current employment in the electrical trades industry.

**Advisory:** Not open to students with credit in APRT 125 or C E 125.

8 hours lecture-laboratory.

Lessons in grounding and bonding, overcurrent protection and load calculations. Identification of different transformer connections.

**APEL 126 MOTORS; MOTOR CONTROL; LIGHTING PROTECTION 4 Units**

**Formerly: APRT 126**

**Prerequisite:** Admission to the Electrical Apprenticeship Program; current employment in the electrical trades industry.

**Advisory:** Not open to students with credit in APRT 126 or C E 126.

8 hours lecture-laboratory.

A study of different motor types and controls with emphasis on protecting the motors and the buildings they are in with lightning protection systems. Reading and interpretation of schematic drawings. Not open to students with credit in C E 126.

**APEL 127 DIGITAL ELECTRONICS; MOTOR SPEED CONTROL; ADVANCED NATIONAL ELECTRICAL CODE 4 Units**

**Formerly: APRT 127**

**Prerequisite:** APRT 120 or equivalent.

**Advisory:** Not open to students with credit in APRT 127 or C E 127.

8 hours lecture-laboratory.

The use of Boolean algebra in the development of logic circuits and logic control. Introduction to the principles of motor speed control. Review of AC theory. Expanded coverage of the National Electrical Code. Not open to students with credit in C E 127.

**APEL 127A DIGITAL ELECTRONICS; MOTOR SPEED CONTROL 2 Units**

**Prerequisite:** APEL 120 or equivalent.

4 hours lecture-laboratory.

Introduction to the principles of motor speed control and electric motor drives that are pertinent to apprentice electricians. Review of AC and DC theory.

**APEL 128      PROGRAMMABLE LOGIC                      4 Units**  
**CONTROLLERS; LOW VOLTAGE**  
**SYSTEMS & HIGH VOLTAGE SYSTEMS**

**Formerly: APRT 128**

**Prerequisite:** Admission to the Electrical Apprenticeship Program;  
**current employment in the electrical trades industry.**

**Advisory:** Not open to students with credit in APRT 128 or C E 128.

**8 hours lecture-laboratory.**

Introduction to programmable controllers, alarm systems, telephone wiring, instrumentation, and high voltage testing.

**APEL 129      NATIONAL ELECTRICAL                      4 Units**  
**CODE REVIEW**

**Formerly: APRT 129**

**Prerequisite:** Admission to the Electrical Apprenticeship Program;  
**current employment in the electrical trades industry.**

**Advisory:** Not open to students with credit in APRT 129 or C E 129.

**8 hours lecture-laboratory.**

Review of the National Electrical Code and preparation for the California State Certification Test. Jobsite management. System testing. Fiber Optics. Heating, air conditioning and refrigeration systems.

**APEL 129A    ELECTRICAL SYSTEMS                      2 Units**

**Prerequisite:** Admission to the San Francisco Electrical Apprenticeship;  
**continued employment in the San Francisco Inside Wireman Electrical Trade.**

**4 hours lecture-laboratory.**

This class will cover the 2005 National Electrical Code & Electrical Systems based on the 2005 NEC.

**APEL 129B    BASIC ESTIMATING/TAKE-OFF &              2 Units**  
**ELECTRICAL SAFETY-RELATED**  
**WORK PRACTICES**

**Prerequisite:** Admission to the San Francisco Electrical Apprenticeship;  
**continued employment in the San Francisco Inside Wireman Electrical Trade.**

**3.75 hours lecture-laboratory.**

This class will cover basic estimating, material take off, labor review and specification review and will explore the electrical safety-related work practice requirements of NFPA 70E and see how these requirements can be a solution to comply with OSHA's performance requirements, a number of the calculations required to comply with NFPA 70E, many of the significant OSHA requirements related to electrical work, design and work practice issues that make for a safer work environment as well as look at several techniques that can be applied to existing installations that can significantly reduce or eliminate electrical hazards.

**APEL 130      OSHA SAFETY & HEALTH                      2 Units**

**Prerequisite:** Admission to the Electrical Apprenticeship Program;  
**current employment in the electrical trades industry.**

**4 hours lecture-laboratory.**

Covers thirty (30) hours of training, required by the Occupational Health and Safety Act (OSHA) that apply toward the 30-hour Construction Industry course completion card. The course is comprised of 25 sections, each either one or 2 hours in length, and covers topics pertaining to regulations covered by Standard 29 CFR 1926. The successful completion of this course will help meet the Construction Industry standards established by OSHA.

**APEL 135      RESIDENTIAL ELECTRICAL                      3 Units**  
**ORIENTATION; SAFETY, &**  
**CODE INTRODUCTION**

**Formerly: APRT 135**

**Prerequisite:** Admission to the Electrical Apprenticeship Program;  
**current employment in the electrical trades industry.**

**Advisory:** Not open to students with credit in APRT 135.

**6.25 hours lecture-laboratory.**

Orientation to the electrical industry with a residential emphasis; on-the-job safety; identification of tools and materials; review of basic math. Introduction to the National Electrical Code.

**APEL 136      RESIDENTIAL ELECTRICAL D/C              3 Units**  
**THEORY; BLUEPRINT READING**

**Formerly: APRT 136**

**Prerequisite:** Admission to the Electrical Apprenticeship Program;  
**current employment in the electrical trades industry.**

**Advisory:** Not open to student with credit in APRT 136.

**6.25 hours lecture-laboratory.**

Introduction to D/C electrical theory and circuitry as it relates to residential installations; conductors used in electrical wiring. Course also introduces blueprint reading including architectural and engineering symbols and scale.

**APEL 137      RESIDENTIAL ELECTRICAL A/C              3 Units**  
**THEORY & CIRCUITRY**

**Formerly: APRT 137**

**Prerequisite:** Admission to the Electrical Apprenticeship Program;  
**current employment in the electrical trades industry.**

**Advisory:** Not open to students with credit in APRT 137.

**6.25 hours lecture-laboratory.**

Introduction to A/C electrical theory and circuitry as they relate to residential installations; job costing and industrial standards. Further study of the National Electrical Code focusing on codeology. Expanded development of blueprint reading skills.

**APEL 138      RESIDENTIAL WIRING LAYOUT              3 Units**  
**& INSTALLATION**

**Formerly: APRT 138**

**Prerequisite:** Admission to the Electrical Apprenticeship Program;  
**current employment in the electrical trades industry.**

**Advisory:** Not open to students with credit in APRT 138.

**6.25 hours lecture-laboratory.**

A study of electrical wiring methods, circuitry, and conduit installation in residential applications. Students will also practice wiring layout for residential housing. Continued study of the National Electrical Code as it relates to circuits, grounding and cable assemblies.

## APPRENTICESHIP: IRON WORKERS

**Computers, Technology & Information Systems      (650) 949-7142**

**APIW 100      INTRODUCTION TO IRONWORKING              3 Units**

**Formerly: APPR 170**

**Prerequisite:** Admission to Ironworkers Apprenticeship Program;  
**current employment in the ironworking industry.**

**5.3 hours lecture-laboratory.**

Overview of Ironworker,s skill and knowledge areas needed to make the newly indentured apprentice a safe and productive worker from the earliest period of job dispatch. Includes a review of basic math principles. OSHA safety.

**APIW 109      POST-TENSIONING I                              2 Units**

**Formerly: APPR 179**

**Prerequisite:** Admission to Ironworkers Apprenticeship Program;  
**current employment in the ironworking industry.**

**Three and one third hours lecture-laboratory.**

History of post-tensioning, modern efforts and safety advantages. Special materials, preparation and stressing of post-tensioning systems. Special applications of post-tensioning systems. Discussion of thread-bar post-tensioning systems.

**APIW 110      ARCHITECTURAL I                              2 Units**

**Formerly: APPR 182A**

**Prerequisite:** Admission to Ironworkers Apprenticeship Program;  
**current employment in the ironworking industry.**

**Three and one third hours lecture-laboratory.**

A study of the procedures and practices employed by the ironworker in architectural and ornamental ironworking with emphasis on the principles, theory and application of ornamental hand tools, power-actuated tools, anchors, and fasteners. Application of window walls, curtain walls, sealants, glazing, and window and curtain wall systems.

**APIW 111 ARCHITECTURAL II 2 Units**

**Formerly: APPR 182B**

**Prerequisite:** Admission to Ironworkers Apprenticeship Program; current employment in the ironworking industry.

**3.3 hours lecture-laboratory.**

A continued study of the procedures and practices employed by the ironworker in architectural and ornamental ironworking with emphasis on those elements of construction that do not make a load-bearing contribution to the skeletal structure; such as stairs, fire escapes, ladders, conveyor systems, doors, elevators, windows, railings and other metal features of modern construction. Study of the erection of flagpoles, playground equipment, rail and chain link fences. Care and use of the tools and accessories used in all installations.

**APIW 114 WELDING III 2 Units**

**Prerequisite:** Admission to Ironworkers Apprenticeship Program; current employment in the ironworking industry.

**3.3 hours lecture-laboratory.**

Advanced welding. A further study of welding safety and welding concepts for construction job sites. Welding processes, shielded metal-arc, flux-core arc welding, gas shielded-arc, and TiG welding, symbols, and certification qualifications are included.

**APPRENTICESHIP: PIPE TRADES**

**Computers, Technology & Information Systems (650) 949-7142**

**APPT 121 INTRODUCTION TO RESIDENTIAL PLUMBING, SAFETY & TOOLS 2.5 Units**

**Formerly: APRT 190**

**Prerequisite:** Admission to the Plumbing/Steamfitting Apprenticeship Program; current employment in the pipe trades industry.

**4.5 hours lecture-laboratory.**

An introduction to basic residential plumbing standards, employment information and procedures, history and heritage of plumbing, organization and construction safety. Necessary trade skills include cutting and threading, use and care of tools, and soldering and brazing are taught along with construction terminology and plumbing definitions.

**APPT 122 RESIDENTIAL DRAINAGE SYSTEMS 2.5 Units**

**Formerly: APRT 182**

**Prerequisite:** Admission to the Residential Plumbing Apprenticeship Program; current employment in the pipe trades industry.

**4.5 hours lecture-laboratory.**

Overview of the installation and design criteria of residential drainage, waste and vent systems, with emphasis and study of the applied theory, design and installation criteria. Includes application of local codes.

**APPT 123 RESIDENTIAL GAS & WATER INSTALLATIONS 2.5 Units**

**Formerly: APRT 181**

**Prerequisite:** Admission to the Residential Plumbing Apprenticeship Program; current employment in the pipe trades industry.

**4.5 hours lecture-laboratory.**

Overview of the installation and design criteria of residential hot and cold water, and fuel gas installations. Includes piping materials and hanger systems, material handling and environmental concerns.

**APPT 124 MATHEMATICS FOR RESIDENTIAL PLUMBING 2.5 Units**

**Formerly: APRT 195**

**Prerequisite:** Admission to the Residential Plumbing Apprenticeship Program; current employment in the pipe trades industry.

**4.5 hours lecture-laboratory.**

A review of basic math concepts and operation, followed by instruction in pipe measurements, formulas, and off-set calculations. Use of common electronic calculators will be included.

**APPT 125 RESIDENTIAL BLUEPRINT READING 4.5 Units**

**Formerly: APRT 196**

**Prerequisite:** Admission to the Residential Plumbing Apprenticeship Program; current employment in the pipe trades industry.

**9 hours lecture-laboratory.**

This course will familiarize the student with the various blueprints, drawings and sketches used in residential construction. Plan types, details and symbols will be covered, as well as common construction terms and methods. Working from a set of building plans, students will create isometric drawings of plumbing systems.

**APPT 126 RESIDENTIAL PIPING LAYOUT & INSTALLATION; RESIDENTIAL FIXTURES 4.5 Units**

**Formerly: APRT 197**

**Prerequisite:** Admission to the Residential Plumbing Apprenticeship Program; current employment in the pipe trades industry.

**9 hours lecture-laboratory.**

This course will introduce the student to the various methods of inserting and sleeving in residential construction. Students will practice the layout and installation of residential copper pipe and tube systems. Hands-on practice of plumbing fixture installation, service and repair will be provided.

**APPT 127 RESIDENTIAL PLUMBING CODE 2.5 Units**

**Formerly: APRT 192**

**Prerequisite:** Admission to the Residential Plumbing Apprenticeship Program; current employment in the pipe trades industry.

**4.5 hours lecture-laboratory.**

A comprehensive overview of the Plumbing Code. Students will examine each chapter of the code book and practice proper application through worksheets, system design, and sizing exercises.

**APPT 128 RESIDENTIAL GAS INSTALLATIONS; SERVICE WORK 2.5 Units**

**Formerly: APRT 183**

**Prerequisite:** Admission to the Residential Plumbing Apprenticeship Program; current employment in the pipe trades industry.

**4.5 hours lecture-laboratory.**

This course instructs the student in safe practices for working in excavations and confined spaces. Instructions and hands-on practice will be provided in underground polyethylene gas installations and residential service work.

**APPT 131 BASIC PLUMBING SKILLS 4.5 Units**

**Formerly: APPR 110**

**Prerequisite:** Admission to the Plumbing Apprenticeship Program; current employment in the pipe trades industry.

**9 hours lecture-laboratory.**

This course starts with orientation to the apprenticeship program, JATC policies and procedures, and familiarizes the apprentice with the Training Center facility and staff. UA history and heritage will also be covered at this time. Safety training is introduced next, with instruction in general construction safety, and hazardous materials awareness. Necessary trade skills including cutting and threading, joining of plastics, knots and rigging, and soldering and brazing are taught.

**APPT 132 APPLIED & RELATED THEORY 4.5 Units**

**Formerly: APPR 102**

**Prerequisite:** Admission to the Plumbing Apprenticeship Program; current employment in the pipe trades industry.

**9 hours lecture-laboratory.**

An overview of the installation and design criteria of basic plumbing installations. Covers, plumbing terminology, definitions and application of local codes. Learn the theory and design criteria applied to waste and vent systems.

**APPT 133 BEGINNING DRAWING & DESIGN 4.5 Units**

**Formerly: APPR 112**

**Prerequisite: Admission to the Plumbing Apprenticeship Program; current employment in the pipe trades industry.**  
**9 hours lecture-laboratory.**

This course starts with drawing fundamentals before moving to instruction in isometric drawing. Students learn the proper design and sizing of simple waste, water and gas systems. An in-depth study of water supply systems will also be included. Students will also learn to read and interpret simple residential building plans, designing and coordinating plumbing systems within the structure.

**APPT 134A RIGGING; LAY-OUT 2.5 Units**

**Formerly: APPR 113**

**Prerequisite: Admission to the Plumbing Apprenticeship Program; current employment in the pipe trades industry.**  
**4.5 hours lecture-laboratory.**

Instruction in the use of a transit, builder's level, pipe laser and other measuring instruments in the layout and installation of piping systems. Establish the invert elevations and coordination of piping systems by means of profile drawings to ensure utility systems are installed as designed.

**APPT 134B INDUSTRIAL SAFETY 2.5 Units**

**Prerequisite: Admission to the Plumbing Apprenticeship Program; current employment in the pipe trades industry.**  
**4.5 hours lecture-laboratory.**

Study of the requirements for emergency response to and handling of hazardous materials incidents. Covers laws of chemical hazards, electrical hazards, personal protective equipment, confined space rescue, monitoring equipment, and Federal and Cal-OSHA Standards for the construction industry.

**APPT 135A PLUMBING FIXTURES 2.5 Units**

**Formerly: APPR 116**

**Prerequisite: Admission to the Plumbing Apprenticeship Program; current employment in the pipe trades industry.**  
**4.5 hours lecture-laboratory.**

Instruction in plumbing fixtures and appliances. Experience with various types of structures and wide variety of materials used in fixture manufacture. Guidelines for safe handling of fixtures to prevent injury and/or damage. Proper installation of fixtures and appliances.

**APPT 135B PLUMBING CODES 2.5 Units**

**Formerly: APPR 119**

**Prerequisite: Admission to the Plumbing Apprenticeship Program; current employment in the pipe trades industry.**  
**4.5 hours lecture-laboratory.**

Apprentices will learn and demonstrate the procedures for coordinating the testing and inspection of plumbing systems and applicable codes that a plumbing systems test must meet. Knowledge of general regulations, including accessibility and ADA requirements will also be discussed.

**APPT 136 ADVANCED TRADE MATH FOR PLUMBERS 4.5 Units**

**Formerly: APPR 118**

**Prerequisite: Admission to the Plumbing Apprenticeship Program; current employment in the pipe trades industry.**  
**9 hours lecture-laboratory.**

Instruction in taking pipe and pipe fitting measurements and in the practical application of measuring devices. Relate math skills to piping installations through the use of formulas and tables. Compute pipe measurements for making offsets and change of direction in piping installations. Review of basic math and the metric system. Use of instruments in piping systems layout.

**APPT 137B APPLIED WELDING 2.5 Units**

**Formerly: APPR 117**

**Prerequisite: Admission to the Plumbing Apprenticeship Program; current employment in the pipe trades industry.**  
**4.5 hours lecture-laboratory.**

This module introduces the fundamentals of using oxygen and fuel gases to cut, heat, and bend as well as the identification, function, and set up of oxy-fuel equipment. The essentials of pipe and joining pipe through the use of threaded and flanged connections will be discussed, along with the importance of welding safety. Techniques will be discussed for laying out pipe, manipulating the torch, and beveling plate and pipe ends to prepare for welding butt joints. Apprentices will be introduced to the plasma arc cutting torch as a means of cutting stainless steel and aluminum, the theoretical principles of shielded metal arc welding (SMAW), and the fundamentals of welding with stainless steel electrodes.

**APPT 139 INDUSTRIAL INSTALLATIONS 2.5 Units**

**Prerequisite: Admission to the Plumbing Apprenticeship Program; current employment in the pipe trades industry.**  
**4.5 hours lecture-laboratory.**

This module focuses on high purity water piping systems (HPW) and cover topics such as basic principles and requirements of HPW production and information, procedures, regulations and requirements for safely working with hazardous materials associated with these installations. Risks of working with common process gases found in HPW installations are identified as well as procedures for safely working with and monitoring of these gases. Apprentices will learn about the use of HPW in the manufacture of semiconductor devices. Water treatment and clean steam parameters for the pharmaceutical and biotech manufacturing industries will also be presented.

**APPT 139B MEDICAL GAS INSTALLATIONS 2.5 Units**

**Prerequisite: Admission to the Plumbing Apprenticeship Program; current employment in the pipe trades industry.**  
**4.5 hours lecture-laboratory.**

Instruction in this module will include piped gas and vacuum systems (levels 1, 2 & 3), medical-surgical sources and WAGD sources and warning systems (levels 1, 2 & 3). Apprentices will learn about station outlets/inlets, manufactured assemblies and pressure/vacuum indicators. Brazing requirements will be described and proper techniques will be demonstrated. Apprentices will practice brazing techniques in order to prepare for the brazing qualification exam.

**APPT 161 SAFETY/TOOLS/HERITAGE/SERVICE 4 Units**

**Prerequisite: Indenture in the Plumbing Apprenticeship Program, approved by the California State Division of Apprenticeship Standards.**  
**8.25 hours lecture-laboratory.**

The first half of year one of the Plumber & Pipefitter Apprenticeship program. Provides students with a working knowledge of plumbing industry materials and standards. Learn Use and Care of Pipetrade Tools, practice Safety, and Heritage of the United Association.

**APPT 162 MATHEMATICS/SCIENCE FOR THE PLUMBING TRADE 4.5 Units**

**Prerequisite: Indenture in the Plumbing Apprenticeship Program, approved by the California State Division of Apprenticeship Standards.**  
**8.5 hours lecture-laboratory.**

The second half of year one, of the Plumber & Pipefitter Apprenticeship program. Provide students with a working knowledge of mathematics and science as it applies to the plumbing industry.

**APPT 163 CODE/WATER SUPPLY SYSTEMS 4 Units**

**Prerequisite: Indenture in the Plumbing Apprenticeship Program, approved by the California State Division of Apprenticeship Standards.**  
**8.25 hours lecture-laboratory.**

The first half of year two, of the Plumber & Pipefitter Apprenticeship program. Provide students with a working knowledge of Plumbing Code I and water supply systems.

<p><b>APPT 164</b>      <b>DRAWING I FOR THE PLUMBING TRADE</b>      <b>4.5 Units</b></p> <p><b>Prerequisite:</b> Indenture in the Plumbing Apprenticeship Program, approved by the California State Division of Apprenticeship Standards. <b>8.5 hours lecture-laboratory.</b></p> <p>The first half of year three, of the Plumber &amp; Pipefitter Apprenticeship program. Provide students with a working knowledge of plumbing and piping layouts, drainage systems, piping and fixture supports as it applies to mechanical drawings.</p>	<p><b>APPT 171</b>      <b>BASIC REFRIGERATION/HERITAGE/CFC</b>      <b>4 Units</b></p> <p><b>Prerequisite:</b> Indenture in the Refrigeration &amp; Air Conditioning Apprenticeship Program; approved by the California State Division of Apprenticeship Standards. <b>8.25 hours lecture-laboratory.</b></p> <p>The first half of year one of the Refrigeration &amp; Air Conditioning Apprenticeship program. Provide students with a working knowledge of Thermodynamics, Chloro-Fluoro Carbons (CFC), and basic Refrigeration, as it pertains to the Air Conditioning Service industry.</p>
<p><b>APPT 165</b>      <b>DRAWING II FOR THE PLUMBING TRADE</b>      <b>4 Units</b></p> <p><b>Prerequisite:</b> Indenture in the Plumbing Apprenticeship Program, approved by the California State Division of Apprenticeship Standards. <b>8.25 hours lecture-laboratory.</b></p> <p>The second half of year two, of the Plumber &amp; Pipefitter Apprenticeship program. Provide students with a working knowledge of Technical Drawings, Isometric Drawings and the creation of Building Plans as it applies to the Plumbing trade.</p>	<p><b>APPT 172</b>      <b>REFRIGERATION SCIENCE</b>      <b>4.5 Units</b></p> <p><b>Prerequisite:</b> Indenture in the Refrigeration &amp; Air Conditioning Apprenticeship Program, approved by the California State Division of Apprenticeship Standards. <b>8.5 hours lecture-laboratory.</b></p> <p>The second half of year one of the Refrigeration &amp; Air Conditioning Apprenticeship program. Provide students with a working knowledge of Basic Refrigeration, Refrigeration Equipment, and Equipment Maintenance.</p>
<p><b>APPT 166</b>      <b>WELDING/OXY-ACETYLENE TRAINING</b>      <b>4.5 Units</b></p> <p><b>Prerequisite:</b> Indenture in the Plumbing Apprenticeship Program, approved by the California State Division of Apprenticeship Standards. <b>8.5 hours lecture-laboratory.</b></p> <p>The second half of year three, of the Plumber &amp; Pipefitter Apprenticeship program. Provide students with a working knowledge of welding principles, as it relates to Metal ARC welding, Gas ARC welding, TIG Welding, MIG Welding and Oxygen/Acetylene burning and welding.</p>	<p><b>APPT 173</b>      <b>BASIC ELECTRICITY FOR THE HVAC SERVICE TRADE</b>      <b>4 Units</b></p> <p><b>Prerequisite:</b> Indenture in the Refrigeration &amp; Air Conditioning Apprenticeship Program, approved by the California State Division of Apprenticeship Standards. <b>8.25 hours lecture-laboratory.</b></p> <p>The first half of year two, of the Refrigeration &amp; Air Conditioning Apprenticeship program. Provide students with a working knowledge of basic electricity, including AC/DC theory and Ohm's Law. Students will be expected to apply these theories in the laboratory using electronic and testing instruments.</p>
<p><b>APPT 167</b>      <b>STEAM SYSTEMS/RIGGING/PIPE FITTING &amp; SERVICE</b>      <b>4 Units</b></p> <p><b>Prerequisite:</b> Indenture in the Plumbing Apprenticeship Program, approved by the California State Division of Apprenticeship Standards. <b>8.25 hours lecture-laboratory.</b></p> <p>The first half of year four, of the Plumber &amp; Pipefitter Apprenticeship program provides students with a working knowledge of Layout, Cut, and Fit for Water Piping and Steamfitting systems.</p>	<p><b>APPT 174</b>      <b>ADVANCED ELECTRICITY/PNEUMATIC DDC INTRODUCTION</b>      <b>4.5 Units</b></p> <p><b>Prerequisite:</b> Indenture in the Refrigeration &amp; Air Conditioning Apprenticeship Program, approved by the California State Division of Apprenticeship Standards. <b>8.5 hours lecture-laboratory.</b></p> <p>This course covers the second half of year two, of the Refrigeration &amp; Air Conditioning Apprenticeship program. Provide students will obtain a working knowledge of Advanced Electricity, Motors, Starter, Circuitry, and Variable Drives.</p>
<p><b>APPT 168</b>      <b>MEDICAL GAS/HYDRONICS</b>      <b>4.5 Units</b></p> <p><b>Prerequisite:</b> Indenture in the Plumbing Apprenticeship Program; approved by the California State Division of Apprenticeship Standards. <b>8.5 hours lecture-laboratory.</b></p> <p>The second half of year four of the Plumber &amp; Pipefitter Apprenticeship program. Provide students with a working knowledge of Medical Gas, Brazer, and Hydronic Systems.</p>	<p><b>APPT 175</b>      <b>CONTROLS I/ELECTRO PNEUMATICS</b>      <b>4 Units</b></p> <p><b>Prerequisite:</b> Indenture in the Refrigeration &amp; Air Conditioning Apprenticeship Program, approved by the California State Division of Apprenticeship Standards. <b>8.25 hours lecture-laboratory.</b></p> <p>The first half of year three of the Refrigeration &amp; Air Conditioning Apprenticeship program. Provide students with a working knowledge of Controls, Control Theory, Timing Circuits, Computerized Control, and Energy Management Systems.</p>
<p><b>APPT 169</b>      <b>ADVANCED DRAWING/LAYOUT FOR THE PLUMBING TRADES</b>      <b>4 Units</b></p> <p><b>Prerequisite:</b> Indenture in the Plumbing Apprenticeship Program, approved by the California State Division of Apprenticeship Standards. <b>8.25 hours lecture-laboratory.</b></p> <p>The first half of year five of the Plumber &amp; Pipefitter Apprenticeship program. Provide students with a working knowledge of Advanced Drawing, Plumbing Layout and Building Detailing. Specifications for Code Callouts are also covered in depth.</p>	<p><b>APPT 176</b>      <b>CONTROLS II/ADVANCED PNEUMATICS CALIBRATION/HYDRONICS</b>      <b>4.5 Units</b></p> <p><b>Prerequisite:</b> Indenture in the Refrigeration &amp; Air Conditioning Apprenticeship Program, approved by the California State Division of Apprenticeship Standards. <b>8.5 hours lecture-laboratory.</b></p> <p>The second half of year three of the Refrigeration &amp; Air Conditioning Apprenticeship program. Provide students with a working knowledge of advanced control systems, including the uses of 2-Position, Floating and Modulating Controls. Fiber Optics and Direct Digital Controls are introduced.</p>
<p><b>APPT 170</b>      <b>CODE II/JUNIOR MECHANICS REVIEW &amp; EXAM</b>      <b>4.5 Units</b></p> <p><b>Prerequisite:</b> Indenture in the Plumbing Apprenticeship Program, approved by the California State Division of Apprenticeship Standards. <b>8.5 hours lecture-laboratory.</b></p> <p>The first half of year five of the Plumber &amp; Pipefitter Apprenticeship program. Provide students with a working knowledge of Plumbing Codes and will review how changes affect the codes.</p>	

**APPT 177 START, TEST & BALANCE I 4 Units**  
**Prerequisite:** Indenture in the Refrigeration & Air Conditioning Apprenticeship Program, approved by the California State Division of Apprenticeship Standards.  
**8.25 hours lecture-laboratory.**  
 The first half of year four of the Refrigeration & Air Conditioning Apprenticeship program. Provide students with an introduction to Start, Test and Balance for fluid distribution. Ducting, Cooling, Fans, and Air Distribution is covered in the laboratory exercises.

**APPT 178 START, TEST & BALANCE II 4.5 Units**  
**Prerequisite:** Indenture in the Refrigeration & Air Conditioning Apprenticeship Program, approved by the California State Division of Apprenticeship Standards.  
**8.5 hours lecture-laboratory.**  
 The second half of year four of the Refrigeration & Air Conditioning Apprenticeship program. Provide students with a working knowledge of Start, Test and Balance for Piping Systems, Pumps, Chillers, Boilers, and Condensers.

**APPT 179 CHILLERS/SPECIAL SYSTEMS/HVACR STAR REVIEW 4 Units**  
**Prerequisite:** Indenture in the Refrigeration & Air Conditioning Apprenticeship Program, approved by the California State Division of Apprenticeship Standards.  
**8.25 hours lecture-laboratory.**  
 The first half of year five of the Refrigeration & Air Conditioning Apprenticeship program. Provide students with a working knowledge of pipe drafting and blueprint reading for Heating, Ventilation and Air Conditioning (HVAC) Systems. Hands-on activities include applying airside, waterside and pressure testing systems.

**APPT 180 HVACR STAR REVIEW & EXIT EXAM 4.5 Units**  
**Prerequisite:** Indenture in the Refrigeration & Air Conditioning Apprenticeship Program, approved by the California State Division of Apprenticeship Standards.  
**8.5 hours lecture-laboratory.**  
 The second half of year five of the Refrigeration & Air Conditioning Apprenticeship program. Provide students with a working knowledge of Troubleshooting, Test and Repair of Refrigeration and Air-conditioning systems.

**APPT 181 STEAM FITTING & RIGGING GENERAL COURSE 4 Units**  
**Prerequisite:** Indenture in the Steam Fitting & Rigging Apprenticeship Program, approved by the California State Division of Apprenticeship Standards.  
**8.25 hours lecture-laboratory.**  
 Provide a comprehensive instruction and review of steamfitting and installed systems including piping and general rigging practices. Upon completion, students are prepared to take the State Certification Exam for Steamfitters.

**APPRENTICESHIP: PIPE TRADES,  
 SHEET METAL, FIELD IRONWORKERS**

**Computers, Technology & Information Systems (650) 949-7236**

**APPR 111 BASIC MATH, SCIENCE & ELECTRICITY 3 Units**  
**Prerequisites:** Admission to the Plumbing/Steamfitting Apprenticeship Program; current employment in the pipe trades industry.  
**6.5 hours lecture-laboratory.**  
 Review of basic math principles. Introduction of pipe measuring concepts and calculation of simple off-sets. Study of science and mechanics with emphasis on fundamental principles and uses of water, steam and all matter. Examines the laws. Course concludes with governing liquids and gases as they apply to piping systems the study of basic electricity and fundamentals of electrical control devices.

**APPR 117A CUTTING & WELDING FOR PLUMBERS 2 Units**  
**Prerequisite:** Admission to the Plumbing/Steamfitting Apprenticeship Program; current employment in the Pipe Trades industry.  
**4.5 hours lecture-laboratory.**  
 Introduction to flame cutting and welding technologies. Students will demonstrate safe work practices and the set-up and use of oxy-acetylene, arc welding and cutting equipment. Extensive hands-on practice will lead toward proficiency in cutting and welding processes.

**APPR 121 ADVANCED TRADE MATH 4.5 Units**  
**Prerequisites:** Admission to the Plumbing/Steamfitting Apprenticeship Program; current employment in the pipe trades industry.  
**9 hours lecture-laboratory.**  
 Extensive use of piping formulas to solve typical piping lay-out calculations. Students must calculate compound offsets and accurately determine center to center and end to end piping measurements.

**APPR 122 STEAMFITTER WELDING, CUTTING & PIPEFITTING SKILLS 4.5 Units**  
**Prerequisites:** Admission to the Plumbing/Steamfitting Apprenticeship Program; current employment in the pipe trades industry.  
**9 hours lecture-laboratory.**  
 Introduction to welding and specific welding processes. Instruction and practice in oxy-fuel cutting, gas welding and arc welding of plate and pipe. Accuracy in measuring, lay-out and torch handling is emphasized.

**APPR 123 ORIENTATION: BASIC STEAMFITTING 4.5 Units**  
**Prerequisites:** Admission to the Plumbing/Steamfitting Apprenticeship Program; current employment in the pipe trades industry.  
**9 hours lecture-laboratory.**  
 Orientation to the steamfitting trade with review of policies, procedures and UA history. Occupational safety training in general construction and hazardous materials awareness. Acquire skills in cutting and threading, joining and plastics, knots and rigging, and soldering and brazing as they relate to the steamfitting trade.

**APPR 124 BASIC MATH; BEGINNING DRAWING 4.5 Units**  
**Prerequisites:** Admission to the Plumbing/Steamfitting Apprenticeship Program; current employment in the pipe trades industry.  
**9 hours lecture-laboratory.**  
 Instruction in trade-related mathematics. Includes basic math review before introducing new concepts including pipe measuring and calculation of simple off-sets. Introduction to basic drawing and measuring tools, and lettering skills. Includes three-view drawings and the study of isometric drawing.

**APPR 125 HYDRONIC SYSTEMS 2.5 Units**  
**Prerequisites:** Admission to the Plumbing/Steamfitting Apprenticeship Program; current employment in the pipe trades industry.  
**4.5 hours lecture-laboratory.**  
 Study of machines, their prime movers and their performance; metals, alloys and synthetics used in piping systems. Methods and practices used to control and prevent corrosion of underground piping systems. Introduction of hydronic heating and cooling. Fundamentals and technical aspects of design, calculation and installation of hydronic systems.

**APPR 126 SCIENCE; ELECTRICITY & AIR CONDITIONING 4.5 Units**  
**Prerequisites:** Admission to the Plumbing/Steamfitting Apprenticeship Program; current employment in the pipe trades industry.  
**9 hours lecture-laboratory.**  
 A study of the fundamentals of science, electrical theory and circuitry. Examines hydraulics and pneumatics, mechanics, metals, alloys and corrosion as they apply to piping systems. Learn to read electrical diagrams and how to troubleshoot electrical circuits. Study the principles of refrigeration and air conditioning.

<b>APPR 127</b>	<b>STEAM TECHNOLOGY</b>	<b>4.5 Units</b>	<b>APPR 151</b>	<b>THEORY &amp; PRACTICE OF GAS WELDING, COPPER, CAST IRON, BRAZING, PLASTIC HOT AIR WELDING, VICTALIC, FLANGE, &amp; FLAME CUTTING</b>	<b>4.5 Units</b>
<p><b>Prerequisite:</b> Admission to the Plumbing/Steamfitting Apprenticeship Program; current employment in the pipe trades industry.  <b>9 hours lecture-laboratory.</b>            A study of steam systems. Covers steam systems theory, one-pipe steam systems, low-and high-pressure boilers, peripherals, arrowhead symbols and accessories.</p>			<p><b>Prerequisite:</b> Admission to Apprenticeship Program; APPR 150.  <b>9 hours lecture-laboratory.</b>            Designed to provide the apprentice with skills in basic oxy-acetylene and hot air welding, soldering, brazing, and flame cutting. Use of copper and cast iron will be included.</p>		
<b>APPR 130</b>	<b>REVIEW &amp; TURNOUT</b>	<b>2.5 Units</b>	<b>APPR 161</b>	<b>AIR CONDITIONING, PNEUMATIC CONTROLS, INSTRUMENTATION &amp; PROCESS CONTROLS</b>	<b>4.5 Units</b>
<p><b>Prerequisite:</b> Admission to the Plumbing/Steamfitting Apprenticeship Program; current employment in the pipe trades industry.  <b>4.5 hours lecture-laboratory.</b>            Comprehensive overview of the entire plumbing, steamfitting and refrigeration courses of instruction. Preparation for completion examinations. Presentation of the latest current code and safety information. Planning and organizing piping projects.</p>			<p><b>Prerequisite:</b> Admission to Apprenticeship Program; APPR 160.  <b>9 hours lecture-laboratory.</b>            Designed to provide the apprentice with the knowledge of basic air conditioning principles and practice, including fundamentals, tools, controls, air balancing, total systems, and trouble-shooting.</p>		
<b>APPR 131</b>	<b>ORIENTATION; BASIC REFRIGERATION SERVICE SKILLS</b>	<b>4.5 Units</b>	<b>APPR 163</b>	<b>REFRIGERATION ASSEMBLY &amp; REPAIR</b>	<b>4.5 Units</b>
<p><b>Prerequisite:</b> Admission to the Plumbing/Steamfitting Apprenticeship Program; current employment in the pipe trades industry.  <b>9 hours lecture-laboratory.</b>            Orientation to the refrigeration trade. Introduction of construction safety, refrigerant handling, and hazardous materials awareness. Develop skills in cutting and threading, soldering and brazing, and how to establish and maintain effective applications. Review basic math principles, and trade related applications introduced. Develop customer relations skills.</p>			<p><b>Prerequisite:</b> Admission to Apprenticeship Program.  <b>9 hours lecture-laboratory.</b>            Designed to provide the apprentice with the knowledge to disassemble repair and reassemble compressors and related refrigeration equipment.</p>		
<b>APPR 132</b>	<b>BASIC ELECTRICITY &amp; REFRIGERATION</b>	<b>4.5 Units</b>	<b>APPR 164</b>	<b>TRANSIT; SOLAR; SPECIAL PURPOSE INSTALLATIONS; SERVICE WORK &amp; HUMAN RELATIONSHIP; HYDRONIC HEATING &amp; COOLING</b>	<b>4.5 Units</b>
<p><b>Prerequisite:</b> Admission to the Plumbing/Steamfitting Apprenticeship Program; current employment in the pipe trades industry.  <b>9 hours lecture-laboratory.</b>            Study of the laws and fundamentals of basic electricity and their application to mechanical equipment service. Covers refrigeration theory and application of the vapor compression cycle.</p>			<p><b>Prerequisite:</b> Admission to Apprenticeship Program.  <b>9 hours lecture-laboratory.</b>            Designed to provide the apprentice with the knowledge of the operation and maintenance of transit and builders level, solar heating, the basic principles of service work, and hydronic heating and cooling systems.</p>		
<b>APPR 132C</b>	<b>MECHANICAL SYSTEMS</b>	<b>3 Units</b>	<b>APPR 165</b>	<b>APPRENTICESHIP ENERGY MANAGEMENT</b>	<b>4.5 Units</b>
<p><b>Prerequisite:</b> Admission to the Plumbing/Steamfitting Apprenticeship Program; current employment in the pipe trades industry.  <b>6 hours lecture-laboratory.</b>            Basic and advanced refrigeration concepts, followed by extensive study of the design, assembly and operation of compression systems. Includes liquid and vapor control, metering devices, system components and piping design.</p>			<p><b>Prerequisite:</b> Admission to Plumbing/Pipefitting Apprentice Program; completion of 4 years of apprenticeship training.  <b>9 hours lecture-laboratory.</b>            Instruction and practice of computer controlled energy management for heating, cooling, and electrical.</p>		
<b>APPR 139A</b>	<b>REMEDIAL CONSTRUCTION TRADE MATH</b>	<b>4.5 Units</b>	<b>APPR 171</b>	<b>MIXED BASE</b>	<b>2 Units</b>
<p><b>Prerequisite:</b> Admission to Construction Trade Apprenticeship Program; current employment in the construction industry.  <b>9 hours lecture-laboratory.</b>            Reinforce and increase math skills necessary to meet the current level of mathematics occurring in construction trades. Course consists of basic arithmetic, geometry, algebra and trigonometry principles as applied in the construction trades.</p>			<p><b>Prerequisite:</b> Admission to Ironworkers Apprenticeship Program; current employment in the ironworking industry.  <b>4 hours lecture-laboratory.</b>            Introduction to blueprint reading and continuation of basic trade mathematics. OSHA safety. Includes scaffold user certification course.</p>		
<b>APPR 150</b>	<b>BASIC THEORY, USE OF TOOLS, JOB SAFETY &amp; HEALTH</b>	<b>4.5 Units</b>	<b>APPR 172</b>	<b>REINFORCING IRON I</b>	<b>2 Units</b>
<p><b>Prerequisite:</b> Admission to Apprenticeship Program; satisfactory completion of qualifying examinations.  <b>9 hours lecture-laboratory.</b>            Designed to provide the apprentice with basic theory and the use of tools, materials, basic code, first aid, basic math, and job safety and health.</p>			<p><b>Prerequisite:</b> Admission to Ironworkers Apprenticeship Program; current employment in the ironworking industry.  <b>4 hours lecture-laboratory.</b>            Instruction in reinforced concrete principles, applications, and processes. Study of the forces at work when iron and concrete are combined as a building material.</p>		
			<b>APPR 173</b>	<b>RIGGING I</b>	<b>2 Units</b>
			<p><b>Prerequisite:</b> Admission to Ironworkers Apprenticeship Program; current employment in the ironworking industry.  <b>4 hours lecture-laboratory.</b>            Introduction to rigging operations such as wire rope, chains, slings, cranes, helicopters, ladders and scaffolds used in the ironworkers' trade. Rigging safety, knot recognition and strength identification, and knot application to rigging are included.</p>		

**APPR 174 IRONWORKER HISTORY & FOREMAN TRAINING 2 Units**

**Prerequisite:** Admission to Ironworkers Apprenticeship Program; current employment in the ironworking industry.  
4 hours lecture-laboratory.

Acquaints the student with the history of the ironworking trade. Study of the state and federal laws giving the apprenticeship program in California its legal authority, the manner in which each law affects the workers, and the privileges and obligations of the workers in the trade. Procedures for dispatch of workers and the effect of wages and benefits on workers' compensation insurance will also be covered.

**APPR 175 WELDING I 2 Units**

**Prerequisite:** Admission to Ironworkers Apprenticeship Program; current employment in the ironworking industry.  
4 hours lecture-laboratory.

Introduction to welding and welding concepts for construction job sites. Basic welding safety and basic welding terms, definitions, positions, and cutting operations are included.

**APPR 176 STRUCTURAL I 2 Units**

**Prerequisite:** Admission to Ironworkers Apprenticeship Program; current employment in the ironworking industry.  
4 hours lecture-laboratory.

Introduction to high steel construction. Emphasis will be on erection of beams and skeletons, fastening structural steel, manufacture of iron and steel, safety positions, finishing operations.

**APPR 177 WELDING II 2 Units**

**Prerequisite:** Admission to Ironworkers Apprenticeship Program; current employment in the ironworking industry.  
4 hours lecture-laboratory.

Intermediate welding. A further study of welding safety and welding concepts for construction job sites. Welding processes, shielded metal-arc, gas shielded-arc, and oxy-acetylene welding, symbols, and certification qualifications are included.

**APPR 178 STRUCTURAL II 2 Units**

**Prerequisite:** Admission to Ironworkers Apprenticeship Program; current employment in the ironworking industry.  
4 hours lecture-laboratory.

Advanced safety, principles, and applications of scaffolding, mobile cranes and tower cranes. Scaffold Erector/Dismantler certification.

**APPR 179 POST-TENSIONING I 2 Units**

**Prerequisite:** Admission to Ironworkers Apprenticeship Program; current employment in the ironworking industry.  
4 hours lecture-laboratory.

History of post-tensioning, modern efforts and safety advantages. Special materials, preparation and stressing of post-tensioning systems. Special applications of post-tensioning systems. Discussion of threadbar post-tensioning systems.

**APPR 182A ARCHITECTURAL I 2 Units**

**Prerequisite:** Admission to Ironworkers Apprenticeship Program; current employment in the ironworking industry.  
4 hours lecture-laboratory.

A study of the procedures and practices employed by the ironworker in architectural and ornamental ironworking with emphasis on the principles, theory, and application of ornamental hand tools, power-actuated tools, anchors, and fasteners. Application of window walls, curtain walls, sealants, glazing, and window and curtain wall systems.

**APPR 182B ARCHITECTURAL II 2 Units**

**Prerequisite:** Admission to Ironworkers Apprenticeship Program; current employment in the ironworking industry.  
4 hours lecture-laboratory.

A continued study of the procedures and practices employed by the ironworker in architectural and ornamental ironworking with emphasis on those elements of construction that do not make a load-bearing contribution to the skeletal structure; such as stairs, fire escapes, ladders, conveyor systems, doors, elevators, windows, railings and other metal

features of modern construction. Study of the erection of flagpoles, playground equipment, rail and chain link fences. Care and use of the tools and accessories used in all installations.

**APPR 183A BASIC ELECTRICITY FOR SHEET METAL & AIR CONDITIONING SERVICE 4.5 Units**

**Prerequisite:** Admission to Sheet Metal Apprenticeship Program; currently employed in the sheet metal industry.  
9 hours lecture-laboratory.

Development of basic skills necessary for sheet metal workers to service air conditioning equipment with special emphasis on the basics of electricity and refrigeration principles.

**APPR 183B ADVANCED ELECTRICITY FOR SHEET METAL & AIR CONDITIONING SERVICE 4.5 Units**

**Prerequisite:** Admission to Sheet Metal Apprenticeship Program; currently employed in the sheet metal industry.  
9 hours lecture-laboratory.

Continued development of skills necessary for sheet metal workers to service air conditioning equipment with special emphasis on the use of basic electrical testing instruments, principles, transformers, relays, contactors and safety around electrical equipment.

**APPR 184A AIR CONDITIONING; COMMERCIAL SYSTEMS; HEATING (FOURTH-YEAR SERVICE) 4.5 Units**

**Prerequisite:** Admission to Sheet Metal Apprenticeship Program; currently employed in the sheet metal industry.  
9 hours lecture-laboratory.

Development of skills necessary for sheet metal workers to service air conditioning equipment with emphasis on air-cooled commercial systems, refrigerant line components, installation and commercial applications.

**APPR 184B COMMERCIAL SYSTEMS; HEAT LOADS; PIPING (FOURTH-YEAR SERVICE) 4.5 Units**

**Prerequisite:** Admission to Sheet Metal Apprenticeship Program; currently employed in the sheet metal industry.  
9 hours lecture-laboratory.

Continued development of skills necessary for sheet metal workers to service air conditioning equipment with emphasis on commercial systems, servicing, heat loads and piping.

**APPR 185A BASIC REFRIGERATION FOR SHEET METAL AIR CONDITIONING SERVICE 4.5 Units**

**Prerequisite:** Admission to Sheet Metal Apprenticeship Program; currently employed in the sheet metal industry.  
9 hours lecture-laboratory.

Introduction to the use of refrigeration evacuation service equipment, charging refrigeration systems, and to the use of oxy-acetylene brazing equipment.

**APPR 185B ADVANCED REFRIGERATION FOR SHEET METAL AIR CONDITIONING SERVICE 4.5 Units**

**Prerequisite:** Admission to Sheet Metal Apprenticeship Program; currently employed in the sheet metal industry; APPR 185A.  
9 hours lecture-laboratory.

Continued development of refrigeration skills with emphasis on the function of compressors, multiphase electric motors and piping systems.

**APPR 186A PROPERTIES OF AIR DISTRIBUTION FOR SHEET METAL AIR CONDITIONING SERVICE 4.5 Units**

**Prerequisite:** Admission to Sheet Metal Apprenticeship Program; currently employed in the sheet metal industry; APPR 185A.  
9 hours lecture-laboratory.

Introduction to the different properties of air distribution with air volumes, pressures, humidity and temperature; basic air balance procedures.

**APPR 186B REFRIGERATION THEORY FOR SHEET METAL AIR CONDITIONING SERVICE 4.5 Units**

**Prerequisite:** Admission to Sheet Metal Apprenticeship Program; currently employed in the sheet metal industry; APPR 186A.  
9 hours lecture-laboratory.

Continuing refrigeration theory with emphasis on all the major parts of refrigeration systems. The explanation of the principles and function of the heat pump in a residential application.

**APPR 187 INDUSTRIAL FIRST AID & CPR TRAINING .5 Unit**

10 hours lecture-laboratory.

A standard first aid and CPR course designed to provide fundamental principles, knowledge of, and skills in, first aid, accident prevention, and CPR. Prepares persons to care for most injuries and to meet most emergencies when medical assistance is not excessively delayed.

**APPR 188A ORIENTATION; SAFETY & BEGINNING RESIDENTIAL SHEET METAL INSTALLATION (SPECIALIST 1A) 2.5 Units**

**Prerequisite:** Admission to the Sheet Metal Specialist Apprenticeship Program; current employment in the sheet metal industry.  
4.5 hours lecture-laboratory.

An introduction to residential and light commercial sheet metal installation, safety, tools, materials, equipment and related industry practices. Emphasis will be on safety and soldering techniques.

**APPR 188B RESIDENTIAL COMPONENTS IDENTIFICATION & INSTALLATION (SPECIALIST 1B) 2.5 Units**

**Prerequisite:** Admission to the Sheet Metal Specialist Apprenticeship Program; current employment in the sheet metal industry.  
4.5 hours lecture-laboratory.

A continued development of concepts and practices already introduced and used in residential and light commercial installations of sheet metal ductwork. Emphasis will be on materials information and skills development.

**APPR 189A RESIDENTIAL SYSTEMS; DUCT & HVAC SYSTEMS (SPECIALIST 2A) 2.5 Units**

**Prerequisite:** Admission to the Sheet Metal Specialist Apprenticeship Program; current employment in the sheet metal industry.  
4.5 hours lecture-laboratory.

A study of typical residential duct systems including ventilation and exhaust systems, and HVAC systems. Development of installation techniques.

**APPR 189B PLANS & ARCHITECTURAL APPLICATIONS FOR RESIDENTIAL SHEET METAL (SPECIALIST 2B) 2.5 Units**

**Prerequisite:** Admission to the Sheet Metal Specialist Apprenticeship Program; current employment in the sheet metal industry.  
4.5 hours lecture-laboratory.

An advanced study of industry standards, values and requirements in residential sheet metal work including architectural applications of metal roofing, complex flashing, gutter and downspouts. Use of plans for coordinating installations. Mathematics review and further development of soldering skills.

**APSM 102 SMQ-2 CERTIFIED SAFETY & BEGINNING TRADE MATH 1.5 Units**

**Prerequisite:** Admission to Sheet Metal Apprenticeship Program.  
3 hours lecture-laboratory.

Introduction to OSHA and related safety issues including job site safety, first aid and CPR certification. Reinforce and increase math skills necessary to meet the current level of mathematics occurring in construction trades. Course consists of basic arithmetic, geometry, algebra and trigonometry principles as applied in the construction trades.

**APSM 103 SMQ-3 SHEET METAL TOOLS & SHOP 1.5 Units**

**Prerequisite:** Admission to Sheet Metal Apprenticeship Program; current employment in the sheet metal industry.  
3 hours lecture-laboratory.

Using sheet metal tools including hand tools and snips, shear, roll, and hand brake. Use of arithmetic and algebraic principles relating to sheet metal layout, fabrication of duct, pan, 45 degree tap-in, and plenum. Demonstration of other shop equipment used in the sheet metal industry.

**APSM 104 SMQ-4 SOLDERING & COMMON SEAMS 1.5 Units**

**Prerequisite:** Admission to Sheet Metal Apprenticeship Program.  
3 hours lecture-laboratory.

Basic soldering and seam fabrication techniques. Includes soldering lap and vertical seams, soldering with various materials and flux, alternate seam fabrication, and fabrication of non-soldered seams.

**APSM 105 SMQ-5 DRAFTING INTRODUCTION & VIEWS 1.5 Units**

**Prerequisite:** Admission to Sheet Metal Apprenticeship Program.  
3 hours lecture-laboratory.

Introduction to communicating construction details through drafting of plans. Topics include drafting equipment and materials, use of an architects scale, drawing format, geometric construction, basic views, square and radius elbows, and drawing duct runs.

**APSM 106 SMQ-6 BEGINNING DUCT FITTINGS 1.5 Units**

**Prerequisite:** Admission to Sheet Metal Apprenticeship Program.  
3 hours lecture-laboratory.

Focus is on the variety of duct connections, sealing, elbows and transitions common to the sheet metal industry.

**APSM 107 SMQ-7 PARALLEL LINE FITTINGS 1.5 Units**

**Prerequisite:** APSM 103, 106, or equivalent.

3 hours lecture-laboratory.

Introduction to communicating construction details through drafting of plans. Topics include drafting equipment and materials, use of an architects scale, drawing format, geometric construction, basic views, square and radius elbows, and drawing duct runs.

**APSM 108 SMQ-8 TRIANGULATION FITTINGS 1.5 Units**

**Prerequisite:** APSM 103, 106, or equivalent.

3 hours lecture-laboratory.

Triangulation Fittings introduces another of three traditional sheet metal pattern development methods. Triangulation is a versatile method, often applied when other methods won't work. Between the method, practice drawings and fabricated projects, there is much to cover in this course.

**APSM 109 SMQ-9 RADIAL LINE LAYOUT & OGEE OFFSETS 1.5 Units**

**Prerequisite:** APSM 103, 106, or equivalent.

3 hours lecture-laboratory.

Radial Line Layout introduces a third of three traditional sheet metal pattern development methods. Concepts are applied to conical sheet metal projects. In addition, the ogee offset fitting, sometimes important in maintaining efficient air flow is developed in flat and compound forms.

**APPRENTICESHIP: SHEET METAL**

**Computers, Technology & Information Systems (650) 949-7236**

**APSM 101 SMQ-1 TRADE INTRODUCTION 1.5 Units**

**Prerequisite:** Admission to Sheet Metal Apprenticeship Program.

3 hours lecture-laboratory.

Introduction to Sheet Metal as a skilled construction trade including: general overview, trade history and related issues, material handling and safety, sheet metal materials, hardware, and HVAC careers.

- APSM 110 SMQ-10 BASICS OF ARCHITECTURAL SHEET METAL 1.5 Units**  
**Prerequisite:** APSM 104, 105, or equivalent.  
**3 hours lecture-laboratory.**  
 This course focuses on essential skills used in architectural sheet metal work, particularly with gutter and downspout systems. This includes joint design for water flow, caulking and soldering applications, miters, and expansion joints. Architectural Sheet Metal is used to protect building from moisture and mold damage. Roof and scaffold safety is discussed.
- APSM 111 SMQ-11 ARCHITECTURAL SHEET METAL 1.5 Units**  
**Prerequisite:** APSM 110 or equivalent.  
**3 hours lecture-laboratory.**  
 This architectural sheet metal course seeks to develop an understanding of the common applications and general skills used in architectural sheet metal construction. Chimney saddles, flashings and counter flashings, coping, gravel stop, fascia, soffit, and scuppers are all covered in detail. Students fabricate many of these items.
- APSM 112 SMQ-12 FIELD INSTALLATION 1.5 Units**  
**Prerequisite:** APSM 102 or equivalent.  
**3 hours lecture-laboratory.**  
 This course addresses some needs specific to field work in the sheet metal industry. Students receive training and safety certifications for powder actuated tools, asbestos awareness, forklift, and scissor lift or articulating booms. Proper techniques for rigging and hoisting loads are presented. Safety harnesses and other field safety equipment are discussed. In addition, fire damper types are presented and the need to follow manufacturer,s specifications for applications related to life safety in buildings is stressed.
- APSM 113 SMQ-13 WELDING 1: PROCESS & SAFETY OVERVIEW 1.5 Units**  
**Prerequisite:** APSM 101, 102, or equivalent.  
**3 hours lecture-laboratory.**  
 This course begins with an overview of common welding safety hazards and personal protective equipment for welding. The Gas Metal Arc Welding process is introduced and practiced by students as commonly used in the sheet metal industry. Machine set-up and basic skills are stressed.
- APSM 114 SMQ-14 WELDING 2: GMAW 1.5 Units**  
**Prerequisite:** APSM 101, 102, or equivalent.  
**3 hours lecture-laboratory.**  
 This course continues with development of Gas Metal Arc Welding skills. In addition, Welding symbols, portable grinder safety, hot work permits, Oxy-Fuel cutting, Plasma Arc cutting and Flux Core Arc Welding are introduced. Progress in student welding skill development is essential.
- APSM 115 SMQ-15 WELDING 3: GMAW 1.5 Units**  
**Prerequisite:** APSM 101, 102, or equivalent.  
**3 hours lecture-laboratory.**  
 This course introduces the Shielded Metal Arc Welding process. Students learn basic skills and proper set up of equipment. Work in vertical and overhead positions is presented as well as flat. Weld safety is stressed. As time allows, Gas Tungsten Arc Welding is also introduced.
- APSM 116 SMQ-16 PLANS & SPECIFICATIONS 1.5 Units**  
**Prerequisite:** APSM 105 or equivalent.  
**3 hours lecture-laboratory.**  
 Introduction to plans and specifications and their applications in the sheet metal construction industry. This includes reading and interpreting title blocks, lines, abbreviations, symbols, sections, details and schedules for residential and commercial projects. Architectural, Structural, Mechanical, Electrical, Control, and specialty drawings are covered in detail.
- APSM 117 SMQ-17 SUBMITTALS & SHOP DRAWINGS 1.5 Units**  
**Prerequisite:** APSM 116, or equivalent.  
**3 hours lecture-laboratory.**  
 This course continues to build on job specification and blueprint reading instructions and adds the 'shop drawing' and use of submittals as done in the sheet metal industry. This includes reading typical drawings and submittals, identifying specific information on the submittal, applying a numbering system to the shop drawing, creating material lists form the shop drawing or submittal, and field use of drawings and submittals.
- APSM 118 SMQ-18 INDUSTRIAL & STAINLESS STEEL INTRODUCTION 1.5 Units**  
**Prerequisite:** APSM 102, 103, or equivalent.  
**3 hours lecture-laboratory.**  
 This course introduces heavy gage industrial sheet metal techniques and stainless steel applications used in the industry. Topics include calculations of bend allowances for heavy gauge metal, layout and forming heavy gauge metal, using a blowpipe, material handling equipment, marking, forming and surface finishing stainless steel products. Safety and material handling practices are reviewed.
- APSM 119 SMQ-19 HVAC AIR SYSTEMS & DUCT DESIGN 1.5 Units**  
**Prerequisite:** APSM 106, or equivalent.  
**3 hours lecture-laboratory.**  
 Basics of air conditioning system design, operation, and installation will be covered in detail. Students will learn how cooling systems can be designed with human comfort and efficient operation in mind. Students learn basic components, and to identify loss factors of typical HVAC systems. Load calculations and air flow calculations are performed. Duct leak testing is introduced. The importance of efficiency with today,s environmental concerns is stressed.
- APSM 120 SMQ-20 MEASURING & SKETCHING 1.5 Units**  
**Prerequisite:** APSM 105, or equivalent.  
**3 hours lecture-laboratory.**  
 Field measuring and sketching techniques are discussed in detail as it relates to sheet metal work. Topics covered include measuring techniques and safety, reference points, calculations, and industry accepted symbols, views and representations. Students measure and produce sketches.
- APSM 121 SMQ-21 FABRICATION & SHORTCUTS 1.5 Units**  
**Prerequisite:** APSM 107, 108, 109, or equivalent.  
**3 hours lecture-laboratory.**  
 Theory and application of sheet metal fabrication and shortcuts used in residential and commercial construction are reviewed in this course. Students will gain a working knowledge of floor and hand tools used in the trade and relevant safety issues. Advanced techniques are applied. Geometry and math associated with fabrication are an integral part of this course.
- APSM 122 SMQ-22 CODES & STANDARDS 1.5 Units**  
**Prerequisite:** APSM 101, 102, 116, or equivalent.  
**3 hours lecture-laboratory.**  
 Introduction to the organization and interpretation of building codes and standards in the sheet metal industry, Restrictions and limitations these codes place on the construction industry are covered in detail. Student work with codes common to the industry and SMACNA standards to research information.
- APSM 123 SMQ-23 RESIDENTIAL SHEET METAL 1.5 Units**  
**Prerequisite:** APSM 101, 106, or equivalent.  
**3 hours lecture-laboratory.**  
 Introduction to sheet metal work specific to residential construction including: the various types of residential heating, ventilation and air conditioning systems, combustion theory, basic air distribution, furnace construction, filters, humidifiers, installation techniques, and maintenance procedures.

**APSM 124 SMQ-24 METAL ROOFING 1.5 Units**  
**Prerequisite:** APSM 110, or equivalent.  
**3 hours lecture-laboratory.**  
 This is an overview of the different types of metal roofs used in the sheet metal industry, installation skills and safety concerns. Common roof seams are fabricated. Use of manufactured and shop-fabricated materials for roof layout and installation is practiced, including roof penetrations and related flashings.

**APSM 125 SMQ-25 DETAILING 1.5 Units**  
**Prerequisite:** APSM 116, 117, or equivalent.  
**3 hours lecture-laboratory.**  
 Detailing in the sheet metal industry is a specialized skill that requires attention to detail when working with drawings and specifications. In this course, students will compile detail information from plans, specs, submittals, standards, field measurements, and codes.

**APSM 126 SMQ-26 FOREMAN TRAINING 1.5 Units**  
**Prerequisite:** APSM 112, 117, 119, 120, or equivalent.  
**3 hours lecture-laboratory.**  
 This course is for journeyman-level sheet metal workers who want to become supervisors, site managers, leads and foreman. In this course, students will be able to identify the roles of the foreman, responsibilities of a foreman, and reasons to become a foreman. Students will practice self-evaluation, successful foreman attributes, managing and leading others, and project management.

**APSM 127 SMQ-27 BASIC AUTOCAD 1.5 Units**  
**Prerequisite:** APSM 105, 116, 117, or equivalent.  
**3 hours lecture-laboratory.**  
 In the Basic AutoCAD class students learn how to follow the proper protocols for computer lab use and perform essential computer file management operations. The students will navigate through the basic AutoCAD screen and command menus. The students will demonstrate the basic use of the AutoCAD program by creating and plotting a drawing assignment within parameters and given template. The students will be able to demonstrate how AutoCAD is used in the Sheet Metal Industry.

**APSM 130 SMQ-30 ADVANCED WELDING 1.5 Units**  
**Prerequisite:** APSM 101 and 102, or equivalent; APSM 114; APSM 115 or equivalent.  
**3 hours lecture-laboratory.**  
 Advanced techniques used in Oxy-Fuel/ Plasma cutting, GMAW, and GTAW on various types and thicknesses of base material.

**APSM 131 SMQ-31 CAD DETAILING (BEGINNING CAD DUCT) 1.5 Units**  
**Prerequisite:** APSM 105; APSM 116 & 117; APSM 127 or equivalent.  
**3 hours lecture-laboratory.**  
 Basic computer-aided design (CAD) drawing skills. Use of CAD DUCT tool to set up drawings. 3D duct detailing program with emphasis on electronic coordination. Focuses on file management and drawing protocol. Utilize structural and architectural backgrounds. Design ducting within the CAD drawing. Use CAD DUCT for location and elevation.

**APSM 132 SMQ-32 INTERMEDIATE CAD DETAILING 1.5 Units**  
**Prerequisite:** APSM 105, 116, 127 and 131 or equivalent.  
**3 hours lecture-laboratory.**  
 Continuation of 3D duct detailing program for electronic coordination. Emphasis is on accessing, editing and recovering files with the CAD DUCT system. Students will use format standards, tag files and program utilities. Using contract documents, students will work through the steps necessary to create a job file.

**APSM 133 SMQ-33 ADVANCED ARCHITECTURAL 1.5 Units**  
**Prerequisite:** APSM 110 or equivalent.  
**3 hours lecture-laboratory.**  
 Develop advanced skills to layout architectural custom flashing and cornices. Work with the newest metal roofing material. Work with copper and other materials to layout and fabricate ornamental projects.

**APSM 134 SMQ-34 ADVANCED LAYOUT FABRICATION 1.5 Units**  
**Prerequisite:** APSM 107, 108, 109 or equivalent.  
**3 hours lecture-laboratory.**  
 Advance methods of pattern development using a calculator. Use the Pythagorean Theorem, and other math formulas relating to sheet metal layout, fabrication and shop procedures.

**APSM 135 SMQ-35 PROJECT MANAGEMENT, TAKEOFFS & ESTIMATES 1.5 Units**  
**Prerequisite:** APSM 112, 117, 119, 120 or equivalent.  
**3 hours lecture-laboratory.**  
 Development of skills in supervision, management of various types of project, performing take offs directly from contract drawings and creating an detailed estimate of a specific project.

**APSM 136 SMQ-36 SERVICE BASICS 1.5 Units**  
**Prerequisite:** APSM 112, 117, 119, 120 or equivalent.  
**3 hours lecture-laboratory.**  
 Development of the basic skills necessary for a sheet metal worker to service a basic HVAC building system.

**APSM 137 SMQ-37 FINAL HVAC PROJECT 1.5 Units**  
**Prerequisite:** APSM 112, 117, 119, 120, or equivalent.  
**3 hours lecture-laboratory.**  
 Design, fabricate, and install a typical HVAC system from concept design drawing to the finished installed project.

**APSM 138 SMQ-38 FINAL ARCHITECTURAL, INDUSTRIAL, ORNAMENTAL PROJECT 1.5 Units**  
**Prerequisite:** APSM 112, 117, 119 or equivalent.  
**3 hours lecture-laboratory.**  
 Design, fabricate, and install a typical Architectural, Industrial or an Ornamental project from concept design drawing to the finished installed project.

## APPRENTICESHIP: SOUND & COMMUNICATION

**Computers, Technology & Information Systems (650) 949-7236**  
[www.foothill.edu/ctis/](http://www.foothill.edu/ctis/)

**APSC 111 JOB INFORMATION, SAFETY, TEST INSTRUMENTS, STRUCTURED CABLING, FIBER OPTICS & BLUEPRINT READING 3.5 Units**

**Formerly: APRT 130**  
**Prerequisite:** Indentured to the Northern California Sound and Communication Joint Apprenticeship and Training Committee as an Apprentice Installer/Technician.  
**6.66 hours lecture-laboratory.**  
 Week One: Introduction to the sound and communication industry. Students will learn about basic tools of the trade, test instruments, proper care and safety of tools. Students will be exposed to the installation and use of fastening devices and how to tie basic knots. This first week also includes an introduction to TIA/EIA standards, need for structured cabling systems, unshielded twisted pair cables and connecting hardware.  
 Week Two: Fiber optic overview of different optical cables, connectors and connection joints. This class will teach the student how to how to properly install, test and certify fiber optical cables. Also, included in this week is safety on the job site, properly hoisting loads, hand signals, metric system and working around energized circuits. The second week concludes with the fundamentals of blueprints, scales, mechanical and electrical symbols, using elevations and schedules properly.

**APSC 112 DC THEORY, CODES & PRACTICES, 3.5 Units  
BOXES, CONNECTORS & RACEWAYS**

**Formerly: APRT 131**

**Prerequisite:** Indentured to the Northern California Sound and Communication Joint Apprenticeship and Training Committee as an Apprentice Installer/Technician.

**6.66 hours lecture-laboratory.**

Week One: Introduction to the National Electrical Code. Including how to interpret and apply the language and articles within the NEC. Week one also introduces the student to the international building code, boxes, connectors and raceways.

Week Two: Study of DC theory. In this week the student will learn how electricity works and how to calculate and measure voltage, current, resistance and power in both a series and parallel DC circuit.

**APSC 121 AC THEORY, POWER QUALITY, FIRE 3.5 Units  
ALARM SYSTEMS & GROUNDING**

**Formerly: APRT 132**

**Prerequisite:** Indentured to the Northern California Sound and Communication Joint Apprenticeship and Training Committee as an Apprentice Installer/Technician.

**6.66 hours lecture-laboratory.**

Week One: Study of AC theory. The week starts off reviewing direct current theory and introduces the student to alternating current theory. The student will learn about sine waves, inductance, inductive reactance, capacitive reactance, frequency and AC impedance. The student will calculate voltage, current, impedance and power in both a series and parallel AC circuit. Also included in this week is an introduction to power quality. This introduction concentrates on how power quality relates to communication systems.

Week Two: Study of fire alarm systems and grounding. The student will study the fundamentals of fire alarm systems including: initiating and notification devices, testing and maintenance. Students will build a small scale fire alarm system using Norcal's fire alarm trainers. The students are also introduced to the theory and practices of grounding and how proper grounding relates to safety and system performance.

**APSC 122 SECURITY, ACCESS CONTROL, 3.5 Units  
TELEPHONY & PAGING SYSTEMS**

**Formerly: APRT 133**

**Prerequisite:** Indentured to the Northern California Sound and Communication Joint Apprenticeship and Training Committee as an Apprentice Installer/Technician.

**6.66 hours lecture-laboratory.**

Week One: Study of the different components of security systems, including magnetic contacts, motion sensors and control panels. Students will study the different components of access control systems, including card, code and biometric readers. Students will learn to design and layout security systems and electronic access control systems.

Week Two: Develop an understanding of telephone systems and how they are wired. Students will learn the different systems such as electronic key systems and PBX systems and study troubleshooting practices in telephone systems. Students will learn the different components involved when installing a paging system and learn how to install a speaker properly. At the completion of this course the student will demonstrate their understanding of these systems by applying their knowledge in hands on laboratory assignments.

**APSC 131 SEMICONDUCTORS, NURSE CALL, 3.5 Units  
AUDIO VISUAL SYSTEMS**

**Formerly: APRT 160**

**Prerequisite:** Indentured to the Northern California Sound and Communication Joint Apprenticeship and Training Committee as an Apprentice Installer/Technician.

**6.66 hours lecture-laboratory.**

Week One: Study of audio visual technology that includes planning and installing cabling, coax and fiber optics, networking and rough-in. This week also includes audio and video fundamentals, properties of sound, distributed audio and video, planning and testing of audio visual systems. Students will perform hands on design and work with an entertainment and applications platform.

Week Two: Develop an understanding of semiconductors and how they work. Students will be introduced to diodes and transistors, learn how to determine transistor types, how semiconductors work in power supplies

and how they are used in amplifiers. Students will be introduced to the characteristics of silicon controlled rectifiers and how to test them. This week also includes an introduction to nurse call systems. The student will be given an introduction to nurse call fundamentals, which includes system components, ancillary systems, system design, installation and troubleshooting techniques. Students will work hands on building a small scale nurse call system.

**APSC 132 CCTV SYSTEMS, FIRE/LIFE SAFETY 3.5 Units  
& VOICE DATA VIDEO (VDV) STATE  
CERTIFICATION PREPARATION**

**Formerly: APRT 161**

**Prerequisite:** Indentured to the Northern California Sound and Communication Joint Apprenticeship and Training Committee as an Apprentice Installer/Technician.

**6.66 hours lecture-laboratory.**

Week One: Advanced study of closed circuit television systems. Students will learn about video camera types, lenses, optics, and lighting characteristics; study signal transmission methods. Students will learn about Plasma, LCD and OLED displays, construct a small scale CCTV system that includes different cameras and switchers reporting to a digital video recorder.

Week Two: Prepare the student for the Fire/Life Safety and Voice Data Video state certification exam. This session includes review of navigating the NEC and NFPA 72 Codes, overview of the certification application process and a lecture on most aspects of the Voice Data Video industry. The course concludes with sample exam tests using Sound & Communication's Classroom Performance System.

**APPRENTICESHIP: PIPE TRADES, SHEET  
METAL, FIELD IRONWORKERS, ELEVATORS**

**Computers, Technology & Information Systems (650) 949-7236**

**APRT 106A SHEET METAL CONTROL SYSTEMS 4.5 Units  
(FIFTH-YEAR SERVICE)**

**Prerequisite:** current employment in the sheet metal industry.

**9 hours lecture-laboratory.**

Development of skills necessary for sheet metal workers to service air conditioning equipment with emphasis on control methods and systems, computerized building management, zone control and variable air volume systems.

**APRT 106B ENERGY MANAGEMENT 4.5 Units  
& CUSTOMER SERVICE  
(FIFTH-YEAR SERVICE)**

**Prerequisite:** Admission to Sheet Metal Apprenticeship Program; current employment in the sheet metal industry.

**9 hours lecture-laboratory.**

Development of skills necessary for sheet metal workers to service air conditioning equipment with emphasis on digital control systems, energy management, business and shop operations and OSHA regulations.

**APRT 107A ADVANCED SHEET METAL SERVICE I 3 Units**

**Prerequisite:** Admission to Sheet Metal Apprenticeship Program; current employment in the sheet metal industry.

**6 hours lecture-laboratory.**

In-depth study of HVAC systems, electricity, measurements; testing, adjusting and balancing for sheet metal service persons. Fluid flow, heat transfer, motors, starters and equations commonly used for testing will be covered.

**APRT 107B ADVANCED SHEET METAL SERVICE II 3 Units**

**Prerequisite:** Admission to Sheet Metal Apprenticeship Program; current employment in the sheet metal industry.

**6 hours lecture-laboratory.**

Continued in-depth study of HVAC systems. Air balancing, hydronic systems, pumps, U.S. and metric equivalents and conversions, heat and refrigeration will be covered.

<p><b>APRT 111</b>      <b>COMPUTER LITERACY FOR TRADE APPRENTICES</b>      <b>1.5 Units</b></p> <p><b>Prerequisite:</b> Enrolled in an apprenticeship program; current employment in a construction trade.  <b>3 hours lecture-laboratory.</b></p> <p>Introduction to general computer principles and basic computer operations. Topics will include hardware familiarity, basic system analysis and design, beginning database and word processing and BASIC language as it relates to the trades.</p>	<p><b>APRT 146</b>      <b>BASIC SERVICE SUPERVISION &amp; JOB MANAGEMENT; ENVIRONMENTAL SAFETY FOR SHEET METAL APPRENTICES</b>      <b>3 Units</b></p> <p><b>Prerequisite:</b> Admission to Sheet Metal Apprenticeship Program; current employment in the sheet metal industry.  <b>6 hours lecture-laboratory.</b></p> <p>Development of skills in basic service, supervision, and job management; training in working safely around hazardous materials related to the sheet metal industry.</p>
<p><b>APRT 143A</b>      <b>AIR BALANCE TEST EQUIPMENT &amp; INSTRUMENTS (FIRST YEAR)</b>      <b>4.5 Units</b></p> <p><b>Prerequisite:</b> Admission to Sheet Metal Apprenticeship Program; current employment in the sheet metal industry.  <b>9 hours lecture-laboratory.</b></p> <p>Development of skills necessary to use test and balance instruments and equipment for HVAC systems and automatic control systems. Use of practical mathematics and mathematical equations to measure air velocity and duct outlet, and to solve air and hydronic balancing problems.</p>	<p><b>APRT 147A</b>      <b>INTRODUCTION TO ARCHITECTURAL BLUEPRINT READING &amp; INTERPRETATION</b>      <b>3 Units</b></p> <p><b>Prerequisite:</b> Admission to Sheet Metal Apprenticeship Program; current employment in the sheet metal industry.  <b>6 hours lecture-laboratory.</b></p> <p>Introduction to reading architectural and structural plans and specifications. Skill development in blueprint interpretation.</p>
<p><b>APRT 143B</b>      <b>TEMPERATURE MEASUREMENT INSTRUMENTS &amp; DUCT SYSTEMS (FIRST YEAR)</b>      <b>4.5 Units</b></p> <p><b>Prerequisite:</b> Admission to Sheet Metal Apprenticeship Program; current employment in the sheet metal industry.  <b>9 hours lecture-laboratory.</b></p> <p>Continuing study of skills necessary to test and balance instruments and equipment for HVAC systems and automatic control systems. Use of practical mathematics and mathematical equations to measure air velocity and duct outlet, and to solve air and hydronic balancing problems.</p>	<p><b>APRT 147B</b>      <b>ADVANCED ARCHITECTURAL BLUEPRINT READING &amp; INTERPRETATION</b>      <b>3 Units</b></p> <p><b>Prerequisite:</b> Admission to Sheet Metal Apprenticeship Program; current employment in the sheet metal industry.  <b>6 hours lecture-laboratory.</b></p> <p>Advanced reading of mechanical, electrical and specialty plans and specifications. Continued skill development in blueprint interpretation.</p>
<p><b>APRT 144A</b>      <b>INTRODUCTION TO MARINE SHEET METAL TRAINING FOR APPRENTICES I</b>      <b>2.5 Units</b></p> <p><b>Prerequisite:</b> Admission to Sheet Metal Apprenticeship Program; current employment in the sheet metal industry.  <b>4.5 hours lecture-laboratory.</b></p> <p>Working of metals in sheet form. Structural shapes, such as angle bar, channels, flat bar, rod and wire are also extensively used. Metals of varying thicknesses, from a few thousandths of an inch to <math>\frac{3}{16}</math><sup>ths</sup> of an inch, are used. Proper techniques and procedures are demonstrated for the different characteristics of each metal studied. Some of the metals used are copper, brass, bronze, lead, zinc, aluminum, black and galvanized iron, monel and stainless steel.</p>	<p><b>APRT 148A</b>      <b>SHEET METAL DETAILING I</b>      <b>3 Units</b></p> <p><b>Prerequisite:</b> Admission to Sheet Metal Apprenticeship Program; current employment in the sheet metal industry.  <b>6 hours lecture-laboratory.</b></p> <p>Reading and interpretation of design drawings and air conditioning duct systems; detailing of plans and specifications required to construct a building.</p>
<p><b>APRT 144B</b>      <b>INTRODUCTION TO MARINE SHEET METAL TRAINING FOR APPRENTICES II</b>      <b>2.5 Units</b></p> <p><b>Prerequisite:</b> Admission to Sheet Metal Apprenticeship Program; current employment in the sheet metal industry.  <b>4.5 hours lecture-laboratory.</b></p> <p>Continuation of working with metals in sheet form. Structural shapes, such as angle bar, channels, flat bar, rod and wire are also extensively used. Metals of varying thicknesses, from a few thousandths of an inch to <math>\frac{3}{16}</math><sup>ths</sup> of an inch, are used. Proper techniques and procedures are demonstrated for the different characteristics of each metal studied. Some of the metals used are copper, brass, bronze, lead, zinc, aluminum, black and galvanized iron, monel and stainless steel.</p>	<p><b>APRT 148B</b>      <b>SHEET METAL DETAILING II</b>      <b>3 Units</b></p> <p><b>Prerequisite:</b> Admission to Sheet Metal Apprenticeship Program; current employment in the sheet metal industry.  <b>6 hours lecture-laboratory.</b></p> <p>Continuation of reading and interpretation of design drawings; construction of duct systems; detailing of plans and specifications required to construct a building. Operation of HVAC equipment. Techniques for organizing the job and preparing for installation.</p>
<p><b>APRT 145</b>      <b>UNIFORM MECHANICAL CODE</b>      <b>2 Units</b></p> <p><b>Prerequisite:</b> Admission to Sheet Metal Apprenticeship Program; current employment in the sheet metal industry.  <b>4 hours lecture-laboratory.</b></p> <p>Study of the mechanical code as it relates to the sheet metal trade. Topics include terminology, definitions, heating, ventilating, cooling, combustion air, venting of appliances, duct work, fire dampers, control systems, various life safety systems, skylights and various architectural sheet metal.</p>	<p><b>APRT 148C</b>      <b>ADVANCED SHEET METAL DETAILING</b>      <b>2 Units</b></p> <p><b>Prerequisite:</b> Admission to Sheet Metal Apprenticeship Program; current employment in the sheet metal industry.  <b>4 hours lecture-laboratory.</b></p> <p>Design and engineer a building for air conditioning duct systems and specifications.</p>
	<p><b>APRT 149A</b>      <b>ELECTRICAL SYSTEMS OPERATION, CONTROLS &amp; DEVICES (TAB-2)</b>      <b>4.5 Units</b></p> <p><b>Prerequisite:</b> Admission to Sheet Metal Apprenticeship Program; current employment in the sheet metal industry.  <b>9 hours lecture-laboratory.</b></p> <p>Study of individual electrical components and devices of control systems, and understanding their operation and relationship to each other. Identify and use instruments in measuring air movement. Learn how to interpret, use and understand drawings relating to the construction of a building.</p>
	<p><b>APRT 149B</b>      <b>HVAC TESTING &amp; BALANCING PROCEDURES (TAB-2)</b>      <b>4.5 Units</b></p> <p><b>Prerequisite:</b> Admission to Sheet Metal Apprenticeship Program; current employment in the sheet metal industry.  <b>9 hours lecture-laboratory.</b></p> <p>Utilize skills and knowledge previously learned to apply methods of balancing HVAC systems. Balancing of systems will include both air and hydronic. Information gathered during the balancing will be used in completing reports required by the building engineer and owner.</p>

- APRT 150A AIR DISTRIBUTION & MANUFACTURING SYSTEMS (TAB-3) 4.5 Units**  
**Prerequisite:** Admission to Sheet Metal Apprenticeship Program; current employment in the sheet metal industry.  
**9 hours lecture-laboratory.**  
 The difference, advantages and disadvantages of pneumatic and direct digital control systems will be compared to electrical systems. Students will use laptop computers to access a control system from a remote location; take readings and make minor adjustments to the system. Clean room operation and protocol will be examined.
- APRT 150B SYSTEMS INSTALLATION & TROUBLESHOOTING (TAB-3) 4.5 Units**  
**Prerequisite:** Admission to Sheet Metal Apprenticeship Program; current employment in the sheet metal industry.  
**9 hours lecture-laboratory.**  
 Proper layout and installation procedures on various control systems. This will include system programming, adjustment, testing, maintenance and repair of the installed system.
- APRT 151A INTERMEDIATE MARINE SHEET METAL TRAINING FOR APPRENTICES I 2.5 Units**  
**Prerequisite:** Admission to Sheet Metal Apprenticeship Program; current employment in the sheet metal industry.  
**4.5 hours lecture-laboratory.**  
 In-depth study of metals in sheet form up to  $\frac{3}{16}$  inch thickness. Further development and practice of pattern layout and fabrication, drawing, sketching and blueprint reading skills. Develop awareness of safety procedures and welding processes.
- APRT 153A CONTROL SYSTEMS & CUSTOMER SERVICE I (TAB-4) 4.5 Units**  
**Prerequisite:** Admission to Sheet Metal Apprenticeship Program; current employment in the sheet metal industry.  
**9 hours lecture-laboratory.**  
 Develop skills and knowledge of various control systems in use today in the HVAC test and air balance industry. Develop customer relations in order to effectively deal with the consumer.
- APRT 153B CONTROL SYSTEMS & CUSTOMER SERVICE II (TAB-4) 4.5 Units**  
**Prerequisite:** Admission to Sheet Metal Apprenticeship Program; current employment in the sheet metal industry.  
**9 hours lecture-laboratory.**  
 Continuation of APRT 153A. Develop skills and knowledge of various control systems in use today in the HVAC test and air balance industry. Further development customer relations in order to effectively deal with the consumer.
- APRT 154A PROJECT MANAGEMENT FOR THE TEST & AIR BALANCE INDUSTRY (TAB-5) 4.5 Units**  
**Prerequisite:** Admission to Sheet Metal Apprenticeship Program; current employment in the sheet metal industry.  
**9 hours lecture-laboratory.**  
 Develop skills and knowledge of project management in use today in the HVAC test and air balance industry. Develop customer relations to effectively deal with the customer, project foreperson, and project engineers.
- APRT 154B HAZARDOUS MATERIAL RECOGNITION FOR THE TEST & AIR BALANCE INDUSTRY (TAB-5) 4.5 Units**  
**Prerequisite:** Admission to Sheet Metal Apprenticeship Program; current employment in the sheet metal industry.  
**9 hours lecture-laboratory.**  
 Develop skills and knowledge to recognize hazardous materials in the HVAC test and air balance industry. Use personal protective equipment and tools properly as they relate to hazardous materials. Review current laws governing hazardous material recognition and response.
- APRT 162 IBEW/NECA HISTORY FOR SOUND & COMMUNICATION 3 Units**  
**Prerequisite:** Admission to the Northern California Sound and Communications industry; employment in the sound and communications trade.  
**6 hours lecture-laboratory.**  
 IBEW/NECA history and orientation to the Sound and Communication industry. Discussion of the hazards of drug abuse and sexual harassment. Responsibilities of apprenticeship. History of American labor. Basic tools of the trade-their use and care; workplace safety, health, first aid and OSHA. Marketing and communications. Introduction to the National Electrical Code. General building wire properties and NEC requirements; conductor insulation and NEC specifications. Reading blueprints and drawing sketches. Architectural views; common scales; understanding specifications, elevations, schedules, structured wiring, electrical and mechanical symbols.
- APRT 163 TRADE MATH & COMMUNICATION ELECTRONICS FOR SOUND & COMMUNICATION 3 Units**  
**Prerequisite:** Admission to the Northern California Sound and Communications industry; current employment in the sound and communications trade.  
**6 hours per week lecture-laboratory.**  
 Review of trade mathematics and electronic theory. Installation and use of fastening devices. Study of Ohm's Law. Instruction on resistance, current, voltage and power in series and parallel circuits. Practice of basic knot tying.
- APRT 164 INSTALLING, TERMINATING, TESTING DATA & TELEPHONE SYSTEMS FOR SOUND & COMMUNICATION 3 Units**  
**Prerequisite:** Admission to the Northern California Sound and Communications industry; current employment in the sound and communications trade.  
**6 hours per week lecture-laboratory.**  
 Study of Structured Premise Cabling System characteristics. In-depth study of standards and codes, plans, specifications and media used for cabling. Examination of connectors, grounding and bonding, retrofitting, firestopping and cable pulling. Instruction on understanding plans and specifications, transmission fundamentals, safety and professionalism.
- APRT 170 INTRODUCTION TO THE ELEVATOR CONSTRUCTOR PROGRAM 3 Units**  
**Prerequisite:** Admission to Elevator Constructor's Apprenticeship Program; current employment in the elevator industry.  
**6 hours lecture-laboratory.**  
 Purpose, structure, rules and regulations of the Elevator Constructor's apprentice program. Study of safety awareness, first aid, tools, customer relations and fundamentals of blueprint reading.
- APRT 171 PIT STRUCTURES; GUIDE RAILS; OVERHEAD INSTALLATION; ROPING & RE-ROPING 3 Units**  
**Prerequisite:** Admission to Elevator Constructor's Apprenticeship Program; current employment in the elevator industry.  
**6 hours lecture-laboratory.**  
 Purpose of pit components. Installation of buffers, compensating sheaves, ropes or chains and when they are used. Steps in rail installation, machine and sheave installation. Study of car and counterweight assembly and roping. Basic math review.
- APRT 172 BASIC ELECTRICITY; ELECTRICAL CIRCUITS; ELECTROMAGNETISM 3 Units**  
**Prerequisite:** Admission to Elevator Constructor's Apprenticeship Program; current employment in the elevator industry.  
**6 hours lecture-laboratory.**  
 Study of basic electricity and electrical safety. Relationships between voltage, current and resistance. Basic electrical circuit components, series and parallel resistive circuits, magnetism and electromagnetism, and single-phase and three-phase theory. Discussion of DC generators and motors. Applying and verifying Ohm's Law. Review of arithmetic.

- APRT 173      ADVANCED ELECTRICITY; VOLTAGE, CURRENT & RESISTANCE; DC GENERATORS & MOTORS      3 Units**  
**Prerequisite:** Admission to Elevator Constructor's Apprenticeship Program; current employment in the elevator industry.  
**6 hours lecture-laboratory.**  
Continued study of electricity. Alternating current theory and AC motor theory. Measuring voltage, current and resistance. Types and components of DC generators and motors. DC machine maintenance and service.
- APRT 174      INDUSTRY ELEVATOR CONSTRUCTION TRAINING; CONSTRUCTION WIRING; DOORS & OPERATORS      3 Units**  
**Prerequisite:** Admission to Elevator Constructor's Apprenticeship Program; current employment in the elevator industry.  
**6 hours lecture-laboratory.**  
Comprehensive industry elevator construction training. Process of planning, piping and wiring for the hoistway, machine room and car. Introduction to passenger and freight entrances and installations. Different types of passenger, freight and dumbwaiter doors and gates. Assembling and installing door motors.
- APRT 175      HYDRAULICS FOR ELEVATOR CONSTRUCTORS; ESCALATORS & MOVING WALKS      3 Units**  
**Prerequisite:** Admission to Elevator Constructor's Apprenticeship Program; current employment in the elevator industry.  
**6 hours lecture-laboratory.**  
Basic hydraulic theory. Different types of hole drilling. Installing the casing and power unit, and connecting pipe lines. Welding procedures for the cylinder and plumbing the jack. Assembly of the car sling and cab. Hydraulic troubleshooting. Rigging safety for escalators and moving walks. Escalator and moving walk mechanical and electrical components and installation procedures.
- APRT 176      CIRCUIT TRACING; BASIC ELEVATOR SOLID STATE ELECTRONICS      3 Units**  
**Prerequisite:** Admission to Elevator Constructor's Apprenticeship Program; current employment in the elevator industry.  
**6 hours lecture-laboratory.**  
Basic hydraulic theory. Different types of hole drilling. Installing the casing and power unit, and connecting pipe lines. Welding procedures for the cylinder and plumbing the jack. Assembly of the car sling and cab. Hydraulic troubleshooting. Rigging safety for escalators and moving walks. Escalator and moving walk mechanical and electrical components and installation procedures.
- APRT 177      BASIC ELEVATOR SOLID STATE ELECTRONICS II      3 Units**  
**Prerequisite:** Admission to Elevator Constructor's Apprenticeship Program; current employment in the elevator industry.  
**6 hours lecture-laboratory.**  
Continued study of basic elevator solid state electronics. Theory of inductors, diodes, zener diodes, light emitting diodes (LEDs) and photodiodes. Transistor and SCR theory. Study of analog integrated circuit development, integrated power supplies and OpAmp integrated circuits. Logic gate theory of AND, OR, NOR, NOT, XOR and XNOR gates. Preparation for NEIEP Mechanics Exam.
- APRT 180      MECHANICAL PIPING & RIGGING      2.5 Units**  
**Prerequisite:** Admission to Pipe Trades Residential Specialist Apprenticeship Program; current employment in the pipe trades industry.  
**4.5 hours lecture-laboratory.**  
Study and hands-on practice of safe rigging, handling and installation of mechanical equipment and piping.
- APRT 185      LEAD HAZARD TRAINING      2 Units**  
**Prerequisite:** Admission to Ironworkers Apprenticeship Program; current employment in the ironworking industry.  
**4 hours lecture-laboratory.**  
A study of the history of lead and the health hazards of lead exposure in the Ironworking trade. Teaches those elements of knowledge, coordination and skill needed for safety, stressing the use of proper protective equipment and work methods. OSHA regulations, sampling methods and legal rights of workers. First Aid/CPR training for certification
- APRT 188      SMALL STRUCTURE ERECTION      2 Units**  
**Prerequisite:** Admission to Ironworkers Apprenticeship Program; current employment in the ironworking industry.  
**4 hours lecture-laboratory.**  
An introduction to small structure erection of prefab and precast concrete buildings. Study of charts, tables, blueprints, anchors, framing and fasteners. Particular emphasis given to the rigging, handling and installing of precast concrete members.
- APRT 189      PRECAST CONCRETE BUILDINGS      2 Units**  
**Prerequisite:** Admission to Ironworkers Apprenticeship Program; current employment in the ironworking industry.  
**4 hours lecture-laboratory.**  
Overview of those elements of knowledge, coordination and skill needed in the safe and economical erection of a precast concrete building, placing particular emphasis on the rigging, handling and installation of the precast concrete members themselves.
- APRT 193      TYPES & USES OF PIPE JOINTS      2.5 Units**  
**Prerequisite:** Admission to Pipe Trades Residential Specialist Apprenticeship Program; current employment in the pipe trades industry.  
**4.5 hours lecture-laboratory.**  
An introduction to uses of copper, plastic, and cast iron joints. Identification and uses of special tools and equipment for joints and types of joint compounds will be presented.
- APRT 194      BUILDING PLUMBING TREES      2.5 Units**  
**Prerequisite:** Admission to Pipe Trades Residential Specialist Apprenticeship Program.  
**4.5 hours lecture-laboratory.**  
An introduction to the construction of plumbing trees. Course will include definitions and materials used for plumbing trees, ABS, water and gas piping, testing for tightness, and backing and strapping.
- APRT 195A      INTERMEDIATE TRADE MATHEMATICS FOR PLUMBING RESIDENTIAL SPECIALISTS      4.5 Units**  
**Prerequisite:** Admission to Pipe Trades Residential Specialist Apprenticeship Program; APRT 124.  
**9 hours lecture-laboratory.**  
A continuation of trade mathematics for residential specialist plumbers. Course includes advanced piping measurements and offsets.
- APRT 196A      INTERMEDIATE BLUEPRINT READING & ISOMETRIC DRAWING FOR PLUMBING RESIDENTIAL SPECIALISTS      4.5 Units**  
**Prerequisite:** Admission to Pipe Trades Residential Specialist Apprenticeship Program; current employment in the pipe trades industry.  
**9 hours lecture-laboratory.**  
A continuation of blueprint reading and isometric drawing for residential specialist plumbers. Course includes isometric piping drawings, piping codes, waste and vent piping drawings, hot and cold water and storm drainage drawings, and gas piping drawings.

**APRT 197A INTERMEDIATE PLUMBING FIXTURES 2.5 Units & APPLIANCES**

**Prerequisite:** APRT 126; Admission to Pipe Trades Residential Specialist Apprenticeship Program.

**4.5 hours lecture-laboratory.**

A continuation of plumbing fixtures and appliances which includes installation of plumbing fixtures, code requirements, finish tools and anchors, plumbing trim material, accessories, and special purpose installations.

**APRT 198 RESIDENTIAL PLUMBING SERVICE 2.5 Units & REPAIR**

**Prerequisite:** Admission to Pipe Trades Residential Specialist Apprenticeship Program.

**4.5 hours lecture-laboratory.**

Introduction to the tools, parts, equipment, techniques and practices of maintaining and repairing residential plumbing systems, past and contemporary, which would generally be encountered by those working exclusively in the housing industry.

**APRT 199 RESIDENTIAL MECHANICAL SERVICE 2.5 Units & REPAIR**

**Prerequisite:** Admission to Pipe Trades Residential Specialist Apprenticeship Program.

**4.5 hours lecture-laboratory.**

Introduction to residential mechanical equipment service and repair. Focus is on system operation, periodic maintenance and minor repair of heating and cooling equipment encountered by those working exclusively in the housing industry.

## ARABIC

Program offered by Foothill-De Anza Community Education IMPACT Program. **(408) 864-8817; www.shortcourses.fhda.edu.**

## ART

### Fine Arts & Communication

**(650) 949-7262  
www.foothill.edu/fa/**

**ART 1 INTRODUCTION TO ART 4.5 Units**  
**4 hours lecture, 1.5 hours laboratory.**

An introduction to new ways of thinking about the visual arts, including examinations of the visual elements and artistic media, particularly as they contribute to the development of visual literacy. Includes analysis of western and non-western traditions in the visual arts within a social and historical context. [Foothill GE: Humanities; Transferability: UC/CSU]

**ART 2A HISTORY OF ART: HISTORY OF WESTERN ART FROM PREHISTORY THROUGH EARLY CHRISTIANITY 4.5 Units**

**Advisory: Not open to students with credit in ART 2AH.**

**4 hours lecture, 1.5 hours laboratory.**

History of Western art from Prehistory through Early Christianity. An introductory survey examining images, objects, and architecture produced from the Paleolithic era to the end of the Roman Empire. We will discuss Prehistoric, Mesopotamian, Egyptian, Greek, Roman, and Early Byzantine culture. Illustrated lectures and readings. [Foothill GE: Humanities; Transferability: UC/CSU]

**ART 2AH HONORS ART HISTORY: HISTORY OF WESTERN ART FROM PREHISTORY THROUGH EARLY CHRISTIANITY 4.5 Units**

**Prerequisite:** Honors Institute participant.

**Advisory: Not open to students with credit in ART 2A.**

**4 hours lecture, 1.5 hours laboratory.**

An introductory survey examining images, objects, and architecture produced from the Paleolithic era to the end of the Roman Empire. We will discuss Prehistoric, Mesopotamian, Egyptian, Greek, Roman, and Early Byzantine culture. Illustrated lectures and readings. The honors sections expand the primary sources for the student. In addition to the textbook, students have a reading list of sources (on reserve in the library). Lectures

are more interactive and the student is expected to participate in group discussions. Exams are more exacting with an emphasis on the student being able to comfortably assimilate political, social, and economic factors into their analysis. [Foothill GE: Humanities; Transferability: UC/CSU]

**ART 2B HISTORY OF WESTERN ART FROM THE MIDDLE AGES TO THE RENAISSANCE 4.5 Units**

**Advisory: Not open to students with credit in ART 2BH.**

**4 hours lecture, 1.5 hours laboratory.**

A History of Western art from ca.600 through ca.1600. This course examines the Middle Ages and the Renaissance using images, objects, and architecture to develop a comprehensive understanding of the social, political, and religious forces that shaped this period. [Foothill GE: Humanities; Transferability: UC/CSU]

**ART 2BH HONORS HISTORY OF WESTERN ART FROM THE MIDDLE AGES TO THE RENAISSANCE 4.5 Units**

**Prerequisite:** Honors Institute participant.

**Advisory: Not open to students with credit in ART 2B.**

**4 hours lecture, 1.5 hours laboratory.**

A History of Western art from ca.600 through ca.1600. This course examines the Middle Ages and the Renaissance using images, objects, and architecture to develop a comprehensive understanding of the social, political, and religious forces that shaped this period. Illustrated lectures and readings. The honors sections expand the primary sources for the student. In addition to the textbook, students have a reading list of sources (on reserve in the library). Lectures are more interactive and the student is expected to participate in group discussions. Exams are more exacting with an emphasis on the student being able to comfortably assimilate political, social, and economic factors into their analysis. [Foothill GE: Humanities; Transferability: UC/CSU]

**ART 2C HISTORY OF WESTERN ART FROM THE BAROQUE TO POST IMPRESSIONISM 4.5 Units**

**Advisory: Not open to students with credit in ART 2CH.**

**4 hours lecture, 1.5 hours laboratory.**

History of Western Art from ca. 1600 to the 20<sup>th</sup> century. An introductory survey examining images, objects, and architecture produced from the late Renaissance to Post-Impressionism. Illustrated lectures and readings. [Foothill GE: Humanities; Transferability: UC/CSU]

**ART 2CH HONORS HISTORY OF WESTERN ART FROM THE BAROQUE TO POST IMPRESSIONISM 4.5 Units**

**Prerequisite:** Honors Institute participant.

**Advisory: Not open to students with credit in ART 2C.**

**4 hours lecture, 1.5 hours laboratory.**

History of Western Art from ca. 1600 to the 20<sup>th</sup> century. An introductory survey examining images, objects, and architecture produced from the late Renaissance to Post-Impressionism. Illustrated lectures and readings. The honors sections expand the primary sources for the student. In addition to the textbook, students have a reading list of sources (on reserve in the library). Lectures are more interactive and the student is expected to participate in group discussions. Exams are more exacting with an emphasis on the student being able to comfortably assimilate political, social, and economic factors into their analysis. [Foothill GE: Humanities; Transferability: UC/CSU]

**ART 2D AFRICAN, OCEANIC & NATIVE AMERICAN ART 4.5 Units**

**4 hours lecture, 1.5 hours laboratory.**

A chronological and thematic examination of arts produced by a selection of societies from Africa, Oceania, and Native North America. Includes the influences of these diverse non-Western arts on American art and society. Art objects will be analyzed within the relevant social and historical context and as part of a larger matrix of myth, ritual, religious belief, politics, and worldview. Includes an examination of art from West Africa (e.g., Nigeria: Ife, Benin, Yoruba, Igbo, etc.), Melanesia (e.g., New Guinea), Polynesia (e.g., Hawaii, Rapa Nui, New Zealand), and Native North

America (e.g., Woodlands, Southwest, Plains, Northwest Coast, Arctic and Subarctic, etc.) [Foothill GE: United States Cultures & Communities, Human; Transferability: UC/CSU]

**ART 2E A HISTORY OF WOMEN IN ART 4.5 Units**

**Advisory: Not open to students with credit in WMN 15.**  
4 hours lecture, 1.5 hour laboratory.

A chronological, thematic, and cross-cultural examination of art works and gender issues concerning women artists from the early Middle-Ages to the 21<sup>st</sup> century. Includes the influences on art produced by women of such issues as race, gender, socio-economic and political conditions, increasing urbanization, and conceptions of nature, etc. [Foothill GE: Humanities, Social & Behavioral Sciences; Transferability: UC/CSU]

**ART 3 MODERN ART & CONTEMPORARY THOUGHT 4.5 Units**

4 hours lecture, 1.5 hours laboratory.

A study of art and architecture from Impressionism to the present day emphasizing the importance of social, economic, and political influences on the art. This course is designed to relate contemporary artistic expression to modern thought. Lectures will be directed towards illustrating and interpreting the subjects listed in the course content. The text and references will be used to supplement these discussions. Class discussions will be encouraged and specific time set aside for this purpose. Field trips will be taken to museums. [Transferability: UC/CSU]

**ART 4A DRAWING I 3 Units**

**Advisory: Students taking this course to satisfy the AA/AS General Education requirement or CSU GE in humanities must complete ART 4AX.**  
6 hours lecture-laboratory.

An introductory course in drawing to develop the ability to perceive and define shape, volume, space, and light both representationally and expressively using black and white media. [Foothill GE: Humanities; Transferability: UC/CSU]

**ART 4AX STUDIO ART SEMINAR: DRAWING 1 Unit**

1 hour lecture.

Examination and critique of drawings. [Foothill GE: Humanities; Transferability: UC/CSU]

**ART 4B DRAWING II 3 Units**

**Advisory: ART 4A.**

6 hours lecture-laboratory.

Continuation of ART 4A; practice in further developing skills of observation, representation of form, volume, space and light, using color media, usually pastels. Increased emphasis on developing composition and content. [Transferability: UC/CSU]

**ART 4C DRAWING III 3 Units**

**Advisory: ART 4B; Students taking this course to satisfy the CSU General Education requirement in humanities must complete ART 4CX.**

May be taken 2 times for credit.

6 hours lecture-laboratory.

Continuation of DRAWING II. Further practice in developing skills of expressive and observational drawing, representing form, volume, space, color and light. Color media, usually but not limited to pastels. Increased emphasis on developing individual expression and content. [Transferability: UC/CSU]

**ART 4CX STUDIO ART SEMINAR: ADVANCED DRAWING 1 Unit**

1 hour lecture.

Examination and critique of colored drawings. [Transferability: UC/CSU]

**ART 4D FIGURE DRAWING 3 Units**

**Advisory: ART 4A, 4B recommended.**

May be taken 3 times for credit.

6 hours lecture-laboratory.

Continuation of principles introduced in ART 4A & 4B with special emphasis on the fundamentals of drawing the human figure. [Transferability: UC/CSU]

**ART 4E PORTRAIT DRAWING 3 Units**

**Advisory: ART 4A & 4B recommended.**

May be taken 3 times for credit.

6 hours lecture-laboratory.

Fundamentals of drawing the human head. Emphasis on use of charcoal and pastel to render the head in light and shadow. [Transferability: UC/CSU]

**ART 4F LANDSCAPE DRAWING 3 Units**

6 hours lecture-laboratory.

Introductory course in drawing representational landscape and natural forms. Practice in rendering plants and landscape elements in their environment. Class may focus on pencil, pen, ink wash and colored pencil techniques. [Transferability: UC/CSU]

**ART 5A BASIC TWO-DIMENSIONAL DESIGN 3 Units**

**Advisory: Students taking this course to satisfy the AA/AS General Education requirement or CSU GE in Humanities must complete ART 5AX.**  
6 hours lecture-laboratory.

Introduction to two dimensional design elements, principles of composition, and design components that include content development, visual perception, and material exploration. And emphasis on problem solving techniques and personal discovery. [Foothill GE: Humanities; Transferability: UC/CSU]

**ART 5AX STUDIO ART SEMINAR: DESIGN 1 Unit**

**Formerly: ART 15AX**

1 hour lecture

Examination and critique of two dimensional art. [Foothill GE: Humanities; Transferability: UC/CSU]

**ART 5B THREE-DIMENSIONAL DESIGN 3 Units**

**Advisory: ART 4A & 5A.**

6 hours lecture-laboratory.

Introduction to three-dimensional design elements and principals with an emphasis on sculptural and structural concepts applied in projects using various materials. [Transferability: UC/CSU]

**ART 5L DESIGN LABORATORY 1 Unit**

**Corequisite: ART 5A or 5B.**

May be taken 3 times for credit.

3 hours laboratory.

Supervised studio practice in design projects. [Transferability: CSU; UC approval is pending.]

**ART 6 COLLAGE & COMPOSITION 3 Units**

**Advisory: ART 4A or 5A.**

May be taken 3 times for credit.

6 hours lecture-laboratory.

Studio experience in structuring the elements of visual form using, but not limited to, the exploratory medium of collage. Development of a personal sensitivity to visual organization and the vocabulary of art as it relates to expressiveness and content. [Transferability: UC/CSU]

**ART 8 BASIC PERSPECTIVE DRAWING 3 Units**

May be taken 3 times for credit.

6 hours lecture-laboratory.

Sketching objects realistically in linear representation. Exploring ways to depict three-dimensional space on a flat drawing surface. [Transferability: UC/CSU]

**ART 9 MATERIALS & MEDIA 3 Units**

6 hours lecture-laboratory.

An introduction to basic materials and techniques of the artist with practical experience in their simple applications. No required background or experience required. [Transferability: UC/CSU]

**ART 11 INTRODUCTION TO MEXICAN ART & ARCHITECTURE 4 Units**

4 hours lecture.

A study of the influence of Spanish colonization and the impact on indigenous art and architecture. Emphasis on both the transformation of identity in art as a result of the cross cultural experience and the

changing perceptions of culture on a local and global level. Emphasis on the similarities and differences of various cultural perspectives in art making beginning with Mexico and the United States. [Foothill GE: Humanities; Transferability: UC/CSU]

**ART 12 INTRODUCTION TO ASIAN ART 4.5 Units**  
4 hours lecture, 1.5 hours laboratory.

An introduction to the art of India, China and Japan from the Neolithic Age to the present, covering painting, sculpture, architecture and ceramics. This course emphasizes the cultural, social and historical meaning of art and traces the changes in style, meaning, and use of art within the broader context of the great religious traditions of China, Japan, and India. [Transferability: UC/CSU]

**ART 13 INTRODUCTION TO ISLAMIC ART 4.5 Units**  
4 hours lecture, 1.5 hours laboratory.

The arts and architecture of the Islamic peoples from the seventh through the 20<sup>th</sup> Century. [Transferability: UC/CSU]

**ART 14 AMERICAN ART 4.5 Units**  
4 hours lecture, 1.5 hour laboratory.

A history of the culturally diverse arts produced in North America (specifically the United States) from prehistory to the present. American art is considered thematically and chronologically, focusing on the important influences on art of nature, landscape, urbanization, gender, race, religion, ethnicity, socio-economic and political reforms, and civil and international wars. [Foothill GE: Humanities; Transferability: UC/CSU]

**ART 19A PAINTING 3 Units**  
Advisory: ART 4A or 5A; ART 4B or 20A.

6 hours lecture-laboratory.  
Studio experiences in basic techniques of painting and composition using oil and/or acrylic paints. [Transferability: UC/CSU]

**ART 19B PAINTING 3 Units**  
Prerequisite: ART 19A.

6 hours lecture-laboratory.  
Continuation of ART 19A. Further studies in studio techniques. [Transferability: UC/CSU]

**ART 19C PAINTING 3 Units**  
Advisory: ART 19B.

May be taken 2 times for credit.  
6 hours lecture-laboratory.  
Advanced studio experiences in techniques of painting and composition using oil and/or acrylic paints. [Transferability: UC/CSU]

**ART 19L PAINTING LABORATORY 1 Unit**  
Advisory: Pass/No Pass.

Corequisite: ART 19A, 19B, or 19C.  
May be taken 4 times for credit.  
3 hours laboratory.  
Supervised studio practice in painting projects. [Transferability: UC/CSU]

**ART 20A COLOR 3 Units**  
6 hours lecture-laboratory.

A fundamental course in color and its creative application. [Transferability: UC/CSU]

**ART 20B COLOR 3 Units**  
Prerequisite: ART 20A.

6 hours lecture-laboratory.  
Continued practice in creative application of color theory with emphasis on the study of perception, simultaneous contrast and Munsell theory. [Transferability: UC/CSU]

**ART 35X HONORS SPECIAL PROJECTS IN ART 1.5 Units**  
May be taken 6 times for credit.

4.5 hours laboratory.  
Individual advanced projects in painting, drawing, sculpture, ceramics and photography. [Transferability: CSU]

**ART 36 HISTORY OF GRAPHIC DESIGN 4 Units**

Advisory: Not open to students with credit in GID 1.  
4 hours lecture, 1 hour laboratory.

A study of the development of visual communication in art, graphic design, illustration and popular culture. Emphasis on the role, impact and interpretation of images, symbols, and typography used in informative and persuasive media. [Foothill GE: Humanities; Transferability: UC/CSU]

**ART 37A BEGINNING ETCHING 3 Units**

Advisory: Not open to students with credit in GID 42 or GRDS 37A.  
6 hours lecture-laboratory.

Beginning techniques in printmaking, including embossing, monoprinting, chine collee, drypoint, softground, line etching, handcoloring, printing and the editioning of plates. [Transferability: UC/CSU]

**ART 37B INTERMEDIATE ETCHING 3 Units**  
Prerequisite: ART 37A.

6 hours lecture-laboratory.  
Continuation of ART 37A with introduction of further techniques including aquatint, sugarlift, photographic processes, and contemporary developments in the discipline. [Transferability: UC/CSU]

**ART 37C ADVANCED ETCHING 3 Units**  
Prerequisite: ART 37B.

May be taken 2 times for credit.  
6 hours lecture-laboratory.  
The application and exploration of techniques introduced in ART 37A and ART 37B toward the development of personal and expressive imagery and style. [Transferability: UC/CSU]

**ART 39A BEGINNING SCREEN PRINTING 3 Units**  
Advisory: ART 4A or 5A; Not open to students with credit in GID 46 or GRDS 39A.

6 hours lecture-laboratory.  
An introduction to screen printing processes, exploring the basic techniques for making cut stencil designs and drawn stencil images. [Transferability: UC/CSU]

**ART 39B PHOTOGRAPHIC SCREEN PRINTING 3 Units**  
Prerequisite: ART 39A or GID 46.

Advisory: PHOT 1 or GID 74.  
6 hours lecture-laboratory.  
Introduction to photographic techniques in screen printing, working with computer generated or darkroom produced transparencies in stencil making. [Transferability: UC/CSU]

**ART 39C SCREEN PRINTING PRACTICES 3 Units**  
Prerequisite: ART 39B.

6 hours lecture-laboratory.  
A course for experienced students to explore combining the various techniques of screen printing in the development of images with strong formal and conceptual qualities. The printing of uniform editions and the presentation of final artwork will be discussed. [Transferability: UC/CSU]

**ART 39L SCREEN PRINTING LABORATORY .5 Unit**  
Corequisite: ART 39A, 39B, or 39C.

May be taken 6 times for credit.  
2 hours laboratory.  
Supervised studio practice in screen printing projects. [Transferability: CSU; UC approval is pending.]

**ART 44 CERAMIC SCULPTURE 3 Units**  
Prerequisite: ART 45A.

Advisory: Concurrent enrollment in ART 45L or 45LX recommended.  
May be taken 2 times for credit.  
6 hours lecture-laboratory.  
Studio practice in designing and creating original ceramic sculpture. [Transferability: UC/CSU]

<b>ART 44L</b>	<b>CERAMICS LABORATORY</b>	<b>.5 Unit</b>	<b>ART 45CL</b>	<b>CERAMICS LABORATORY</b>	<b>.5 Unit</b>
<p>Advisory: Pass/No Pass. Corequisite: ART 44. May be taken 2 times for credit. 2 hours laboratory. Supervised studio practice in ceramics processes, related to skills and materials being presented in ART 44. [Transferability: CSU]</p>			<p>Advisory: Pass/No Pass. Corequisite: ART 45C. May be taken 2 times for credit. 2 hours laboratory. Supervised studio practice in ceramics processes, related to skills and materials being presented in ART 45C. [Transferability: CSU; UC approval is pending.]</p>		
<b>ART 45A</b>	<b>BEGINNING CERAMICS HANDBUILDING</b>	<b>3 Units</b>	<b>ART 45F</b>	<b>LOW-TEMPERATURE CERAMIC FIRING &amp; GLAZING TECHNIQUES</b>	<b>3 Units</b>
<p>Advisory: Concurrent enrollment in ART 45AL; students taking this course to satisfy the AA/AS General Education requirement or CSU GE in humanities must complete ART 45AX. May be taken 2 times for credit. 6 hours lecture-laboratory. An introduction to techniques of hand-building and basic glazing. [Foothill GE: Humanities; Transferability: UC/CSU]</p>			<p>Prerequisite: ART 45A or 45B. Advisory: Concurrent enrollment in ART 45FL recommended. May be taken 2 times for credit. 6 hours lecture-laboratory. Studio practice in the glazing and firing of ceramic pieces using four low-temperature methods: electric kiln oxidation firing, luster firing, raku firing and pit firing. [Transferability: UC/CSU]</p>		
<b>ART 45AL</b>	<b>CERAMICS LABORATORY</b>	<b>.5 Unit</b>	<b>ART 45FL</b>	<b>CERAMICS LABORATORY</b>	<b>.5 Unit</b>
<p>Advisory: Pass/No Pass. Corequisite: ART 45A. May be taken 2 times for credit. 2 hours laboratory. Supervised studio practice in ceramics processes, related to skills and materials being presented in ART 45A. [Transferability: CSU; UC approval is pending.]</p>			<p>Advisory: Pass/No Pass. Corequisite: ART 45F. May be taken 2 times for credit. 2 hours laboratory. Supervised studio practice in ceramics processes, related to skills and materials being presented in ART 45F. [Transferability: CSU; UC approval is pending.]</p>		
<b>ART 45AX</b>	<b>STUDIO ART SEMINAR: CERAMICS (HANDBUILDING)</b>	<b>1 Unit</b>	<b>ART 45L</b>	<b>CERAMICS LABORATORY</b>	<b>.5 Unit</b>
<p>1 hour lecture. Examination and critique of ceramic art (hand-building). [Foothill GE: Humanities; Transferability: UC/CSU]</p>			<b>ART 45LX</b>	<b>CERAMICS LABORATORY</b>	<b>1 Unit</b>
<b>ART 45B</b>	<b>BEGINNING CERAMICS POTTER'S WHEEL</b>	<b>3 Units</b>	<p>Advisory: Pass/No Pass. Corequisite: Concurrent enrollment in a 2 or 3 unit ceramics course. May be taken 2 times for credit. 2 hours laboratory. Supervised studio practice in ceramics processes, related to skills and materials of other ceramics courses in which the student is currently enrolled. [Transferability: UC/CSU]</p>		
<p>Advisory: Concurrent enrollment in ART 45BL recommended; students taking this course to satisfy the CSU General Education requirement in humanities must complete ART 45AX. May be taken 2 times for credit. 6 hours lecture-laboratory. An introduction to techniques of throwing on the potter's wheel and basic glazing. [Transferability: UC/CSU]</p>			<b>ART 46B</b>	<b>POTTER'S WHEEL II</b>	<b>3 Units</b>
<b>ART 45BL</b>	<b>CERAMICS LABORATORY</b>	<b>.5 Unit</b>	<p>Prerequisite: ART 45B. Advisory: Concurrent enrollment in ART 45L recommended. May be taken 2 times for credit. 6 hours lecture-laboratory. Provides intermediate level instruction in clay processes covering intermediate wheel-throwing methods, glazing, decorating, and firing procedures. Explores technical problem solving, and creative design. [Transferability: CSU]</p>		
<p>Advisory: Pass/No Pass. Corequisite: ART 45B. May be taken 2 times for credit. 2 hours laboratory. Supervised studio practice in ceramics processes, related to skills and materials being presented in ART 45B. [Transferability: UC/CSU]</p>			<b>ART 47</b>	<b>WATERCOLOR</b>	<b>3 Units</b>
<b>ART 45BX</b>	<b>STUDIO ART SEMINAR: CERAMICS (WHEEL THROWING)</b>	<b>1 Unit</b>	<p>Advisory: ART 4A or 5A; ART 4B, 20A. May be taken 3 times for credit. 6 hours lecture-laboratory. Study of transparent and opaque watercolor techniques. Emphasis on basic techniques of painting and composition. [Transferability: UC/CSU]</p>		
<p>1 hour lecture. Examination and critique of ceramic arts (wheel-throwing). [Transferability: UC/CSU]</p>			<b>ART 49</b>	<b>MONOPRINTING</b>	<b>3 Units</b>
<b>ART 45C</b>	<b>ADVANCED CERAMICS</b>	<b>3 Units</b>	<p>Advisory: Not open to students with credit in GID 48. May be taken 3 times for credit. 6 hours lecture-laboratory. Studio experiences in printmaking methods that create one-of-a-kind fine art prints. Emphasis on artistic growth of imagery while developing technical skills with tools, media and techniques. [Transferability: CSU]</p>		
<p>Prerequisite: ART 45A and 45B. Advisory: Concurrent enrollment in ART 45CL or 45LX recommended. May be taken 2 times for credit. 6 hours lecture-laboratory. Laboratory practice in throwing advanced forms on the potter's wheel, combining hand-built and wheel-thrown forms, glazing these forms, and understanding kiln loading and firing procedures. [Transferability: UC/CSU]</p>			<b>ART 56</b>	<b>DIGITAL ART &amp; GRAPHICS</b>	<b>4 Units</b>
			<p>Advisory: Familiarity with computer operating systems; ART 4A or GID 70; ART 5A; PHOT 1; not open to students with credit in GID 74, GRDS 56 or PHOT 75. May be taken 3 times for credit. 2 hours lecture, 2 hours lecture-laboratory, 3 hours laboratory. Basic instruction using a computer for painting, drawing, image processing, photo composites and typography. Emphasis on image making and creative problem solving. [Transferability: UC/CSU]</p>		

**ART 69 INTRODUCTION TO PRINTMAKING 3 Units**  
 May be taken 3 times for credit.  
 6 hours lecture-laboratory.  
 Introduction to the basic processes of blockcut, intaglio, screen, mono- and mixed-media original prints. [Transferability: UC/CSU]

**ART 72 STUDIO ART PORTFOLIO PREPARATION 3 Units**  
 1 hour lecture, 5 hours lecture-laboratory  
 Preparation, organization, and assembly of previous and current artwork to create a cohesive studio art portfolio. This course enables students and practicing artists the preparation in creating a professional portfolio for transfer into higher institutions, career opportunities, art exhibitions, art competitions, funding, or professional practice. Documenting work, writing artist statements, practice interviews, and assembling portable portfolios are included in this course. [Transferability: CSU]

**ART 80 MURAL MAKING: COMMUNITY ART PROJECT 3 Units**  
 Advisory: ART 4A or 15A; ART 19A, 20A.  
 6 hours lecture-laboratory.  
 Design and production of public mural projects. Exploration of history, cultural empowerment, identity and communication through sight specific public art. Studio experience in basic painting techniques and composition. [Transferability: UC/CSU]

**ART 83 SERVICE LEARNING PROJECTS 4 Units**  
 Advisory: Entry level design and software courses recommended.  
 May be taken 3 times for credit.  
 6 hours lecture-laboratory, 3 hours laboratory.  
 Fulfillment of work-related assignments for on-campus and off-campus not-for-profit organizations. Faculty coordinator helps the student apply skills learned in graphic arts courses to community-based projects. Disciplines include graphic design, photography and studio art. [Transferability: CSU]

**ART 86 PAINTING WITH THE COMPUTER 3 Units**  
 Advisory: Familiarity with computer operations.  
 May be taken 3 times for credit.  
 6 hours lecture-laboratory.  
 Basic instruction using computers and computer software to produce images for artistic expression and graphic design. [Transferability: CSU]

**ART 87 ART OF THE ELECTRONIC AGE 2 Units**  
 2 hours lecture.  
 Study of electronic art emphasizing the use of technological equipment, lasers, video, computers, photography, digital media, multimedia and communication technology for exhibition, installation, demonstration, research and performance art. [Transferability: CSU]

**ART 190 DIRECTED STUDY .5 Unit**  
**ART 190X 1 Unit**  
**ART 190Y 1.5 Units**  
**ART 190Z 3 Units**  
 Non-degree applicable credit course.  
 Advisory: Pass/No Pass.  
 Any combination of ART 190–190Z may be taken 6 times for credit, however, no single course may be taken more than 6 times for credit.  
 1.5 hours laboratory for each .5 unit of credit.  
 For students who desire or require additional help in attaining comprehension and competency in learning skills.

## ASTRONOMY

Physical Sciences, Mathematics & Engineering (650) 949-7259  
[www.foothill.edu/ast/](http://www.foothill.edu/ast/)

**ASTR 10A GENERAL ASTRONOMY: SOLAR SYSTEM 5 Units**

Advisory: Concurrent enrollment in ASTR 10L recommended.  
 5 hours lecture.  
 Non-technical introduction to astronomy, with emphasis on the planets, dwarf planets, moons, and smaller bodies which make up our solar system, as well as the scientific search for life elsewhere in the universe. Topics include the nature of light, the atom, and telescopes, an examination of the planets and their moons and rings, dwarf planets, comets, asteroids, and meteors, catastrophic events (including the impact that may have killed the dinosaurs), the search for planets and life around other stars, the challenges of space travel, and modern views on extraterrestrial contact. No background in science or math is assumed. [Foothill GE: Natural Sciences; Transferability: UC/CSU]

**ASTR 10B GENERAL ASTRONOMY: STARS, GALAXIES, COSMOLOGY 5 Units**

Advisory: Concurrent enrollment in ASTR 10L is recommended. Not open to students with credit in ASTR 10BH.  
 5 hours lecture.  
 Non-technical introduction to astronomy, with emphasis on stars, galaxies, and the origin and evolution of the universe. Topics covered include the nature of light, atoms, and telescopes; the birth, evolution, and death of stars (including an introduction to black holes); the Milky Way Galaxy and its development over time; normal galaxies, active galaxies, and cannibal galaxies; and the Big Bang model (of the origin and ultimate fate of the cosmos). No background in science or math is assumed. [Foothill GE: Natural Sciences; Transferability: UC/CSU]

**ASTR 10BH HONORS GENERAL ASTRONOMY: STARS, GALAXIES, COSMOLOGY 5 Units**

Prerequisite: Honors Institute participant.  
 Corequisite: ASTR 34H.  
 Advisory: Not open to students with credit in ASTR 10B.  
 5 hours lecture.  
 A non-technical introduction to astronomy, with an emphasis on stars, galaxies, and the origin and evolution of the universe, with additional material for honors students. Topics covered include the nature of light, atoms, and telescopes; the birth, evolution, and death of stars (including an introduction to black holes); the Milky Way Galaxy and its development over time; normal galaxies, active galaxies, and cannibal galaxies; and the Big Bang model (of the origin and ultimate fate of the cosmos.) [Foothill GE: Natural Sciences; Transferability: UC/CSU]

**ASTR 10L ASTRONOMY LABORATORY 1 Unit**

Corequisite: ASTR 10A, 10B or 10BH.  
 1 hour lecture-laboratory, 2 hours laboratory. In-class field trips.  
 A hands-on approach to the scientific method, using astronomical data and equipment. Divided into small lab groups, students will do experiments and observing projects about a range of astronomical topics, including star and constellation finding, the phases of the Moon, the reasons for the seasons, the rotation, revolution, and sphericity of the Earth, the H-R Diagram and the classification of stars, Hubble's Law and the expansion of the universe, the questionable validity of astrology, tracking the moons of Jupiter, etc. Each session will also include guided discussion of the meaning and importance of the data and how the particular activity fits into the larger scheme of understanding the universe and applying the scientific method. [Foothill GE: Natural Sciences; Transferability: UC/CSU]

**ASTR 34H HONORS INSTITUTE SEMINAR IN ASTRONOMY 1 Unit**

*Formerly: ASTR 34*

**Prerequisite:** Honors Institute participant.

**Advisory:** Not open to students with credit in ASTR 34.

**Corequisite:** Completion of, or concurrent enrollment in ASTR 10A or 10B. 1 hour lecture.

A seminar in directed readings, discussions and projects in astronomy. Specific topics to be determined by the instructor. [Transferability: CSU; UC credit may be granted after transfer and upon portfolio review.]

**ASTR 36 SPECIAL PROJECTS IN ASTRONOMY 1 Unit**

**ASTR 36X 2 Units**

**ASTR 36Y 3 Units**

Any combination of ASTR 36–36Y may be taken 6 times for credit, however, no single course may be taken more than 6 times for credit. 3 hours laboratory for each unit of credit.

A seminar in directed reading and discussion in astronomy. An opportunity to do astronomical research and observing at Foothill College Observatory. [Transferability: CSU]

**BIOL 8 BASIC NUTRITION 5 Units**

**Advisory:** MATH 200; eligibility for ENGL 1A.

5 hours lecture.

Introductory nutrition course intended for non-science majors. Basic biological function of nutrients. Nutritional needs throughout the life span. Relationship between nutrition and disease. Current scientific, social, and psychological issues and controversies in nutrition. Not intended for students wishing to pursue a career in health care. [Foothill GE: Lifelong Understanding; Transferability: UC/CSU]

**BIOL 9 ENVIRONMENTAL BIOLOGY 4 Units**

4 hours lecture.

An introduction to environmental biology and a survey of the biological and ecological principles needed to understand environmental issues. Global, national and local perspectives on current issues such as resource use, pollution, biodiversity and impacts of human population growth. [Foothill GE: Lifelong Understanding, Natural Sciences; Transferability: UC/CSU]

**BIOL 9L ENVIRONMENTAL BIOLOGY LABORATORY 1 Unit**

**Corequisite:** BIOL 9.

1 hour lecture-laboratory, 2 hours laboratory. In-class field trips.

An introduction to environmental biology through laboratory and field experiments, examination of local examples illustrating ecological concepts, use of sampling techniques to assess environmental quality, and student research of environmental topics. [Foothill GE: Natural Sciences; Transferability: UC/CSU]

**BIOL 10 GENERAL BIOLOGY: BASIC PRINCIPLES 5 Units**

4 hours lecture, 1 hour lecture-laboratory, 2 hours laboratory.

Methods of science and basic principles of biology. Special emphasis on genetics, ecology, overpopulation, nutrition and disease prevention. [Foothill GE: Natural Sciences; Transferability: UC/CSU]

**BIOL 12 HUMAN GENETICS 4 Units**

4 hours lecture.

An introduction to the nature of human inheritance. The molecular basis of inheritance, Mendelian genetics, population genetics, common human genetic diseases, factors affecting human diversity and the social and moral implications of recent advances in genetics. [Transferability: UC/CSU]

**BIOL 13 MARINE BIOLOGY 5 Units**

4 hours lecture, 1 hour lecture-laboratory, 2 hours laboratory, 3 all-day field trips.

An introduction to biology using marine animals, plants and ecosystems. Major emphasis given to the ecology and conservation issues with examples drawn from California marine life. Conceptual development of seashore, estuaries, coral reefs, kelp forests, and pelagic life as interrelated ecosystems. [Foothill GE: Natural Sciences; Transferability: UC/CSU]

**BIOL 14 HUMAN BIOLOGY 5 Units**

4 hours lecture, 1 hour lecture-laboratory, 2 hours laboratory.

An introduction to biology using human beings as the exemplary organism. The evolution and biological unity of the human species and of all life forms; American and global patterns of human biological diversity; reproduction and heredity; how human organ systems function; humans and their environment; the uses and misuses of the scientific method; the scientific and biological bases for human equality. [Foothill GE: United States Cultures & Communities, Natural Sciences; Transferability: UC/CSU]

**BIOL 15 CALIFORNIA ECOLOGY/NATURAL HISTORY 5 Units**

4 hours lecture, 1 hour lecture-laboratory, 2 hours laboratory, all-day field trips.

An introduction to ecology, natural history and field biology through the study, largely in an outdoor setting, of the plants and animals of the San Francisco Bay area. [Foothill GE: Natural Sciences; Transferability: UC/CSU]

## BIOLOGY

**Biological & Health Sciences (650) 949-7249**  
[www.foothill.edu/bio/programs/biosci/](http://www.foothill.edu/bio/programs/biosci/)

**BIOL 1A PRINCIPLES OF CELL BIOLOGY 6 Units**

**Prerequisite:** CHEM 1A.

**Advisory:** Students taking the biology majors' sequence (BIOL 1A, 1B, 1C, 1D) are strongly advised to take the sequence in order and in its entirety.

4 hours lecture, 2 hours lecture-laboratory, 4 hours laboratory.

An introduction to biological molecules, cellular structure and function, bioenergetics, the genetics of both prokaryotic and eukaryotic organisms, cell communication and signaling, the cell cycle, and elements of molecular biology. Intended for biology majors. [Foothill GE: Natural Sciences; Transferability: UC/CSU]

**BIOL 1B FORM & FUNCTION IN PLANTS & ANIMALS 6 Units**

**Prerequisite:** BIOL 1A.

**Advisory:** Students taking the biology majors' sequence (BIOL 1A, 1B, 1C, 1D) are strongly advised to take the sequence in order and in its entirety.

4 hours lecture, 2 hours lecture-laboratory, 4 hours laboratory.

An introduction to the structure and physiological processes of plants and animals. Transport systems, reproduction, digestion, gas exchange, regulation of the internal environment, responses to external stimuli, nervous systems, hormones, and locomotion. [Foothill GE: Natural Sciences; Transferability: UC/CSU]

**BIOL 1C EVOLUTION, SYSTEMATICS & ECOLOGY 6 Units**

**Prerequisite:** BIOL 1A.

**Advisory:** Students taking the biology majors' sequence (BIOL 1A, 1B, 1C, 1D) are strongly advised to take the sequence in order and in its entirety.

4 hours lecture, 2 hours lecture-laboratory, 4 hours laboratory.

Principles of evolutionary theory, classification of organisms, and basic ecology. Phylogenetic survey of the major groups of organisms (bacteria, protists, plants, animals and fungi) and their evolutionary history. [Foothill GE: Natural Sciences; Transferability: UC/CSU]

**BIOL 1D MOLECULAR GENETICS 4 Units**

**Prerequisite:** BIOL 1A.

**Advisory:** Students taking the biology majors' sequence (BIOL 1A, 1B, 1C, 1D) are strongly advised to take the sequence in order and in its entirety; students may choose to take BIOL 1DL to obtain laboratory experience in this subject.

4 hours lecture.

An introduction to molecular biology with an emphasis in molecular genetics, cell communication, and developmental biology. [Transferability: UC/CSU]

**BIOL 17 BIOTECHNOLOGY & SOCIETY 4 Units**  
4 hours lecture.  
Scientific principles and techniques used in biotechnology. Use of molecular biology, cell biology, microbiology and immunology to solve problems of mankind and the environment. Current technical, ethical, social, and safety concerns presented by applications of biotechnology. [Transferability: UC/CSU]

**BIOL 34H HONORS INSTITUTE SEMINAR IN BIOLOGY 1 Unit**  
*Formerly: BIOL 34*  
Prerequisite: Honors Institute participant.  
1 hour lecture.  
A seminar in directed readings, discussions and projects in biology. Specific topics to be determined by the instructor. [Transferability: CSU; UC credit may be granted after transfer and upon portfolio review.]

**BIOL 40A HUMAN ANATOMY & PHYSIOLOGY I 5 Units**  
Prerequisite: High school biology or BIOL 10 or BIOL 14 or equivalent; high school chemistry or CHEM 30A or equivalent.  
Advisory: ENGL 1A, ESLL 26 or equivalent.  
4 hours lecture, 1 hour lecture-laboratory, 2 hours laboratory.  
Basic human anatomy and physiology. Emphasis on integration of systems and homeostatic mechanisms. Physical and chemical basis of life, histology and integumentary, skeletal and muscular systems. Designed for majors that require fundamental background in human anatomy and physiology. Completion of this course is required for BIOL 40B. [Transferability: UC/CSU]

**BIOL 40B HUMAN ANATOMY & PHYSIOLOGY II 5 Units**  
Prerequisite: BIOL 40A or equivalent.  
4 hours lecture, 1 hour lecture-laboratory, 2 hours laboratory.  
Anatomy and physiology of the nervous system, cardiovascular system and respiratory system. Completion of this course is required for BIOL 40C. [Transferability: UC/CSU]

**BIOL 40C HUMAN ANATOMY & PHYSIOLOGY III 5 Units**  
Prerequisite: BIOL 40B or equivalent.  
4 hours lecture, 1 hour lecture-laboratory, 2 hours laboratory.  
Anatomy and physiology of the digestive system; metabolism; urinary system; fluid, electrolyte and acid/base balance; lymphatic system; endocrine system; and reproductive system. Completion of BIOL 40B is required for enrollment in this course. [Transferability: UC/CSU]

**BIOL 41 MICROBIOLOGY 6 Units**  
Prerequisite: High school chemistry or CHEM 30A.  
Advisory: ESLL 25 and 235; critical reading skills and knowledge of English sentence structure; ability to comprehend spoken English in academic context.  
4 hours lecture, 2 hours lecture-laboratory, 4 hours laboratory.  
Morphology and physiology of bacteria, fungi and viruses. Mechanisms of pathogenicity, host-parasite relationships, the immune response and principles of disease transmission. Techniques of microbial control including sterilization, aseptic procedures, use of disinfectants, antiseptics and chemotherapy. [Foothill GE: Natural Sciences; Transferability: UC/CSU]

**BIOL 45 INTRODUCTION TO HUMAN NUTRITION 4 Units**  
Prerequisite: CHEM 30A or 1 year of high school chemistry; BIOL 40A and 40C; BIOL 40A or 40C may be taken concurrently.  
Advisory: ENGL 1A or ESLL 26.  
4 hours lecture.  
Introduction to the medical aspects of nutrition. Biological function and chemical classification of nutrients. Nutritional needs throughout the lifespan. Effects of nutritional deficiencies and excesses. Recommended nutrient intakes and the role of diet in the development of chronic disease. Intended for students wishing to pursue a career in health care. [Foothill GE: Lifelong Understanding; Transferability: UC/CSU]

**BIOL 58 FUNDAMENTALS OF PHARMACOLOGY 4 Units**  
*Formerly: BIOL 46*  
Prerequisite: CHEM 30B; BIOL 40A, 40B, 40C.  
Advisory: ENGL 1A or ESLL 26; BIOL 40C may be taken concurrently.  
4 hours lecture.

General principles of pharmacology. Emphasis on drug-receptor interactions, second messenger systems, determinants of drug response, pharmacokinetics, bio transformation and excretion, pharmacogenetics, drug development and legal aspects of drug distribution. Application of pharmacological principles and concepts with emphasis on the various pharmacological classes of drugs in diverse patient populations. [Transferability: CSU]

**BIOL 71 ADVANCED MOLECULAR BIOLOGY TECHNIQUES 2 Units**  
Prerequisite: Laboratory experience (high school and/or professional experience).  
Advisory: BIOL 71 and BTEC 71 are interchangeable. High school biology, chemistry, algebra recommended.  
May be taken 2 times for credit.  
4 hours lecture-laboratory.

Understanding, using and performing DNA sequencing and cloning techniques in a research and production setting. Includes applications of cDNA and PCR product sequencing, historical and theoretical basis of conventional and automated DNA sequencing, experimental design of sequencing methods, oligonucleotide synthesis, construction of sequencing and expressions plasmids, and vectorology. Laboratory exercises will involve DNA and RNA manipulation using established protocols and computer assisted methods (bioinformatics). [Transferability: CSU]

**BIOL 90A BIOLOGY EXPERIENTIAL INTERNSHIP 4 Units**  
Prerequisite: Acceptance into the FHDA Internship program.  
May be taken 6 times for credit.  
12 hours laboratory.

Off-campus supervised experiential education of Biology students in laboratory or technology support environment. Opportunity for practical application of knowledge, skills and abilities acquired in Biology and related course work. Opportunity for additional hands-on training in all aspects of biologically laboratory related and/or technology support skills. Exposure to varied protocols, methodologies and practices in a professional research environment. [Transferability: CSU]

**BIOL 90B BIOLOGY EXTENDED EXPERIENTIAL INTERNSHIP 6 Units**  
Prerequisite: Acceptance into the FHDA Internship program.  
May be taken 2 times for credit.  
18 hours laboratory.

Off-campus supervised experiential education of Biology students in laboratory or technology support environment. Opportunity for practical application of knowledge, skills and abilities acquired in Biology and related course work. Opportunity for additional hands-on training in all aspects of biologically laboratory related and/or technology support skills. Exposure to varied protocols, methodologies and practices in a professional research environment. [Transferability: CSU]

**BIOL 190X DIRECTED STUDY 1 Unit**  
Non-degree applicable credit course.  
Advisory: Pass/No Pass.  
May be taken 6 times for credit.  
.5 hour lecture and 3.5 hours laboratory.  
Instructor permission required. For students who desire or require additional help in attaining comprehension and competency in learning skills.

## BIOTECHNOLOGY

Biological & Health Sciences (650) 949-7249  
[www.foothill.edu/bio/programs/biotech/](http://www.foothill.edu/bio/programs/biotech/)

### BTEC 10 BIOTECHNOLOGY: GENERAL PRINCIPLES 5 Units

**Advisory:** Recent high school algebra or MATH 220; high school biology; eligibility for ENGL 1A or ESLL 26.

**4 hours lecture, 1 hour lecture-laboratory, 2 hours laboratory.**

Introduction to the field of biotechnology. Topics covered include history, applications of biotechnology (in health care, agriculture, forensics, and the study of evolution), bioethics, the scientific method, lab safety and record-keeping, and instrumentation. Instruction in cell and molecular biology. May include field trips and/or presentations by industry speakers. Will allow for career exploration. [Transferability: CSU; UC approval is pending.]

### BTEC 51A CELL BIOLOGY FOR BIOTECHNOLOGY 3 Units

**3 hours lecture.**

Introduction to cell biology. Topics to include molecular and cellular structure, cellular metabolism, cell division, DNA replication, transcription and translation. [Transferability: CSU]

### BTEC 51AL CELL BIOLOGY LABORATORY FOR BIOTECHNOLOGY 5.5 Units

**Prerequisite:** High school algebra or MATH 220; eligibility for ENGL 110 or ESLL 25; high school biology or BIOL 10; CHEM 30A and 30B or equivalent.

**Corequisites:** Completion of, or concurrent enrollment in, BTEC 51A or equivalent.

**2 hours lecture, 10 hours laboratory.**

Introduction to the biological laboratory techniques and methods used in cell biology. Topics to include solution preparation, use of pH meters, cellular fractionation by centrifugation, enzymology, spectrophotometry, chromatography, microscopy, and electrophoresis. Laboratory exercises will also reinforce scientific method, lab safety, importance of laboratory notebooks, applied problem solving, and fundamentals of instrumentation. [Transferability: CSU]

### BTEC 52A MOLECULAR BIOLOGY FOR BIOTECHNOLOGY 3 Units

**3 hours lecture.**

Introduction to molecular biology. Topics to include organization of the genome, control of gene expression, oncogenes, molecular events of the cell cycle, theory and applications of recombinant DNA technology. [Transferability: CSU]

### BTEC 52AL MOLECULAR BIOLOGY LABORATORY FOR BIOTECHNOLOGY 5.5 Units

**Prerequisite:** BTEC 51AL, or instructor permission.

**Corequisites:** Completion of, or concurrent enrollment in, BTEC 52A.

**2 hours lecture, 10 hours laboratory.**

Introduction to the biological laboratory techniques and methods used in molecular biology. Topics to include media preparation, agarose gel electrophoresis, restriction enzyme digestion, transformation of cells, purification and analysis of DNA, PCR, and Southern blotting. Laboratory exercises will also reinforce scientific method, lab safety, importance of laboratory notebooks, applied problem solving, and fundamentals of instrumentation. [Transferability: CSU]

### BTEC 53A IMMUNOLOGY & VIROLOGY FOR BIOTECHNOLOGY 3 Units

**Prerequisite:** BTEC 52A.

**3 hours lecture.**

Introduction to immunology and virology. Topics to include the structure, function, and development of the immune system, regulation of the immune response, diseases of the immune system, vaccines, cancer, immunological techniques used in industry, viral structure, viral diseases, and the uses of viruses in biotechnology. [Transferability: CSU]

### BTEC 53AL IMMUNOLOGY LABORATORY FOR BIOTECHNOLOGY 5.5 Units

**Prerequisite:** BTEC 52AL.

**Corequisite:** Completion of, or concurrent enrollment in, BTEC 53A or equivalent.

**2 hours lecture, 10 hours laboratory.**

Introduction to the biological laboratory techniques and methods used in immunology. Topics to include the use of antibodies (ELISA, Western blot, immunofluorescence) in the lab, mammalian cell culture, and antibody production using hybridoma technology. Laboratory exercises will also reinforce scientific method, lab safety, importance of laboratory notebooks, applied problem solving, and fundamentals of instrumentation. [Transferability: CSU]

### BTEC 54 BIOTECHNOLOGY EXTERNSHIP 4 Units

**Prerequisite:** BTEC 52A & 52AL.

**Corequisite:** BTEC 53A & 53AL.

**24 hours clinic.**

Externship for Spring Quarter Biotechnology Technician Training Program students, arranged at biotechnology, pharmaceutical, instrumentation companies and research facilities. Provides applied learning experience in several diverse employment situations including, but not limited to, the areas of production, research and development, manufacturing and quality control. [Transferability: CSU]

### BTEC 60 PLANT BIOTECHNOLOGY & TISSUE CULTURE 3.5 Units

**Prerequisite:** High school biology.

**Advisory:** BIOL 10 or HORT 50A strongly recommended.

**2 hours lecture, 4 hours laboratory.**

Introduction to current topics in plant tissue culture, micropropagation and plant biotechnology. Topics include: history of plant tissue culture, culture media and facilities, preparation of culture media, tissue culture techniques, including micropropagation, methods of plant genetic engineering and applications, and benefits and risks of plant genetic engineering. [Transferability: CSU]

### BTEC 61 MICROBIAL BIOTECHNOLOGY 4.5 Units

**Prerequisite:** BTEC 51A & 51AL.

**2 hours lecture, 2 hours lecture-laboratory, 4 hours laboratory.**

Introduction to microbiology with an emphasis on a practical approach to the utilization of microorganisms in biotechnology. Topics to include the current status of microbial biotechnology and potential contributions within a variety of fields, the genetic and biochemical diversity of microorganisms, their classification and metabolism, methods used to create engineered microorganisms, and the most widely exploited attributes of engineered microorganisms. [Transferability: CSU]

### BTEC 64 PROTEIN ELECTROPHORETIC SYSTEMS: BASIC LABORATORY TECHNIQUE 1 Unit

**Prerequisite:** Laboratory experience (high school and/or professional experience).

**Advisory:** BTEC 64 and BIOL 64 are interchangeable; high school biology, chemistry, and algebra.

**May be taken 2 times for credit.**

**2 hours lecture-laboratory.**

Understanding, using, and performing electrophoretic separations and transfers in a research or industrial setting. This is to include the molecular and physical basis of specific techniques, and their practical applications. Techniques covered will include gel electrophoresis, capillary electrophoresis, isoelectric focusing, 2D gels and electrotransfers. The applications of these techniques for proteins, carbohydrates and small molecules, within research and industry will be presented. The instrumentation used for electrophoresis, isoelectric focusing, and capillary electrophoresis and practical experience with reagents and instrumentation will be emphasized. Students will follow established protocols, and demonstrate an understanding of supporting routine operations and standard protocols. [Transferability: CSU]

**BTEC 65 NUCLEIC ACIDS ELECTROPHORETIC SYSTEMS: BASIC LABORATORY TECHNIQUE 1 Unit**

**Prerequisite:** Laboratory experience (high school and/or professional experience).

**Advisory:** BTEC 65 and BIOL 65 are interchangeable; high school biology, chemistry, and algebra.

**May be taken 2 times for credit.**

**2 hours lecture-laboratory.**

Understanding, using, and performing electrophoretic separations and transfers in a research or industrial setting. This is to include the molecular and physical basis of specific techniques, and their practical applications. Techniques covered will include gel electrophoresis, capillary electrophoresis and electrotransfers. The applications of these techniques for proteins, and small molecules, within research and industry will be presented. The instrumentation used for electrophoresis, capillary electrophoresis, and pulsed gel electrophoresis and practical experience with reagents and instrumentation will be emphasized. Students will follow established protocols, and demonstrate an understanding of supporting routine operations and standard protocols. [Transferability: CSU]

**BTEC 66 HPLC: BASIC LABORATORY TECHNIQUE 2 Units**

**Prerequisite:** High school biology, chemistry and algebra; laboratory experience.

**Advisory:** BTEC 66 and BIOL 66 are interchangeable.

**May be taken 2 times for credit.**

**4 hours lecture-laboratory.**

Understanding, using and performing HPLC in a research or industrial setting. Includes the theory and mechanisms of molecules and chemistry, the wide range of research, analytical and preparative uses, instrumentation used for HPLC, practical experience with reagents and instrumentation, following established protocols, calibrating and maintaining the instrumentation. [Transferability: CSU]

**BTEC 67 IMMUNOLOGICAL ASSAYS 1 Unit**

**Prerequisite:** Laboratory experience (high school, college and/or professional); high school chemistry, biology, algebra.

**Advisory:** BTEC 67 and BIOL 67 are interchangeable.

**May be taken 2 times for credit.**

**2 hours lecture-laboratory.**

Understanding and performing immunological assays. Includes the theory, molecular basis, and research/diagnostic applications of several techniques. Techniques covered will include, direct, indirect, sandwich, and quantitative ELISAs, and Western blotting. Practical experience with reagents (selection of conjugated antibodies, detection systems) and instrumentation (microtiter plate reader, polyacrylamide gel electrophoresis apparatus, transfer apparatus) will be emphasized. [Transferability: CSU]

**BTEC 68 POLYMERASE CHAIN REACTION: LABORATORY TECHNIQUE 1 Unit**

**Advisory:** Laboratory experience (academic and/or industry); high school chemistry, biology, algebra.

**May be taken 2 times for credit.**

**2 hours lecture-laboratory.**

Fundamentals of the polymerase chain reaction (PCR) technique including theory, application, and instrumentation. Practical experience with the technique as used in research and industry settings following established protocols. Basic instruction in record-keeping, laboratory safety, and trouble-shooting. [Transferability: CSU]

**BTEC 69 BASIC MAMMALIAN CELL CULTURE TECHNIQUES 3 Units**

**Prerequisite:** Laboratory experience (high school, college and/or professional).

**Advisory:** High school chemistry, biology, algebra.

**May be taken 2 times for credit.**

**6 hours lecture-laboratory.**

Introduction to general mammalian cell culture techniques, including media preparation, sterile technique, freezing, thawing, and maintaining primary cell and cell lines. Theoretical considerations will include purpose and selection of media components, setting up and maintaining a sterile

cell culture environment, and controlling contamination. Students will gain practical experience working in the laminar flow hood, counting cells, isolating cells from a primary source, and maintaining healthy adherent and suspension cells in culture. Emphasis will also be given to proper care and use of equipment used in a cell culture facility: laminar flow hoods, CO2 incubators, water baths, and the inverted microscope. [Transferability: CSU]

**BTEC 71 ADVANCED MOLECULAR BIOLOGY TECHNIQUES 2 Units**

**Prerequisite:** Laboratory experience (high school and/or professional experience).

**Advisory:** BTEC 71 and BIOL 71 are interchangeable; high school biology, chemistry, and algebra.

**May be taken 2 times for credit.**

**4 hours lecture-laboratory.**

Understanding, using and performing DNA sequencing and cloning techniques in a research and production setting. Includes applications of cDNA and PCR product sequencing, historical and theoretical basis of conventional and automated DNA sequencing, experimental design of sequencing methods, oligonucleotide synthesis, construction of sequencing and expressions plasmids, and vectorology. Laboratory exercises will involve DNA and RNA manipulation using established protocols and computer assisted methods (bioinformatics). [Transferability: CSU]

**BTEC 73 HISTOTECHNOLOGY IN RESEARCH 1 Unit**

**Prerequisite:** Laboratory experience (high school and/or professional experience).

**Advisory:** BTEC 73 and BIOL 73 are interchangeable; high school biology, chemistry, and algebra.

**May be taken 2 times for credit.**

**2 hours lecture-laboratory.**

Introduction to basic histotechnology techniques, including fixation, processing, embedding, sectioning, and staining. The course will stress hands-on work cutting thick and thin sections and individual staining techniques, including mixing all necessary solutions. The impact of histology as an aid in disease detection and how it is used as a tool in research will be explored. The course also addresses safety in the laboratory and ergonomic considerations along with an understanding of equipment maintenance. [Transferability: CSU]

**BTEC 75 IMMUNOBIOLOGY 2 Units**

**Advisory:** high school chemistry, biology, algebra.

**2 hours lecture.**

Understanding immunobiology in relation to biotechnology. Introduction to molecular pathways associated with the human immune system. Inflammation, apoptosis, hematopoiesis, cellular activation, cellular genetics, signal transduction, and molecular classification in relation to current research in immunology. Introduction to flow cytometric analysis in both clinical and research settings. [Transferability: CSU]

**BTEC 77 ENVIRONMENTAL BIOTECHNOLOGY 5 Units**

**Prerequisite:** Laboratory experience (high school and/or professional experience); high school biology, chemistry, algebra.

**Advisory:** BTEC 68 & 71.

**2 hours lecture, 2 hours lecture-laboratory, 6 hours laboratory**

Introduction to laboratory techniques and methods utilized in environmental research settings; including flow cytometry and data analysis, Restriction Fragment Length Polymorphisms (RFLP), Fluorescent in Situ Hybridizations (FISH), determination of coliform bacteria in water samples, production of biodiesel from algae, and Polymerase Chain Reaction (PCR) for biological assessment of mud and soil samples. Exercises will include design and characterization of species-specific fluorescent probes used in molecular biological techniques, flow cytometric analysis of marine samples, methods of environmental sampling, and algal culturing. Emphasis will be placed on lab safety, following scientific method, applied problem solving, following standard protocols, and maintaining a professional quality laboratory notebook. [Transferability: CSU]

**BUSINESS****Business & Social Sciences****(650) 949-7322**  
**www.foothill.edu/bss/****BUSI 18 BUSINESS LAW I 5 Units**  
**Advisory: Eligibility for ENGL 1A or ESLL 26.**  
**5 hours lecture.**

Introduction to law applicable to business. Social forces and the law; source of law; agencies for enforcement; and court systems and procedures. California law applicable to contracts, tort negligence, agency, and the Uniform Commercial Code. Contemporary Legal Issues. [Transferability: UC/CSU]

**BUSI 19 BUSINESS LAW II 4 Units**  
**Advisory: BUSI 18.**  
**4 hours lecture.**

Law of sales, warranty and product liability, partnerships, corporations, personal property, and bailments. The Uniform Commercial Code as related to negotiable instruments and secured transactions, and creditor-debtor rights. [Transferability: UC/CSU]

**BUSI 22 PRINCIPLES OF BUSINESS 4 Units**  
**4 hours lecture.**

Examination of the principles and functions of business and the objectives and operations of the corporate and small business managerial decision-making process; its relations to consumers and stakeholders and its global orientation. Includes focus on the economic, political, legal, social environments of business and corporate ethics and social responsibility. [Foothill GE: Social &amp; Behavioral Sciences; Transferability: UC/CSU]

**BUSI 34H HONORS INSTITUTE SEMINAR IN BUSINESS 1 Unit****Formerly: BUSI 34****Prerequisite: Honors Institute participant.**  
**1 hour lecture.**

A seminar in directed readings, discussions, and projects in business. Specific topics to be determined by the instructor. [Transferability: CSU; UC credit may be granted after transfer and upon portfolio review.]

**BUSI 53 SURVEY OF INTERNATIONAL BUSINESS 4 Units****Advisory: Not open to students with credit in BIS 53.**  
**4 hours lecture.**

Introduction to the global commercial community, theory and practice. Exploration of trade and development with the Pacific Rim, Eastern/Western Europe, Third World and developing nations. Major economic, social, political, cultural forces directing the competitive business environment. Examination of the full range of international commercial activities, marketing, logistics, research, risk analysis, and global corporate ethics and social responsibility. [Foothill GE: Social &amp; Behavioral Sciences; Transferability: CSU]

**BUSI 57 PRINCIPLES OF ADVERTISING 4 Units**  
**Advisory: Not open to students with credit in ADVT 57.**  
**4 hours lecture.**

Introduction to the relationship between advertising and society, and consumer and business. Analysis of markets and direction of advertising campaigns toward them. Selection of media. Evaluation and proper use of the creative aspects of advertising. Actual creation of an advertising campaign and pro forma budget. [Transferability: CSU]

**BUSI 58 SURVEY OF INTERNATIONAL MARKETING 4 Units****Advisory: Not open to students with credit in BIS 58.**  
**4 hours lecture.**

Contemporary developments of international marketing functions, concepts and business activities that determine global customer demand for products and services. [Transferability: CSU]

**BUSI 59 PRINCIPLES OF MARKETING 4 Units**  
**4 hours lecture.**

Contemporary marketing developments and applications relative to business activities that determine customer demand for products and services. Focus on market planning strategy, determining the right product, price, distribution and promotion elements and evaluating the results of effective marketing decision-making from both a marketer's and a consumer's perspective. [Transferability: CSU]

**BUSI 61 INVESTMENT FUNDAMENTALS 3 Units**  
**3 hours lecture.**

Introduction to securities investment characteristics and rights. Portfolio building. Stock exchanges and over-the-counter markets. Investment banking and investment trusts. Financial statements, stock choice and selection, investment methods, technical market and stock analysis, financial planning, bond portfolios. [Transferability: CSU]

**BUSI 62 PRINCIPLES OF SALESMANSHIP 3 Units**  
**3 hours lecture.**

The principles and techniques of selling ideas, products, services. Focus on persuasive activities, buying behavior, communication, ethics. Combines an emphasis on the art of selling with providing effective customer service. [Transferability: CSU]

**BUSI 64 SPECIAL PROJECTS IN BUSINESS 1 Unit**  
**BUSI 64X 2 Units**  
**BUSI 64Y 3 Units**  
**BUSI 64Z 4 Units****Any combination of BUSI 64–64Z may be taken 6 times for credit, however, no single course may be taken more than 6 times for credit..**  
**1 hour lecture for each unit of credit.**

Advanced readings, research, and/or project in business. Specific topics determined in consultation with instructor. [Transferability: CSU]

**BUSI 70 BUSINESS & PROFESSIONAL ETHICS 4 Units**  
**Advisory: Eligibility for ENGL 1A or ESLL 26.**  
**4 hours lecture.**

Social and moral dilemmas encountered in business and professional lives. Exploration and analysis of the ongoing conflicts between personal value systems, expected codes of behavior, and standard operating procedure in the work place. Special attention given to an examination of the major philosophical schools of ethics and how their specific theories may be applied to the concrete business cases and contemporary management issues. [Transferability: CSU]

**BUSI 90A PRINCIPLES OF MANAGEMENT 4 Units**  
**Advisory: Eligibility for ENGL 1A or ESLL 26.**  
**4 hours lecture.**

Introduction to the study of the principles and functions of business management as an important part of the social, political and economic environment. The following functional areas of management include: Planning and Organizing, Control and Monitoring, Strategy and Leadership, Legal and Ethical issues affecting business today. [Transferability: CSU]

**BUSI 91L INTRODUCTION TO BUSINESS INFORMATION PROCESSING 4 Units****Formerly: BUSI 10****3 hours lecture, 2 hours laboratory.**

Knowledge and understanding of business uses of computer and information processing. Introduction to computer hardware and software and popular operating systems. Hands-on experience in the use of word processing software, spreadsheet software, presentation graphics software, database software and communications software. [Foothill GE: Lifelong Understanding; Transferability: CSU]

**BUSI 92 FINANCIAL PLANNING PRACTICES 4 Units**  
**4 hours lecture.**

Examination of financial and retirement planning, mutual funds, real estate, bonds, cash equivalents, gold, stock, tax-free income, sources of investment help, advisory services. [Transferability: CSU]

**BUSI 95 ENTREPRENEURSHIP - SMALL BUSINESS MANAGEMENT 4 Units**

4 hours lecture.

Creating, managing and profiting from a small business. For potential or present entrepreneurs. Emphasis on organization and operation of a small business including problems of raising capital, establishing an effective marketing plan, and directing and motivating employees. [Transferability: CSU]

**BUSI 95E SMALL BUSINESS EXPORT & IMPORT 3 Units**

Advisory: Not open to students with credit in BIS 95E.

3 hours lecture.

Challenges and opportunities of world trade through small business exporting and importing. The basic mechanics, market analysis, pricing, financing, marketing, insurance, transportation and distribution of exports/imports. Expert assistance and resources. [Transferability: CSU]

**BUSI 97 MANAGEMENT SEMINAR .5 Unit**

BUSI 97X 1 Unit

BUSI 97Y 1.5 Units

BUSI 97Z 3 Units

Advisory: Pass/No Pass.

Any combination of BUSI 97-97Z, may be taken 6 times for credit, however, no single course may be taken more than 6 times for credit. 1 hour lecture for each unit of credit.

In-depth exposure to specific management theories and processes and the various leaders in the field. [Transferability: CSU]

**BUSI 99A SUPERVISED BUSINESS INTERNSHIPS 1 Unit**

May be taken 6 times for credit.

3 hours laboratory.

The Internship Program is an educational experience that gives students the opportunity to apply classroom learning to the business world. Working part-time/full-time, students receive hands-on experience where they improve their knowledge and skills in a workplace environment. Legal right to work in the United States is required. [Transferability: CSU]

**BUSI 99B SUPERVISED BUSINESS INTERNSHIPS 2 Units**

May be taken 6 times for credit.

6 hours laboratory.

The Internship Program is an educational experience that gives students the opportunity to apply classroom learning to the business world. Working part-time/full-time, students receive hands-on experience where they improve their knowledge and skills in a workplace environment. Legal right to work in the United States is required. [Transferability: CSU]

**BUSI 99C SUPERVISED BUSINESS INTERNSHIPS 3 Units**

May be taken 6 times for credit

9 hours laboratory.

The Internship Program is an educational experience that gives students the opportunity to apply classroom learning to the business world. Working part-time/full-time, students receive hands-on experience where they improve their knowledge and skills in a workplace environment. Legal right to work in the United States is required. [Transferability: CSU]

**BUSI 120 DISPUTE RESOLUTION & MEDIATION 3.5 Units**

3.5 hours lecture.

Principles and process of mediation with role-play practice in community, business and workplace cases. Evolution and comparison of alternative dispute resolution processes. Skill development for effective communication, relationship building, interest-based negotiation and problem-solving.

**BUSI 131B HOW TO START A HOME-BASED BUSINESS .5 Unit**

Advisory: Pass/No Pass.

.5 hour lecture.

Exploration of unique needs for small businesses started and operated from the home. Topics covered include information about licenses, taxes, resolution of lifestyle and image.

**BUSI 133A STARTING A SMALL BUSINESS 1 Unit**

Advisory: Pass/No Pass.

1 hour lecture.

Introductory class providing basics necessary for start-up of a small business including local, state, and federal regulatory requirements; pros and cons of various options for structuring business; selecting a business location; simple structuring of marketing and business plans; developing and understanding a feasibility study; and basics of managing and operating a small business.

**BUSI 133E SMALL BUSINESS MARKETING, RESEARCH & PLANNING 1 Unit**

Advisory: Pass/No Pass.

1 hour lecture.

Explore the basics necessary to develop a successful marketing strategy and business plan. Includes analysis of customer, competition, pricing, marketing strategies, promotional and business plans.

**BUSINESS OFFICE TECHNOLOGY**

**Computers, Technology & Information Systems (650) 949-7236  
www.foothill.edu/ctis/**

**B T 51A PROFESSIONAL KEYBOARDING I 1 Unit  
(BEGINNING)**

Advisory: Students who have had previous training in typewriting or keyboarding and can keyboard at least 30 words a minute should enroll in B T 51B.

2 hours lecture-laboratory.

Develop and master correct keyboarding skills and techniques on the microcomputer using the touch system. [Transferability: CSU]

**B T 51B PROFESSIONAL KEYBOARDING II 1 Unit  
(BASIC FORMATTING)**

Prerequisite: B T 51A or ability to typewrite/keyboard straight copy at a minimum rate of 30 wpm for two minutes with two or fewer errors. 2 hours lecture-laboratory.

Continued development of keyboarding competencies; emphasis on increasing speed, improving accuracy, learning word processing functions, developing formatting skills, applying communication skills, and learning document production skills. [Transferability: CSU]

**B T 51C PROOFREADING I 1 Unit**

2 hours lecture-laboratory.

Development of proofreading and editing skills in preparation for office occupations. Hands-on experience with proofreading software. [Transferability: CSU]

**B T 59 INTEGRATED BUSINESS COMMUNICATION 5 Units**

Formerly: B T 59A & B T 59B

Advisory: Satisfactory completion of ENGL 110 or ESLL 25, or English Placement Test level of ENGL 1A or ESLL 26; not open to students with credit in B T 59A and 59B.

4 hours lecture, 4 hours terminal time.

Integrates the review and refinement of basic English communication in the business setting. Includes business focused content, practice in grammar, punctuation, word usage skills and communication techniques as well as research and techniques for larger written documents and presentations. Skills developed will be practiced using business computer applications in Word, PowerPoint and Excel. [Transferability: CSU]

**B T 93U B T EXPERIENTIAL INTERNSHIP 3 Units**

B T 93V 4 Units

B T 93 W 6 Units

May be taken 6 times for credit.

3 hours laboratory for each unit of credit.

Off-campus supervised experiential education of BT students in office administration or technology support. Opportunity for practical application of knowledge, skills and abilities acquired in B T and related course work. Opportunity for additional hands-on training in all aspects

of office administration and/or technology support. Exposure to varied protocols, methodologies and practices in a professional working environment. [Transferability: CSU]

## CAREER LIFE PLANNING

**Counseling & Student Services** (650) 949-7296  
[www.foothill.edu/transfer/counseling.html](http://www.foothill.edu/transfer/counseling.html)

**CRLP 55 LIFELONG LEARNING STRATEGIES 3 Units**  
3 hours lecture.

Interactive, applied course to teach learning strategies and skills necessary to successfully reach educational, career and personal objectives. Topics include time management, memory techniques, study reading, note taking, test preparation, other learning strategies and the techniques to apply them in college and throughout life. [Foothill GE: Lifelong Understanding; Transferability: CSU]

**CRLP 70 SELF-ASSESSMENT 3 Units**  
Advisory: Not open to students with credit in CRLP 76 or 76A.  
3 hours lecture.

Exploration of individual skills, interests, values, and personality style as they relate to career choice. Includes testing, values clarification, skills identification, lifestyle assessment, decision making and goal-setting techniques. [Foothill GE: Lifelong Understanding; Transferability: CSU]

**CRLP 71 EXPLORING CAREER FIELDS 1 Unit**  
Advisory: Pass/No Pass; may not be concurrently enrolled in CRLP 70.  
May be taken 3 times for credit.  
1 hour lecture.

Explore career options compatible with student's strengths and interests. Using resources on the campus as well as on the Internet and in communities to investigate specific career choices, researching job descriptions, desired employee characteristics, training/education requirements, salary ranges and employment trends. [Transferability: CSU]

**CRLP 73 EFFECTIVE RESUME WRITING 1 Unit**  
Advisory: Pass/No Pass.  
May be taken 3 times for credit.  
1 hour lecture.

Development of successful resume writing skills including understanding of the hidden job market, types of resumes and tips that will create resumes that result in interviews. [Transferability: CSU]

**CRLP 74 SUCCESSFUL INTERVIEWING TECHNIQUES 1 Unit**

Advisory: Pass/No Pass.  
May be taken 3 times for credit.  
1 hour lecture.

Development of successful interviewing skills includes techniques for pre-interview preparation, dynamics of an interview, salary negotiations and follow-up. [Transferability: CSU]

## CERTIFIED ELECTRICIAN

**Computers, Technology & Information Systems** (650) 949-7236

**C E 101A ELECTRICIAN TRAINING 3 Units**  
CERTIFICATION REVIEW: NEC

Prerequisite: Eligibility for State of California Electrician Certification as an Electrician in one of the following categories: General, Residential, Fire/Life Safety Technician, Voice Data Video Technician, or Nonresidential Lighting Technician.  
May be taken 6 times for credit.

3 hours lecture.  
A content review course designed to prepare for NEC component of the State Electrician Certification Exam. Study of the National Electrical Code (NEC), its purpose, and application of information to the job. Advice and practice on how to prepare for and take examinations.

**C E 101B ELECTRICIAN TRAINING 1.5 Units**  
CERTIFICATION REVIEW:  
TEST INSTRUMENTS

Prerequisite: Eligibility and registration as an Electrician Trainee for purpose of attaining a State of California Electrician Certification in one of the following categories: General, Residential, Fire/Life Safety Technician, Voice Data Video Technician, or Nonresidential Lighting Technician.

May be taken 6 times for credit.  
1 hour lecture, 1 hour laboratory.

A content review course designed to prepare for the test instrument portion of the State Electrician Certification Exam. Instruction on usage of test equipment. Advice and practice on how to prepare for and take examinations.

**C E 101C ELECTRICIAN TRAINING 1.5 Units**  
CERTIFICATION REVIEW:  
AC/DC GENERATORS

Prerequisite: Eligibility for State of California Electrician Certification as an Electrician in one of the following categories: General, Residential, Fire/Life Safety Technician, Voice Data Video Technician, or Nonresidential Lighting Technician.

May be taken 6 times for credit.  
1 hour lecture, 1 hour laboratory.

A content review course designed to prepare for DC/AC generator elements of the State Electrician Certification Exam. Theory, function, and design of DC and AC generators and basic fundamentals of using blueprints. Advice and practice on how to prepare for and take examinations.

**C E 101D ELECTRICIAN TRAINING 1.5 Units**  
CERTIFICATION REVIEW:  
PIPE BENDING

Prerequisite: Eligibility for State of California Electrician Certification as an Electrician in one of the following categories: General, Residential, Fire/Life Safety Technician, Voice Data Video Technician, or Nonresidential Lighting Technician.

May be taken 6 times for credit.  
1 hour lecture, 1 hour laboratory.

A content review course designed to prepare for Pipe Bending elements of the State Electrician Certification Exam. Instruction on usage of pipe bending tools. Advice and practice on how to prepare for and take examinations.

**C E 101E ELECTRICIAN TRAINING 1.5 Units**  
CERTIFICATION REVIEW:  
GROUNDING & BONDING

Prerequisite: Eligibility for State of California Electrician Certification as an Electrician in one of the following categories: General, Residential, Fire/Life Safety Technician, Voice Data Video Technician, or Nonresidential Lighting Technician.

May be taken 6 times for credit.  
1 hour lecture, 1 hour laboratory.

A content review course designed to prepare for grounding and bonding elements of the State Electrician Certification Exam. Provides the what, where, and why effective grounding is needed, and how grounding can be effective in the overall electrical installation. Advice and practice on how to prepare for and take examinations.

**C E 101F ELECTRICIAN TRAINING 2.5 Units**  
CERTIFICATION REVIEW:  
BLUEPRINT READING

Prerequisite: Eligibility and registration as an Electrician Trainee for purpose of attaining a State of California Electrician Certification in one of the following categories: General, Residential, Fire/Life Safety Technician, Voice Data Video Technician, or Nonresidential Lighting Technician

May be taken 6 times for credit.  
2.5 hour lecture.

A content review course designed to prepare for all elements of the State Electrician Certification Exam. Theory, function, and basic fundamentals of using blueprints. Advice and practice on how to prepare for and take examinations.

**C E 101G ELECTRICIAN TRAINING CERTIFICATION REVIEW: PROFESSIONAL RELATIONS 1 Unit**

**Prerequisite:** Eligibility for State of California Electrician Certification as an Electrician in one of the following categories: General, Residential, Fire/Life Safety Technician, Voice Data Video Technician, or Nonresidential Lighting Technician.

May be taken 6 times for credit.

1 hour lecture.

A content review course designed to prepare for Professional Job Relations elements of the State Electrician Certification Exam. Advice and practice on how to prepare for and take examinations.

**C E 101H ELECTRICIAN TRAINING CERTIFICATION REVIEW: SPECIALTY SYSTEMS 1 Unit**

**Prerequisite:** Eligibility for State of California Electrician Certification as an Electrician in one of the following categories: General, Residential, Fire/Life Safety Technician, Voice Data Video Technician, or Nonresidential Lighting Technician.

May be taken 6 times for credit.

1 hour lecture.

A content review course designed to prepare for the specialty systems portion of the State Electrician Certification Exam. Study of the National Electrical Code (NEC), its purpose, and application of information to the job. Theory, function, and design of DC and AC generators and basic fundamentals of using blueprints. Instruction on usage of test equipment and pipe bending tools. Orientation to job responsibility and safety procedures. Provides the what, where, and why effective grounding is needed, and how grounding can be effective in the overall electrical installation. Advice and practice on how to prepare for and take examinations.

**C E 101I ELECTRICIAN TRAINING CERTIFICATION REVIEW: NEC UPDATE 1.5 Units**

**Prerequisite:** Eligibility for State of California Electrician Certification as an Electrician in one of the following categories: General, Residential, Fire/Life Safety Technician, Voice Data Video Technician, or Nonresidential Lighting Technician.

May be taken 6 times for credit.

1.5 hours lecture.

A content review course designed to prepare for NEC component of the State Electrician Certification Exam. Study of the National Electrical Code (NEC), its purpose, and application of information to the job. This course will specifically address the most recent updates and changes to the NEC. Advice and practice on how to prepare for and take examinations.

## CHEMISTRY

**Physical Sciences, Mathematics & Engineering (650) 949-7259**  
[www.foothill.edu/psme/](http://www.foothill.edu/psme/)

**CHEM 1A GENERAL CHEMISTRY 5 Units**

**Prerequisite:** Satisfactory score on the chemistry placement test or CHEM 25; satisfactory score on the mathematics placement test or MATH 105. **Advisory:** Concurrent enrollment in ESLL 25 or ENGL 100.

3 hours lecture, 2 hours lecture-laboratory, 4 hours laboratory, 2 hours TBA.

The course covers fundamental chemical principles with an emphasis on physical and chemical properties, stoichiometry, chemical reaction types, kinetic molecular theory, thermochemistry, modern atomic theory and atomic structure, chemical bonding and bonding theory, and molecular shapes. The laboratory component parallels lecture topics and also includes chemical nomenclature, basic chemical equations, stoichiometry, unknown analysis, and fundamentals of oxidation and reduction. [Foothill GE: Natural Sciences; Transferability: UC/CSU]

**CHEM 1B GENERAL CHEMISTRY 5 Units**

**Prerequisite:** CHEM 1A.

3 hours lecture, 2 hours lecture-laboratory, 4 hours laboratory, 2 hours TBA. Kinetic molecular theory and gas laws, intermolecular forces, chemical kinetics, equilibria, behavior of acids and bases, acid/base equilibrium, and classical thermodynamics. Laboratory parallels lecture topics and

includes computer graphing techniques, chemical kinetics, equilibrium measurements, heat transfer experiments, thermodynamics of an equilibrium system, vapor pressure of liquids. [Transferability: UC/CSU]

**CHEM 1C GENERAL CHEMISTRY & QUALITATIVE ANALYSIS 5 Units**

**Prerequisite:** CHEM 1B.

3 hours lecture, 2 hours lecture-laboratory, 4 hours laboratory, 2 hours TBA.

Aqueous ionic equilibria of buffers, solubility product constants and formation constants; properties of solutions including factors affecting solubility, energy changes in the solution process and colligative properties; electrochemistry including the thermodynamics of voltaic cells; introduction to coordination chemistry and bonding theory; nuclear chemistry with emphasis on applications; and, time permitting, an introduction to modern materials. Laboratory parallels lecture topics with an introduction to qualitative inorganic analysis. [Transferability: UC/CSU]

**CHEM 12A ORGANIC CHEMISTRY 6 Units**

**Prerequisite:** CHEM 1C.

4 hours lecture, 2 hours lecture-laboratory, 4 hours laboratory, 2 hours TBA.

A sophomore level course describing the chemistry of organic (carbon containing) compounds. Emphasis on structure-reactivity relationships mechanisms of functional group transformations, and preparation, and purification of organic compounds. For biological science, chemistry, chemical engineering, pre-professional students in dentistry, medicine, pharmacy, veterinary medicine and other interested students who have mastered the prerequisites. [Transferability: UC/CSU]

**CHEM 12B ORGANIC CHEMISTRY 6 Units**

**Prerequisite:** CHEM 12A.

4 hours lecture, 2 hours lecture-laboratory, 4 hours laboratory, 2 hours TBA.

A continuation of a sophomore-level course describing the reactivity of organic (carbon containing) compounds. Emphasis on structure-reactivity relationships, mechanisms of functional group transformations, and methods of synthesis, purification, isolation and characterization of organic target molecules. For biological science, chemistry, chemical engineering, pre-professional students in dentistry, medicine, pharmacy, veterinary medicine and other interested students who have mastered the prerequisites. [Transferability: UC/CSU]

**CHEM 12C ORGANIC CHEMISTRY 6 Units**

**Prerequisite:** CHEM 12B.

4 hours lecture, 2 hours lecture-laboratory, 4 hours laboratory, 2 hours TBA.

A continuation of a cumulative sophomore-level course describing the reactivity of organic (carbon containing) compounds including biomolecules such as proteins and carbohydrates. Continued emphasis on structure-reactivity relationships, mechanisms of functional group transformations, and methods of synthesis, purification, isolation and characterization of target organic molecules. For biological science, chemistry, chemical engineering, pre-professional students in dentistry, medicine, pharmacy, veterinary medicine and other interested students who have mastered the prerequisites. [Transferability: UC/CSU]

**CHEM 25 FUNDAMENTALS OF CHEMISTRY 5 Units**

**Prerequisite:** Satisfactory score on the mathematics placement test or MATH 105.

**Advisory:** Concurrent enrollment in ESLL 25 or ENGL 100.

4 hours lecture, 1 hour lecture-laboratory, 2 hours laboratory, 1 hour TBA.

Intended for students who wish to meet general education requirements in physical science or need background preparation for CHEM 1A. The course includes basic chemical laboratory techniques and methods, a survey of important chemical principles with emphasis on problem solving, and a description of the elements and their compounds. [Foothill GE: Natural Sciences; Transferability: UC/CSU]

**CHEM 30A SURVEY OF INORGANIC & ORGANIC CHEMISTRY 5 Units**

**Prerequisite:** Satisfactory score on the mathematics placement test or MATH 220.

4 hours lecture, 1 hour lecture-laboratory, 2 hours laboratory, 1 hour TBA.

This is an introductory course covering basic principles of chemistry more descriptive than quantitative in emphasis. Topics include atomic structure, trends in the periodic table, the three states of matter (gas,

liquid and solid), energy, chemical bonding in ionic and molecular compounds, nomenclature, measurement and the metric system, chemical reactions and equations, solutions, acids, bases, salts and electrolyte systems. This chemistry course is primarily for students entering the Allied Health field including: nursing, veterinary technology, dental assistant, dental hygiene, biotechnology, primary care associate, radiation therapy technology, radiological technology, respiratory therapy, and pharmaceutical technology. [Foothill GE: Natural Sciences; Transferability: UC/CSU]

**CHEM 30B SURVEY OF ORGANIC & BIOCHEMISTRY 5 Units**

**Prerequisite:** CHEM 30A.

**4 hours lecture, 1 hour lecture-laboratory, 2 hours laboratory, 1 hour TBA.** This is an introductory course covering basic principles of organic chemistry and biological chemistry. Topics include organic chemistry nomenclature, functional groups, and an introduction to structure and properties of carbohydrates, lipids, nucleic acids, proteins and enzymes. An overview of metabolism will also be given. This chemistry course is primarily for students entering the allied health field including: nursing, dental hygiene, and biotechnology. [Transferability: UC/CSU]

**CHEM 34H HONORS INSTITUTE SEMINAR IN CHEMISTRY 1 Unit**

**Prerequisite:** Honors Institute participant.

**Advisory:** Not open to students with credit in CHEM 34. **1 hour lecture.**

A seminar in directed readings, discussions and projects in chemistry. Specific topics to be determined by the instructor. [Transferability: CSU; UC credit may be granted after transfer and upon portfolio review.]

**CHEM 36 SPECIAL PROJECTS IN CHEMISTRY 1 Unit**  
**CHEM 36X 2 Units**  
**CHEM 36Y 3 Units**

**Prerequisite:** Four quarters of college-level chemistry.

**Any combination of CHEM 36–36Y may be taken 6 times for credit, however, no single course may be taken more than 6 times for credit. 3 hours laboratory.**

Advanced laboratory procedures and practices; the use of instrumentation and analytical chemistry; inorganic and organic analyses and syntheses; physical measurements. Projects are assigned on consultation with instructor, outside reading required. [Transferability: CSU]

**CHEM 70 STUDY SKILLS & PROBLEM SOLVING STRATEGIES FOR CHEM 1A 2 Units**

**Corequisite:** CHEM 1A.

**May be taken 2 times for credit.**

**2 hours lecture.**

This course focuses on two objectives: (1) Development of study skills and strategies needed to succeed in a college level science course including listening and note taking skills, time management, use of textbooks, management of effective study sessions and study groups, managing lecture and laboratory work, analyzing figures and graphs, test preparation and test taking strategies. (2) Development of analytical reasoning strategies, critical thinking skills and problem-solving abilities with a focus on topics the student must master in CHEM 1A in order to succeed in subsequent courses, CHEM 1B and 1C. [Transferability: CSU]

**CHEM 100 CHEMISTRY STUDENT ASSISTANCE .5 Unit**  
**CHEM 100X 1 Unit**  
**CHEM 100Y 2 Units**

**Advisory:** Pass/No Pass

**Corequisites:** Concurrent enrollment in any Chemistry course.

**Any combination of CHEM 100–100Y may be taken 6 times for credit, however, no single course may be taken more than 6 times for credit. 1.5 hours laboratory for each .5 unit of credit.**

Individual study and/or guidance provided for students who desire or require additional assistance in any of the chemistry courses.

**CHILD DEVELOPMENT**

**Business & Social Sciences**

**(650) 949-7322**

**www.foothill.edu/bss/**

**CHLD 11 AFFIRMING DIVERSITY IN EDUCATION 4 Units**

**Advisory:** Eligibility for ENGL 1A or ESSL 26.

**4 hours lecture.**

Analysis of gender, race, culture, abilities/disabilities and social class from the child development perspective with emphasis on theory and research. Provides a conceptual framework for children's cognitive, social and emotional responses to diversity. Serves as a basis to develop a rationale for a culturally relevant/anti-bias education. [Foothill GE: United States Cultures & Communities; Transferability: CSU]

**CHLD 50 SCHOOL-AGE CHILD (5–12): BEHAVIOR & DEVELOPMENT 3 Units**

**3 hours lecture.**

Introduction to human growth and development from ages five to twelve, covering physical, cognitive, social and emotional development of the child. Analysis of current issues facing school-age children in contemporary society. Designed for those who work or desire to work with school age children in after school programs, elementary schools (teachers and aides) and home setting (parents and caregivers). [Transferability: CSU]

**CHLD 50A INFANT/TODDLER DEVELOPMENT 3 Units**

**3 hours lecture.**

Human growth and development from birth to age 3 years; discussion of concepts, characteristics, stages, and timing of physical, social, emotional, intellectual, and language development. Investigation of developmental norms, recognition of individual differences, child theory in action, and guides for working and living with children. [Transferability: CSU]

**CHLD 50B PRESCHOOL YEARS: AGES 3 TO 6 3 Units**

**3 hours lecture.**

Human growth and development from 3 years to six years. A discussion of the developmental stages including: physical, social, emotional, and intellectual. Peer relationships, pro-social behavior and knowing and living with the preschool child. [Transferability: CSU]

**CHLD 53NC SUPPORTING CHILDREN WITH SPECIAL NEEDS IN CHILDREN'S PROGRAMS 3 Units**

**3 hours lecture.**

Introduction to the concepts and best practices for early childhood education and early childhood special education. Includes early intervention for practical application in a variety of children's programs. Discussion of characteristics of infants, toddlers, preschoolers and school age children with disabilities, developmental delay or special health care needs. Study of appropriate modifications and accommodations to environments, materials and teaching strategies for individual children in group settings. Develop knowledge to collaborate with additional support professionals, community resource agencies, IFSP/IEP teams and family members. [Transferability: CSU]

**CHLD 53NP ATYPICAL DEVELOPMENT IN THE EARLY YEARS 3 Units**

**3 hour lecture.**

Introduction to a range of diagnosed disabilities and other special needs conditions that cause children, birth through age 8, to show atypical development. Discussion of laws and service provisions, social and educational implications, culture and family dynamics in the context of the larger community. [Transferability: CSU]

**CHLD 55 CHILD GROWTH & DEVELOPMENT 5 Units**

**4 hours lecture, 3 hours laboratory.**

Development of the child from prenatal life through adolescence. In-depth study of the physical, cognitive, language and social-emotional development of children from infancy through adolescence. Observation of children required. [Foothill GE: Social & Behavioral Sciences; Transferability: UC/CSU]

<b>CHLD 56</b>	<b>OBSERVATION TECHNIQUES</b>	<b>4 Units</b>	<b>CHLD 73</b>	<b>MUSIC &amp; MOVEMENT IN THE EARLY YEARS</b>	<b>3 Units</b>
<p>Advisory: CHLD 56N, 55 or PSYC 14. 3 hours lecture, 3 hours laboratory. Provides training in observational techniques in natural settings using a range of tools. Students will learn to make formal observations that will guide their development of curriculum, create a child's portfolio and prepare for teacher-parent conferences. [Transferability: CSU]</p>			<p>2 hours lecture, 3 hours laboratory. Music and movement activities and experiences that facilitate non-musician teachers to express ideas and implement expanded curriculum ideas for infants/toddlers, preschoolers and school aged children. Elements of presentation and basic concepts of teaching music and movement to promote the growth and development of the young children. [Transferability: CSU]</p>		
<b>CHLD 56N</b>	<b>INTRODUCTION TO CHILD DEVELOPMENT</b>	<b>4 Units</b>	<b>CHLD 74</b>	<b>SCIENCE &amp; NATURE</b>	<b>1 Unit</b>
<p>4 hours lecture. Introduction to the field of child development. Curriculum planning and supervisory activities for children in early childhood programs. Focus on developmental issues in the teaching-learning environment, including guidelines for interaction and teaching techniques. [Transferability: CSU]</p>			<p>1 hour lecture. Science for children; suggestions for activities involving plants, animals, and the physical properties of the environment; emphasis on making science part of the everyday experience. [Transferability: CSU]</p>		
<b>CHLD 59</b>	<b>WORKING WITH SCHOOL-AGE CHILDREN: PRINCIPLES &amp; PRACTICES</b>	<b>3 Units</b>	<b>CHLD 79</b>	<b>CARING FOR INFANTS &amp; TODDLERS IN GROUPS</b>	<b>3 Units</b>
<p>3 hours lecture. Review of developmental characteristics of children ages five to twelve years. Role of adult in high quality child care and behavior management. Planning and implementing developmentally appropriate curriculum. Creating environment-program standards and criteria for evaluation. Specifically designed for those who work or desire to work with school-age children in a variety of after-school, recreation and summer day camps. [Transferability: CSU]</p>			<p>3 hours lecture. Overview of infant and toddler development. The role adults play in responsive infant and toddler caregiving and the essential elements of a quality infant/toddler environment. Individualized routines as appropriate curriculum. Forming partnerships with parents. [Transferability: CSU]</p>		
<b>CHLD 63N</b>	<b>ARTISTIC &amp; CREATIVE DEVELOPMENT</b>	<b>3 Units</b>	<b>CHLD 82</b>	<b>PLANNING CREATIVE DRAMATICS</b>	<b>1 Unit</b>
<p>2.5 hours lecture, 1 hour laboratory. Artistic awareness and creativity in young children. Using a variety of media to promote children's sensitivity to, and use of, various tactile arts, visual arts and performing arts. Role of the parent and teacher in encouraging children's explorations. [Transferability: CSU]</p>			<p>1 hour lecture. An introduction to creative dramatics for the child; dramatic play, puppetry, role playing, acting out stories; how to implement creative dramatics. The emergence of creativity, imagining, and empathizing with others. Techniques for promoting children's sensitivity to, and use of, various dramatic art forms. The role of the parent and teacher in facilitating children's explorations. [Transferability: CSU]</p>		
<b>CHLD 64N</b>	<b>BUILDING RELATIONSHIPS BETWEEN PARENTS &amp; CHILDREN</b>	<b>1 Unit</b>	<b>CHLD 85</b>	<b>LITERACY &amp; LITERATURE IN PRESCHOOL EDUCATION</b>	<b>3 Units</b>
<p>Advisory: Pass/No Pass. May be taken 6 times for credit. 1 hour lecture. Focus on helping parents build a loving and responsible relationship with their children, and develop skills to handle conflicts creatively. Topics include helping children deal with their feelings, expressing anger without being hurtful, engaging children's cooperation without nagging, setting firm limits, and negotiating win-win solutions. [Transferability: CSU]</p>			<p>3 hours lecture. Introduction to literature for children from birth through age 5. Emphasis on selection, evaluation and classroom use of literature to support literacy in children. [Transferability: CSU]</p>		
<b>CHLD 68</b>	<b>TOPICS/PROJECTS IN</b>	<b>1 Unit</b>	<b>CHLD 86A</b>	<b>MENTORING &amp; PROFESSIONAL DEVELOPMENT OF EARLY CHILDHOOD PROFESSIONALS</b>	<b>4 Units</b>
<b>CHLD 68X</b>	<b>CHILD DEVELOPMENT</b>	<b>2 Units</b>	<p>Advisory: CHLD 55, 88 and a minimum of one other 3-unit course in Child Development. 4 hours lecture Focus on preparing teachers for the role of mentoring student teachers, assistant teachers, parents, and volunteers in early childhood settings. Emphasis is on the role of teachers supervising other adults while simultaneously addressing the classroom needs of the children and parents in the program. Development will focus on the professional self, portfolio development, documentation of the teachers work with children. [Transferability: CSU]</p>		
<b>CHLD 68Y</b>		<b>3 Units</b>			
<b>CHLD 68Z</b>		<b>4 Units</b>			
<p>Any combination of CHLD 68–68Z may be taken 6 times for credit, however, no single course may be taken more than 6 times for credit. 1 hour lecture for each unit of credit. Topical introductory projects in any Early Child Development academic discipline of program segment area. Specific course and/or special projects vary from quarter to quarter depending upon selected student, population, methodology and faculty member. [Transferability: CSU]</p>					
<b>CHLD 71</b>	<b>PLANNING CREATIVE ART ACTIVITIES FOR CHILDREN</b>	<b>1 Unit</b>	<b>CHLD 86B</b>	<b>PRACTICUM STUDENT TEACHING IN AN EARLY CHILDHOOD PROGRAM</b>	<b>5 Units</b>
<p>2 hours lecture-laboratory. Introduction to a variety of creative art activities for the preschool child. Tactile arts including paint, clay, chalk, playdough, collage and crayons. [Transferability: CSU]</p>			<p>Advisory: CHLD 55, 88 and a minimum of one other 3-unit course in Child Development. 2 hours lecture, 10 hours laboratory. Focus on students preparing to work in an early childhood program. Integrating and applying knowledge and understanding of the process of child growth and development to group settings with young children. Incorporates the role of the teacher as it relates to observing, interacting, with children and families, planning and implementing developmentally appropriate curriculum, and participating in staff meetings. [Transferability: CSU]</p>		
<b>CHLD 72</b>	<b>LANGUAGE DEVELOPMENT</b>	<b>3 Units</b>			
<p>3 hours lecture. Introduction to early language development focusing on cognition, language development and language within the social context. Theoretical information and practical applications with children including music, movement, storytelling, books, chants, songs and fingerplays. [Transferability: CSU]</p>					

- CHLD 88 CHILD, FAMILY & COMMUNITY 4 Units**  
**4 hours lecture.**  
 Child's relationship to the family and community. Interaction of family members and the community as they cope with problems that affect the child. How family life practices and attitudes differ among cultures. Major child development theories and how they relate to cross-cultural perspectives of the child in society. [Transferability: CSU]
- CHLD 88B POSITIVE BEHAVIOR MANAGEMENT 2 Units**  
**2 hour lecture.**  
 Introduction to a range of positive guidance techniques that can be used with infants, toddlers, pre-school, and school-aged children. Emphasis on selection of appropriate strategies to meet the needs of each individual child. [Transferability: CSU]
- CHLD 89 CURRICULUM FOR EARLY CARE & EDUCATION PROGRAMS 3 Units**  
**Advisory: CHLD 55.**  
**3 hours lecture.**  
 An overview of knowledge and skills related to providing appropriate curriculum and environments for young children from birth to six years. The course will include the essential elements of developing a curriculum framework emphasizing the roles of both the child and adult. [Transferability: CSU]
- CHLD 90B ADMINISTRATION & SUPERVISION: DESIGNING & STARTING CHILD CARE FACILITIES 4 Units**  
**Advisory: Completion of 9 units of child development courses.**  
**4 hours lecture.**  
 Components of a quality child care center including types of programs, facility design and set up, licensing regulations, budgeting processes, personnel and policy procedures, food, health and safety issues, and working with advisory boards. [Transferability: CSU]
- CHLD 90C ADMINISTRATION & SUPERVISION: PROGRAM OPERATION 4 Units**  
**Advisory: Completion of 9 units of child development courses.**  
**4 hours lecture.**  
 Administrative responsibilities including budgeting processes, program philosophy, program assessment, marketing and enrollment management, parent and community involvement, ADA facility requirements, and equipment selection. [Transferability: CSU]
- CHLD 91 ADMINISTRATION & SUPERVISION: ADULT SUPERVISION 4 Units**  
**Advisory: Completion of 9 units of child development courses.**  
**4 hours lecture.**  
 Methods and principles of supervising adults in early childhood classrooms. Emphasis on the role of experienced classroom teachers who function as support and mentors to new teachers. Fulfills requirement of Child Development Permit Matrix and Mentor Teacher course. [Transferability: CSU]
- CHLD 95 HEALTH, SAFETY & NUTRITION IN CHILDREN'S PROGRAMS 3 Units**  
**3 hours lecture.**  
 For child care providers engaged in-home or classroom care of young children. Studies will include how to improve health and safety procedures, signs and symptoms of infectious diseases, knowledge of sanitary food handling, child nutrition and physical fitness, signs and symptoms of child abuse, and emergency preparedness and evacuation. Student earns a first aid with CPR training certificate. Course meets Title 22, Section 101215.1 California State Licensing requirement. [Transferability: CSU]

## CHINESE - MANDARIN

### Language Arts

(650) 949-7043  
[www.foothill.edu/la/](http://www.foothill.edu/la/)

- CHIN 1 ELEMENTARY CHINESE I 5 Units**  
**5 hours lecture.**  
 Intensive oral practice of basic, everyday language functions. Written practice to further understanding of the underlying grammatical and syntactical structures. Introduction to the four tone system of Chinese pronunciation and characters. Language laboratory practice. [Foothill GE: Humanities; Transferability: UC/CSU]
- CHIN 2 ELEMENTARY CHINESE II 5 Units**  
**Prerequisite: CHIN 1 or 1 year of high school Chinese.**  
**5 hours lecture.**  
 Intensive oral and written practices broadening the functions presented in CHIN 1. Further development of the use of the four tone system of Chinese pronunciation, as well as basic grammatical construct and sentence structures. Language laboratory practice. [Foothill GE: Humanities; Transferability: UC/CSU]
- CHIN 3 ELEMENTARY CHINESE III 5 Units**  
**Prerequisite: CHIN 2 or two years of high school Chinese.**  
**5 hours lecture.**  
 Continuation of CHIN 2. Further development of listening, speaking, reading and writing skills. Intensive oral practice of the four tone system pronunciation in everyday language situations. Oral and written practice of Chinese grammatical constructions and sentence structures. Language laboratory practice. [Foothill GE: Humanities; Transferability: UC/CSU]
- CHIN 4 INTERMEDIATE CHINESE I 5 Units**  
**Prerequisite: CHIN 3 or 3 years of high school Chinese.**  
**5 hours lecture.**  
 Continuation of CHIN 3. Review of grammar and grammatical structures presented at the elementary level. Intensive oral and written drills in the use of the four-tone system of Chinese pronunciation and idiomatic constructions. Composition of short essays and stories. Presentation and discussion of Chinese culture. Conversation and language laboratory practice. [Foothill GE: Humanities; Transferability: UC/CSU]
- CHIN 5 INTERMEDIATE CHINESE II 5 Units**  
**Prerequisite: CHIN 4 or four years of high school Chinese.**  
**5 hours lecture.**  
 Continuation of CHIN 4. Introduction to reading Chinese literature. Continued intensive drill of the four-tone system. Further development of grammatical structures. Continuation of communicative competency and vocabulary building. Limited amount of composition of short essays and stories. Presentation and discussion of Chinese culture. Language laboratory practice. [Foothill GE: Humanities; Transferability: UC/CSU]
- CHIN 6 INTERMEDIATE CHINESE III 5 Units**  
**Prerequisite: CHIN 5.**  
**5 hours lecture.**  
 Continuation of CHIN 5. Further development of speaking, listening, reading, and writing skills at the intermediate to high proficiency levels. Review all the structures learned in the previous levels. Emphasis on communication competency and vocabulary. Study new idiomatic Mandarin expressions. Expand students' abilities to express their attitudes towards actions and conditions. Discuss and analyze limited amount of composition of short essays and stories. Introduce classical Chinese literature. Individual and group oral presentations, and language laboratory practice will be part of the regular performance-based assessment. [Foothill GE: Humanities; Transferability: UC/CSU]
- CHIN 13A INTERMEDIATE CONVERSATION I 4 Units**  
**Prerequisite: CHIN 3.**  
**May be taken 6 times for credit.**  
**4 hours lecture.**  
 Speaking and listening experience in culturally appropriate ways. Special emphasis on correct perception and speaking, and familiarity with oral idioms and grammar as they differ from more formal written and literary uses. Development of critical thinking skills by comparing different

viewpoints and different values of diverse cultures. Development of listening and speaking skills by exploring various forms of authentic materials, such as current news media, formal and informal conversations. Understanding ambiguities, vagaries, and value inherent in the target language. [Foothill GE: Humanities; Transferability: UC/CSU]

**CHIN 13B INTERMEDIATE CONVERSATION II 4 Units**

**Prerequisite:** CHIN 13A.  
**May be taken 6 times for credit.**  
**4 hours lecture.**

Continuation of CHIN 13A. Speaking and listening experience in an environment of increasingly challenging language situation in culturally appropriate ways. Special emphasis on rapidity of correct perception and speaking, acquaintance with a variety of native dialects, and familiarity with oral idioms and grammar as they differ from more formal written and literary uses. Development of critical thinking skills by comparing different viewpoints and different values of diverse cultures. Development of listening and speaking skills by exploring various forms of authentic materials, such as current news media, political speech, and debates. Stating and supporting opinions on various topics. Understanding ambiguities, vagaries, and value inherent in the target language. [Foothill GE: Humanities; Transferability: UC/CSU]

**CHIN 14A ADVANCED CONVERSATION I 4 Units**

**Prerequisite:** CHIN 13B.  
**May be taken 6 times for credit.**  
**4 hours lecture.**

Development of fluency in the oral/aural language, and cultural skills required in socio-linguistic functions, i.e., honorifics, in-group/out-group, male/female, and formal/informal expressions. Development of critical thinking skills by comparing different viewpoints and different values of diverse cultures. Development of listening and speaking skills by exploring various forms of authentic materials, such as current news media, political speech, debates, and drama. Stating and supporting opinions on various topics, including abstract concepts. Understanding and appreciating ambiguities, vagaries, and value inherent in the target language. [Foothill GE: Humanities; Transferability: CSU; UC approval is pending.]

**CHIN 14B ADVANCED CONVERSATION II 4 Units**

**Prerequisite:** CHIN 14A.  
**May be taken 6 times for credit.**  
**4 hours lecture.**

Continuation of CHIN 14A. Development of advanced level of oral/aural fluency in the language, and cultural skills required in socio-linguistic functions. Stating and supporting opinions on complex, abstract topics. Analyzing and hypothesizing. Understanding cultural differences, persuading, negotiating, and giving speech in formal settings. Development of critical thinking skills by comparing different viewpoints and different values of diverse cultures. Development of listening and speaking skills by exploring various forms of authentic materials, such as current news media, debates on various issues, and drama. [Foothill GE: Humanities; Transferability: CSU; UC approval is pending.]

**CHIN 25A ADVANCED COMPOSITION & READING I 4 Units**

**Prerequisite:** CHIN 6.  
**4 hours lecture.**

Introduction to authentic Chinese written materials intended for native Chinese readers, such as magazine articles, editorials, statistics, and literature. Reading and analysis of texts as exponents of the culture and history. Compositions and advanced grammar. Development of critical thinking skills by comparing different viewpoints and different values of diverse cultures. Development of reading and writing skills by exploring various forms of literary and other forms of creative thoughts. Understanding ambiguities, vagaries, and value inherent in the target language. [Foothill GE: Humanities; Transferability: UC/CSU]

**CHIN 25B ADVANCED COMPOSITION & READING II 4 Units**

**Prerequisite:** CHIN 25A.  
**4 hours lecture.**

Continuation of CHIN 25A. Reading and analysis of authentic Chinese written materials intended for native Chinese readers, as exponents of the culture and history. Development of further skills in reading authentic

materials, including magazines, newspaper articles, editorials, literature, and abstract theories. Practice in writing expository essays. Development of critical thinking skills by comparing different viewpoints and different values of diverse cultures. Development of reading and writing skills by exploring various forms of literary and other forms of creative thoughts. Understanding and appreciating the ambiguities, vagaries, and value inherent in the target language. [Foothill GE: Humanities; Transferability: UC/CSU]

**CHIN 36 SPECIAL PROJECTS IN CHINESE 1 Unit**

**CHIN 36X 2 Units**  
**CHIN 36Y 3 Units**  
**CHIN 36Z 4 Units**

**Prerequisite:** CHIN 6.  
**Any combination of CHIN 36–36Z may be taken 6 times for credit, however, no single course may be taken more than 6 times for credit.**  
**1 hour lecture for each unit of credit.**

A study oriented toward spoken or written practice or both in Chinese. This may entail research and critical techniques adapted to individual writing and/or oral presentation projects under instructor supervision. Specific topics vary from quarter to quarter. This course cannot be substituted for departmental requirements. [Transferability: UC/CSU]

**CHIN 103 CHINESE BUSINESS CULTURE & ETIQUETTE 1 Unit**

**Non-degree applicable credit course.**  
**May be taken 6 times for credit.**  
**1 hour lecture.**

Introduction to basic Chinese business etiquette and culture. Basic business greetings and interactions. Culturally appropriate behavior and body language. The role of gift giving and socializing in a business setting. The decision-making process in Chinese corporate culture.

**COMMUNICATION STUDIES**

**Fine Arts & Communication (650) 949-7262**  
[www.foothill.edu/fa/speechcomm.html](http://www.foothill.edu/fa/speechcomm.html)

**COMM 1A PUBLIC SPEAKING 5 Units**

**Formerly: SPCH 1A**  
**Advisory: Eligibility for ENGL 1A or ESLL 26, or equivalent; not open to students with credit in COMM 1AH or SPCH 1A.**  
**5 hours lecture.**

Introduction to the analysis, theory and history of rhetoric and public address; application of principles of public address to the preparation and delivery of public speeches. [Foothill GE: Communication & Analytical Thinking; Transferability: UC/CSU]

**COMM 1AH HONORS PUBLIC SPEAKING 5 Units**

**Prerequisite:** Honors Institute participant.  
**Advisory: Eligibility for ENGL 1A or ESLL 26, or equivalent; not open to students with credit in COMM 1A or SPCH 1A.**  
**5 hours lecture.**

Introduction to the analysis of the history of rhetoric and public address; application of principles of public address to the preparation and delivery of public speeches. The honors section provides accelerated students with additional academic challenge in the areas of research, discussion, and intellectual exploration of ideas. Expanded opportunities include, but are not limited to, in-depth examination of speech text within historical context, self-reflection speeches and papers, creative individual and group projects, historical oral interpretation, and enrichment activities. [Transferability: UC/CSU]

**COMM 1B ARGUMENTATION & PERSUASION 5 Units**

**Formerly: SPCH 1B**  
**Advisory: Eligibility for ENGL 1A or ESLL 26, or equivalent; not open to students with credit in COMM 1BH or SPCH 1B.**  
**5 hours lecture.**

The study and practice of argumentation and persuasion. Analysis of rhetorical theory and application of methods of effective persuasion. Knowledge of the structure and format of various types of disputation and participation in in-class speech activities. [Foothill GE: Communication & Analytical Thinking; Transferability: UC/CSU]

**COMM 1BH HONORS ARGUMENTATION & PERSUASION 5 Units**

**Prerequisite:** Honors Institute participant.  
**Advisory:** Eligibility for ENGL 1A or ESLL 26, or equivalent; not open to students with credit in COMM 1B or SPCH 1B.  
**5 hours lecture.**

The study and practice of argumentation and persuasion. Analysis of rhetorical theory and application of methods of effective persuasion. Knowledge of the structure and format of various types of disputation and participation in in-class speech activities. The honors section provides accelerated students with academic enrichment emphasizing rhetorical analysis and critical thinking. Expanded opportunities include, but are not limited to, examination of political speech in historical context, student-initiated and student-led discussion, self-reflection paper, and creative group project. [Transferability: UC/CSU]

**COMM 2 INTERPERSONAL COMMUNICATION 5 Units**  
**Formerly: SPCH 2**

**Advisory:** Eligibility for ENGL 1A or ESLL 26, or equivalent; not open to students with credit in SPCH 2.  
**5 hours lecture.**

Experience in interpersonal communication, including discussion, the perception process, critical thinking and reasoning, verbal and nonverbal modes of communication, intercultural communication, and the effect of communication on individuals and society. Faculty and peer feedback on critically evaluated exercises. [Foothill GE: Communication & Analytical Thinking, Lifelong; Transferability: UC/CSU]

**COMM 3 FUNDAMENTALS OF ORAL COMMUNICATION 5 Units**

**Formerly: SPCH 3**  
**Advisory:** Eligibility for ENGL 1A or ESLL 26, or equivalent; not open to students with credit in SPCH 3.  
**5 hours lecture.**

Introduction to the nature of communication in interpersonal, intercultural, small group and public speaking contexts. Application of basic theories through critically evaluated exercises and oral presentations. [Foothill GE: Communication & Analytical Thinking; Transferability: UC/CSU]

**COMM 4 GROUP DISCUSSION 5 Units**  
**Formerly: SPCH 4**

**Advisory:** Eligibility for ENGL 1A or ESLL 26, or equivalent; not open to students with credit in SPCH 4.  
**5 hours lecture.**

Analysis of the principles of group interaction and decision making. Participation in discussion groups designed to share information, solve problems and reach consensus. [Foothill GE: Communication & Analytical Thinking; Transferability: UC/CSU]

**COMM 10 GENDER, COMMUNICATION & CULTURE 5 Units**

**Formerly: SPCH 10**  
**Advisory:** Eligibility for ENGL 1A or ESLL 26, or equivalent; not open to students with credit in SPCH 10.  
**5 hours lecture.**

A comparative and integrative study of the interactive relationship between communication, gender, and culture in American society. Emphasis on the multiple ways communication in interpersonal relationships, educational institutions, organizations, media, and society in general creates and perpetuates gender roles. Analysis of gendered histories, traditions, and practices which normalize certain expectations, values, meanings, and patterns of behavior across cultural/racial lines (Native Americans, Latino Americans, European Americans, African Americans, Asian Americans, Gays, Lesbians, Bi-sexual, and Transgendered peoples). [Foothill GE: United States Cultures & Communities, Lifelong; Transferability: UC/CSU]

**COMM 12 INTERCULTURAL COMMUNICATION 5 Units**

**Formerly: SPCH 12**  
**Advisory:** Eligibility for ENGL 1A or ESLL 26, or equivalent; not open to students with credit in SPCH 12.  
**5 hours lecture.**

A comparative and integrative study of intercultural communication in American Society. Analysis of cultural histories, cultural concepts, language, ethnic perspectives, perceptions, symbols and roles as they facilitate or hinder effective verbal and nonverbal interaction across cultural lines. Examination of cultural identities which influence thinking and behavior, such as race, class, gender, ethnicity, sexual orientation, nationality, age, appearance, and physical ability. [Foothill GE: United States Cultures & Communities, Comm, Lifelong; Transferability: UC/CSU]

**COMM 24 READERS' THEATRE 5 Units**  
**Formerly: SPCH 24**

**Advisory:** Not open to students with credit in DRAM 24, SPCH 24 or THTR 24.

**May be taken 2 times for credit.**  
**5 hours lecture.**  
Selection and practice of individual and group readings from various types of literature, employing a range of vocal skills and presented in a dramatic context. [Foothill GE: Communication & Analytical Thinking, Human; Transferability: UC/CSU]

**COMM 30 ORAL INTERPRETATION OF LITERATURE 5 Units**

**Formerly: SPCH 30**  
**Advisory:** Not open to students with credit in DRAM 30 or SPCH 30.  
**5 hours lecture.**

Introductory techniques of selection, comprehension, oral interpretation and presentation of prose, poetry, and dramatic literature, exploring diverse cultural and ethnic backgrounds. [Foothill GE: Communication & Analytical Thinking; Transferability: UC/CSU]

**COMM 34H HONORS INSTITUTE SEMINAR IN COMMUNICATION STUDIES 1 Unit**

**Formerly: SPCH 34**  
**Prerequisite:** Honors Institute participant.  
**Advisory:** Not open to students with credit in SPCH 34 or 34H.  
**1 hour lecture.**

A seminar in directed readings, discussions, and projects in speech. Specific topics to be determined by the instructor. [Transferability: CSU; UC credit may be granted after transfer and upon portfolio review.]

**COMM 35 DEPARTMENT HONORS PROJECTS IN COMMUNICATION STUDIES**  
**COMM 35X 2 Units**  
**COMM 35Y 3 Units**  
**COMM 35Z 4 Units**

**Formerly: SPCH 35**  
**Advisory:** COMM 1A or 4.  
Any combination of COMM 35–35Z may be taken 6 times for credit, however, no single course may be taken more than 6 times for credit.  
**1 hour lecture for each unit of credit.**

A seminar of advanced research in the critical elements of speech communication. Discussions and individual writing projects under instructor supervision. Specific topics will vary from quarter to quarter. This course can be substituted for departmental requirements. Enrollment in this course is available in the Fine Arts Division Office. [Transferability: CSU]

**COMM 36 SPECIAL PROJECTS IN SPEECH**  
**COMM 36X 2 Units**  
**COMM 36Y 3 Units**  
**COMM 36Z 4 Units**

**Formerly: SPCH 36**  
**Advisory:** COMM 1A or 4.  
Any combination of COMM 36–36Z may be taken 6 times for credit, however, no single course may be taken more than 6 times for credit.  
**1 hour lecture for each unit of credit.**

A seminar of advanced research in the critical elements of speech communication. Discussions and individual writing projects under instructor supervision. Specific topics will vary from quarter to quarter.

This course can be substituted for departmental requirements. Enrollment in this course is available in the Fine Arts Division Office. [Transferability: CSU]

**COMM 46 VOICE & DICTION 5 Units**  
*Formerly: SPCH 46*

**Advisory:** Not open to students with credit in DRAM 46, SPCH 46 or THTR 46.  
**5 hours lecture.**

An introductory study of the anatomy and physiology of the vocal mechanism. Development of voice and articulation with an emphasis on standard American speech for the stage. [Foothill GE: Communication & Analytical Thinking; Transferability: UC/CSU]

**COMM 53 FORENSIC SPEECH/DEBATE 4.5 Units**  
*Formerly SPCH 53*

**Advisory:** COMM 1A and/or 1B; not open to students with credit in SPCH 53.

**4 hours lecture, 1.5 hours laboratory.**

Study of public oratory, adjudicated debate and forensic speech; application of principles the preparation and delivery of speeches; structure and format of various forms of debate and participation in debate activities. Students encouraged to attend intercollegiate forensic tournaments. [Transferability: CSU]

**COMM 54 INTERCOLLEGIATE SPEECH/DEBATE 1.5 Units**  
**COMM 54X 2.5 Units**  
**COMM 54Y 3.5 Units**  
**COMM 54Z 4.5 Units**

*Formerly: SPCH 54*

**Advisory:** Eligibility for ENGL 1A or ESLL 26 or equivalent.

**Any combination of COMM 54–54Z may be taken 6 times for credit, however, no single course may be taken more than 6 times for credit. 1 hour lecture, 1.5 hours laboratory for each 1.5 unit of credit.**

Training in principles of debate and forensic speech; preparation for participation in competitive debate, extemporaneous speaking and oratory. Students required to attend and participate in intercollegiate forensic tournaments. [Transferability: CSU]

**COMM 55 CAREER & LEADERSHIP COMMUNICATION IN THE GLOBAL WORKPLACE 5 Units**

*Formerly: SPCH 55*

**Advisory:** Eligibility for ENGL 1A or ESLL 26 or equivalent.

**May be taken 2 times for credit.**

**5 hours lecture.**

Introduction to communication in organizational, career, leadership and global contexts. Interviewing, interpersonal and intercultural communication, group interactions, professional presentations, and leadership development. Application of theories and skills through critically evaluated exercises. [Foothill GE: Communication & Analytical Thinking; Transferability: CSU]

**COMM 105 SPEAKING WITH CONFIDENCE 4.5 Units**  
*Formerly: SPCH 105*

**Advisory:** Not open to students with credit in SPCH 105.

**4 hours lecture, 1.5 hour laboratory.**

Emphasizes experiences in verbal communications specifically designed to reduce speaking anxiety/communication reticence. Development of practical skills in academic, social and work/professional situations where success is largely dependent on clear, effective communication.

**COMM 190 DIRECTED STUDY .5 Unit**  
**COMM 190X 1 Unit**  
**COMM 190Y 1.5 Units**  
**COMM 190Z 2 Units**

*Formerly: SPCH 190*

Non-degree applicable credit course.

**Advisory:** Pass/No Pass.

**Any combination of COMM 190–190Z may be taken for a maximum of 12 units.**

**.5 hour lecture, 1.5 hours laboratory for each .5 unit of credit.**

For students who desire or require additional help in attaining comprehension and competency in learning skills.

## COMPUTER INFORMATION SYSTEMS

**Computers, Technology & Information Systems (650) 949-7236**  
[www.foothill.edu/ctis/](http://www.foothill.edu/ctis/)

**CIS 1 INTRODUCTION TO COMPUTER SCIENCE 5 Units**

**4 hours lecture, 4 hours laboratory.**

Provides a broad overview of the field of computer science and an introduction to software engineering. Introduces hardware, software, information systems, software development and networking. Uses a subset of a programming language to study programming and problem solving. [Transferability: UC/CSU]

**CIS 2 COMPUTERS & SOCIETY 5 Units**

**Advisory:** MATH 220; ENGL 1A or ESLL 26.

**4 hours lecture, 4 hours laboratory.**

A critical examination of the capabilities and uses of modern computers and how they affect society. Hands-on introduction to selected applications such as document creation, manipulation of numeric data, accessing information, decision support and expert systems, graphics and multimedia. [Foothill GE: Lifelong Understanding; Transferability: UC/CSU]

**CIS 12A FUNDAMENTALS OF VISUAL BASIC.NET PROGRAMMING 5 Units**

**Advisory:** MATH 220.

**4 hours lecture, 4 hours laboratory.**

Introduction to computer programming using the Visual Basic.NET Language; provides an overview of computer organization and an introduction to software engineering. Topics include methodologies for program design, development, style, testing and documentation; algorithms, control structures, objects, classes, file I/O, and elementary data structures. [Foothill GE: Communication & Analytical Thinking; Transferability: UC/CSU]

**CIS 12C INTERMEDIATE VISUAL BASIC PROGRAMMING 5 Units**

**Advisory:** CIS 12A or equivalent.

**4 hours lecture, 4 hours laboratory.**

Intermediate/advanced level course for programming and human computer interaction (HCI) using VB.NET. Includes but not limited to overview of OOP, designing classes, advanced objects, and advanced validation techniques; design and usability features using VB.NET forms and controls; database integration using SQL-Server and ADO.NET; web development using Visual Web Developer; in addition to .NET security and deployment features. [Transferability: UC/CSU]

**CIS 12D ADVANCED VISUAL BASIC.NET FOR WINDOWS-BASED APPLICATIONS 5 Units**

**Advisory:** CIS 12A or equivalent.

**4 hours lecture, 4 hours Laboratory.**

Windows based program development using Microsoft's Visual Basic .NET programming language. Includes use of the Visual Studio.NET IDE and the .NET Framework, database programming with ADO.NET, programming handheld devices, MDI, drawing and the GDI, security, deployment. Preparation course for the Microsoft MCSD/MCAD Exam #70-306. [Transferability: UC/CSU]

**CIS 12W DEVELOPING WEB APPLICATIONS WITH VISUAL BASIC.NET 5 Units**

**Advisory:** CIS 12A.  
**4 hours lecture, 4 hours laboratory.**  
Developing Web Applications using the VB.NET language. Visual Basic.NET is one of the latest programming languages from Microsoft designed to support the Internet solutions. Using the Internet related classes in the .NET Framework, VB.NET provides a powerful set of tools both for constructing Web Forms applications using ASP.NET as well as XML Web Services. This Course, which assumes a basic understanding of VB or C# programming, covers all of the key elements of building Web Applications and is targeted at preparing students for the Microsoft Web Applications Certification Exam. [Transferability: UC/CSU]

**CIS 15A COMPUTER SCIENCE I: C++ 5 Units**

**Advisory:** MATH 220  
**4 hours lecture, 4 hours laboratory.**  
Introduces the discipline of computer science using the C++ language; provides an overview of computer organization and an introduction to software engineering. Topics include methodologies for program design, development, style, testing and documentation, and object oriented design; algorithms, control structures, sub-programs, elementary data structures. [Foothill GE: Communication & Analytical Thinking; Transferability: UC/CSU]

**CIS 15B COMPUTER SCIENCE II: C++ 5 Units**

**Advisory:** CIS 15A.  
**4 hours lecture, 4 hours laboratory.**  
A systematic approach to the design, construction, and management of computer programs, emphasizing object-oriented design and programming, documentation, testing and debugging techniques. Focuses on classes, strings, arrays, pointers, and dynamic allocation, and disk files in the C++ programming language. Introduction to basic data structures. Builds on the concepts presented in CIS 15A. [Transferability: UC/CSU]

**CIS 15C COMPUTER SCIENCE III: DATA STRUCTURES & ALGORITHMS C++ 5 Units**

**Advisory:** CIS 15B or equivalent.  
**4 hours lecture, 4 hours laboratory.**  
A systematic approach to the design and construction of data structures and algorithms. Focuses on defining abstract data types, including arrays, stacks, queues, trees, and graphs as well as searching and sorting techniques and recursive algorithms. Analysis of algorithms and their performance will be evaluated. [Transferability: UC/CSU]

**CIS 15D DESIGNING WITH C++ CLASSES 5 Units**

**Advisory:** CIS 15B or CIS 15P.  
**4 hours lecture, 4 hours laboratory.**  
Survey of the practice, theory and advanced techniques of object-oriented computer programming using the C++ programming languages in a practical and realistic software environment. [Transferability: UC/CSU]

**CIS 15P C++ FOR PROGRAMMERS 5 Units**

**Advisory:** CIS 25A, 27B or equivalent C or JAVA programming class.  
**4 hours lecture, 4 hours laboratory.**  
Introduction to the theory and techniques of object-oriented computer programming using the C++ programming language. Encapsulation, polymorphism, and inheritance including both single and multiple inheritance. The syntax of C++ will be introduced in a context that stresses both the theoretical and practical advantages of object-oriented design methodology. [Transferability: UC/CSU]

**CIS 18 DISCRETE MATHEMATICS 5 Units**

**Prerequisite:** MATH 49.  
**Advisory:** Not open to students with credit in MATH 22.  
**5 hours lecture, 1 hour laboratory.**  
Discrete mathematics: set theory, logic, Boolean algebra, methods of proof, mathematical induction, number theory, discrete probability, combinatorics, functions, relations, recursion, algorithm efficiencies, graphs, trees. [Foothill GE: Communication & Analytical Thinking; Transferability: UC/CSU]

**CIS 19A INTRODUCTION TO PROGRAMMING WITH C# 5 Units**

**Advisory:** CIS 12A or 15A or 27A.  
**4 hours lecture, 4 hours laboratory.**  
Introduction to programming using the C# language. C# is a new programming language which was developed expressly for the .NET platform. C# has now become the exclusive language used by Microsoft for all of its internal development. This course provides an introduction to basic object oriented programming constructs from the point of view of C#. Students will learn how to build both console and Windows forms based applications. [Transferability: UC/CSU]

**CIS 19D DEVELOPING WINDOWS-BASED APPLICATIONS WITH C# 5 Units**

**Advisory:** CIS 19A.  
**4 hours lecture, 4 hours laboratory.**  
Developing Windows Based Applications using C#. Internally, Microsoft has shifted the development of all new projects to the use of C#, relegating C and C++ to purely maintenance tasks for existing products. Evidencing Microsoft's commitment to C#, the next version of the Windows Operating System (codename Longhorn) will largely replace the Win32 API with the .NET Framework. C# is a powerful new programming language which grafts the rapid application development capabilities of Visual Basic onto the strongest features of C++. This Course, which assumes a basic understanding of C# programming, covers all of the key elements of building classic WinForms Applications and is targeted at preparing students for the Microsoft Windows-Based Applications Certification Exam. [Transferability: UC/CSU]

**CIS 19K USER INTERFACE DESIGN WITH EXPRESSIONS BLEND 5 Units**

**Advisory:** CIS 19M, COIN 78.  
**May be taken 3 times for credit.**  
**4 hours lecture, 4 hours laboratory.**  
Expression Blend is a new tool from Microsoft for designing both Windows and Web user interfaces using XAML, an XML derivative. Blend seamlessly permits the incorporation of audio, video, 2D and 3D vector art, bitmap images and animations into stunning user interfaces. Through data binding and other markup extensions, XAML permits the implementation of a considerable degree of functionality without requiring a full fledged programming language such as C#. At the same time, Blend is able to totally coordinate with Visual Studio so that the same project can be worked on simultaneously by a designer using Blend and by a C# developer using Visual Studio. Blend will ultimately be used both by professional user interface designers and by developers for most WPF (Windows Presentation Foundation) UIs since its feature set for design purposes is considerably richer than the equivalent designer in Visual Studio.

**CIS 19L WINDOWS COMMUNICATION FOUNDATION (WCF) INTRODUCTION 5 Units**

**Advisory:** CIS 12D, 12W, 19D, 19W.  
**May be taken 3 times for credit.**  
**4 hours lecture, 4 hours laboratory.**  
This course provides students with an understanding of the Windows Communications Foundation and the skills required to use this Framework to develop service-oriented applications (SOA) on Windows. This course will explain how to take advantage of built-in features of Version 3.0 (and following) of the .NET Framework such as service hosting, instance management, asynchronous calls, synchronization, reliability, transaction management, disconnected queued calls and security to build distributed applications. [Transferability: CSU]

**CIS 19M WINDOWS PRESENTATION FOUNDATION INTRODUCTION 5 Units**

**Advisory:** CIS 12C, 19D, COIN 78.  
**May be taken 3 times for credit.**  
**4 hours lecture, 4 hours laboratory.**  
This course provides students with an understanding of the Windows Presentation Foundation and the skills required to use this Framework to create both dynamic C# Windows Forms and browser hosted applications. WPF is a new programming paradigm introduced in Version 3.0 of the .NET Framework as an alternative to traditional Windows Forms programming. WPF effectively permits the separation of user interface design (to be

principally implemented by designers) from the underlying functionality (to be implemented by developers). WPF also permits almost any control to host any other control, thereby allowing dramatic user interface such as buttons hosting videos or 3D drawings. [Transferability: CSU]

**CIS 19N DEPLOYING .NET APPLICATIONS 5 Units**

**Advisory:** CIS 12C, 19D.

**May be taken 3 times for credit.**

**4 hours lecture, 4 hours laboratory.**

This course provides students with an understanding of how to deploy .NET applications using Microsoft Installer, MSBuild and ClickOnce technologies. The course will address the installation of both Windows Forms applications and Web Applications. It also covers both initial installations and service packs as well as patches and other updates. [Transferability: CSU]

**CIS 19P ADVANCED PROGRAMMING WITH C# 5 Units**

**Advisory:** CIS 12A or 15A or 19A or 27A.

**4 hours lecture, 4 hours laboratory.**

Advanced programming using the C# language. C# is a new programming language introduced by Microsoft as an intended replacement for C++ and as an attempt to leap-frog Java. C# incorporates the power and speed of C++ with the rapid design features of Visual Basic. C# extends its heritage as a fully object oriented language and broadens its scope from suitability for forms based applications to web based applications as well. This course explores how to create forms based applications with this powerful, yet simple, new programming language. It explains how to leverage the hundreds of built in classes provided by the .NET Framework to quickly and efficiently build robust applications. [Transferability: UC/CSU]

**CIS 19V USING VISUAL STUDIO TOOLS FOR OFFICE 5 Units**

**Advisory:** CIS 12A or 19A.

**May be taken 3 times for credit.**

**4 hours of lecture, 4 hours laboratory.**

Visual Studio Tools for Office (VSTO) is an add-in to Visual Studio 2005 which allows developers to build Microsoft Office related applications. VSTO applications can take three forms: (1) Office automation, (2) Office add-ins and (3) Code behind Office documents. Office automation refers to a C# or VB.NET application which uses some capability of one or more Office applications to perform a given task. For example, an application could use either Word or Excel to print a document pursuant to some pre-designed format. Office add-ins are applications which run at the same time as the Office application with which they are associated and which appear to be an integral part of the application's user interface. Code behind Office documents correspond to classic Visual Basic for Applications (VBA) projects which customize a particular Office document. This course will teach students how to use VSTO to build all three types of Office related applications.

**CIS 19W DEVELOPING WEB APPLICATIONS 5 Units**

**Advisory:** CIS 19A.

**4 hours lecture, 4 hours laboratory.**

Developing Web Applications using C# language. C# is the first programming language from Microsoft designed from the ground up to support the Internet. Using the Internet related classes in the .NET Framework, C# provides a powerful set of tools both for constructing Web Forms applications using ASP.NET as well as XML Web Services. This course assumes a basic understanding of C# programming, covers all of the key elements of building Web Applications and is targeted at preparing students for the Microsoft Web Applications Certification Exam. [Transferability: CSU]

**CIS 25A PROGRAMMING IN C 5 Units**

**Advisory:** Knowledge of a high-level programming language.

**4 hours lecture, 4 hours laboratory.**

Introduction to the C programming language and its applications. Emphasis on C syntax and structured programming. Designed for individuals who have a good grasp of computer fundamentals and some programming experience. [Foothill GE: Communication & Analytical Thinking; Transferability: UC/CSU]

**CIS 25B ADVANCED PROGRAMMING IN C 5 Units**

**Advisory:** CIS 25A, 15A or equivalent.

**4 hours lecture, 4 hours laboratory.**

Advanced professional programming in C. The C compiler, code generation, subroutine linkage, structured programming, complex declarations, memory allocation, use of the heap and stack, multidimensional arrays, advanced pointers, recursion, I/O, debugging and portability. [Transferability: UC/CSU]

**CIS 27A COMPUTER SCIENCE I: JAVA 5 Units**

**Advisory:** MATH 220.

**4 hours lecture, 4 hours laboratory.**

Introduces the discipline of computer science using the Java language; provides an overview of computer organization and an introduction to software engineering. Topics include methodologies for program design, development, style, testing and documentation; algorithms, control structures, sub-programs, objects, and elementary data structures. [Transferability: UC/CSU]

**CIS 27B COMPUTER SCIENCE II: JAVA 5 Units**

**Advisory:** CIS 27A or equivalent.

**4 hours lecture, 4 hours laboratory.**

A systematic approach to the design, construction, and management of computer programs, emphasizing object oriented design and programming, documentation, testing and debugging techniques. Focuses on classes, inheritance, graphical user interfaces, event-driven programs, Web applets, and disk files. Introduction to basic data structures. Builds on the concepts presented in CIS 27A. [Transferability: UC/CSU]

**CIS 27C COMPUTER SCIENCE III: DATA STRUCTURES & ALGORITHMS IN JAVA 5 Units**

**Advisory:** CIS 27B.

**4 hours lecture, 4 hours laboratory.**

A systematic approach to the design and construction of programs using common data structures and their associated algorithms. Focuses on defining abstract data types including arrays, stacks, queues, and trees, as well as searching and sorting techniques, disk files, and recursive programming techniques. Builds on the concepts presented in CIS 27B. [Transferability: UC/CSU]

**CIS 27D JAVA ADVANCED FEATURES 5 Units**

**Advisory:** CIS 27B or 27P.

**4 hours lecture, 4 hours laboratory.**

Covers several of the more important advanced features of Java not normally covered in CIS 27A or 27B. Topics will include, but will not be limited to, input and output streams, multithreading networking, Remote Method Invocation (RMI), Java Beans, 2D graphics, advanced multimedia and other topics at the discretion of the instructor. [Transferability: UC/CSU]

**CIS 27P JAVA FOR PROGRAMMERS 5 Units**

**Advisory:** Prior C/C++ programming experience.

**4 hours lecture, 4 hours laboratory.**

A comprehensive course in the Java programming language intended for students with previous experience programming in C or C++ and a basic understanding of computer science concepts. Provides instruction in object-oriented programming in Java and the use of classes, data abstraction, arrays, strings, graphics, GUI, files, exception handling and applets. Note: Students with no programming experience who wish to learn Java should opt for CIS 27A. [Transferability: UC/CSU]

**CIS 30 SELECTED TOPICS IN PROGRAMMING TECHNOLOGY 5 Units**

**Advisory:** CIS 12A, 15A, 25A, 27A or equivalent.

**May be taken 3 times for credit.**

**4 hours lecture, 4 hours laboratory.**

Introduction to various programming languages and software development tools. [Transferability: CSU]

**CIS 50A USING THE COMPUTER: PC (WINDOWS) 5 Units**

**Advisory: Not open to students with credit in CIS 50B. 4 hours lecture, 4 hours laboratory.**

Introduction to the computer and its uses for the student with little or no computer experience. Use of the IBM PC (Windows) for hands-on experience with a word processor, a spreadsheet, a database manager, graphics, file management techniques, simple software configuration, an Internet browser, and the use of a programming language. Discussion of other software applications and of the role of computers and the information superhighway in our society. [Foothill GE: Lifelong Understanding; Transferability: CSU]

**CIS 51A PREPARATION FOR TECHNOLOGY CAREERS 3 Units**

**1.5 hours lecture, 1.5 hours lecture-laboratory, 2 hours laboratory.** Introduction to Foothill College technology programs. CIS 51A prepares students to differentiate among the technology careers and enter the career path of their choice. The local opportunities in technology careers to be discussed. In addition, professional and academic preparations, basic skills needed and resources available at Foothill College and aligned schools and industry will be thoroughly reviewed. [Transferability: CSU]

**CIS 51C WORKPLACE PRINCIPLES & PRACTICES 4 Units**

**Advisory: Grade of "C" or better in ENGL 110 or ESLL 25, or eligibility for ENGL 1A or ESLL 26.**

**1.5 hours lecture, 1.5 hours lecture-laboratory, 3 hours laboratory.** Concepts, principles and practices in the information technology workplace. Emphasis on how the issues of currency, certification, ethical decision-making, globalization, diversity, organizational roles and responsibilities, collaboration and work-teams, customer service and total quality management apply to the information technology workplace. [Transferability: CSU]

**CIS 52A INTRODUCTION TO DATA MANAGEMENT SYSTEMS 5 Units**

**Advisory: CIS 50A, 50B, or 60.**

**4 hours lecture, 4 hours laboratory.**

Introduction to database systems and data management. Topics include database definitions and concepts, relational database, client/server database, Internet database, distributed database, object-oriented database, data warehousing, transaction management, database administration, database performance, and hands-on experience with a database management system. [Transferability: CSU]

**CIS 52B ORACLE SQL 5 Units**

**4 hours lecture, 4 hours laboratory.**

Introduction to Oracle 11g Structured Query Language used in querying single and multiple tables, manipulating data in tables, and creating database objects in a relational database. Students will gain essential SQL skills through hands-on exercises that reinforce SQL fundamental concepts. This course prepares students to take the Oracle Certified Associate exam and the Oracle Certified Professional exam. [Transferability: CSU]

**CIS 52C DATABASE MODELING & RELATIONAL DATABASE DESIGN 5 Units**

**4 hours lecture, 4 hours laboratory.**

Introduction to data modeling and the process of database design. This course covers the database development process, entity-relationship model, logical and physical database design. [Transferability: CSU]

**CIS 52E ORACLE DATABASE ADMINISTRATION I 5 Units**

**Advisory: CIS 52B or equivalent.**

**4 hours lecture, 4 hours laboratory.**

The fundamentals of Oracle 11g database administration. Students will acquire an understanding of the Oracle database architecture and how each component work and interact with each other. Students will create, manage, and maintain the operation of a database and gain essential skills in user management, backup and recovery, performance monitoring, database security, Oracle Net Services, Oracle shared servers, lock monitoring, and data movement. Hands-on exercises reinforce basic

concepts in the course. This course prepares students to take the Oracle Certified Associate exam and the Oracle Certified Professional exam. [Transferability: CSU]

**CIS 52F ORACLE DATABASE ADMINISTRATION II 5 Units**

**Advisory: CIS 52E or equivalent.**

**4 hours lecture, 4 hours laboratory.**

Introduction to Oracle 11g database backup and recovery using RMAN, recovery catalog and user-managed techniques. Students will learn how to diagnose the database, manage Oracle memory structures, use database performance monitoring tools, use flashback technology and flashback database, manage resources, automate tasks, use Segment Advisor, work with automatic storage management (ASM), and use globalization support. Hands-on exercises reinforce topics covered in this course. This course prepares students to take the Database Administration Oracle Certified Professional exam. [Transferability: CSU]

**CIS 52J ORACLE: PROGRAM WITH PL/SQL 5 Units**

**Advisory: CIS 52B or equivalent.**

**4 hours lecture, 4 hours terminal time.**

Introduction to Oracle 11g PL/SQL, Programming Language for the Structured Query Language. This course covers the benefits, concepts, application, and management of PL/SQL program units. Students will learn how to create PL/SQL blocks, stored procedures, functions, packages, and database triggers; handle run-time errors; write dynamic SQL; use Oracle-supplied packages; and manage dependencies and PL/SQL codes. Hands-on exercises reinforce the concepts in this course. [Transferability: CSU]

**CIS 52K ORACLE FORMS DEVELOPER: BUILD INTERNET APPLICATIONS 5 Units**

**Advisory: CIS 52J.**

**4 hours lecture, 4 hours laboratory.**

Introduction to developing, testing, and deploying of Internet applications using Oracle's Developer Suite10g. Students will learn how to build and customize forms, control data access through event-related triggers, display Form elements in multiple windows, test and debug Web applications. This course helps students prepare for one of the exams in the Oracle Forms Developer Certified Professional Program. [Transferability: CSU]

**CIS 52N PHP & MYSQL 5 Units**

**4 hours lecture, 4 hours laboratory.**

Students learn how to code PHP and MySQL, languages used to generate powerful, database-driven, dynamic Web sites. This course covers the rudiments of PHP programming, including the anatomy of a PHP script, operators, strings, conditionals, loops, arrays, and functions; and MySQL capabilities, including MySQL command-line options, connecting to the database, and phpMyAdmin tool. [Transferability: CSU]

**CIS 52P PHP PROGRAMMING 5 Units**

**Advisory: CIS 52N.**

**4 hours lecture, 4 hours laboratory.**

Students learn the intermediate and advanced features of PHP to develop powerful web applications. Topics include object-oriented programming, error handling and debugging, regular expressions and pattern matching, files and directories, PHP forms, PHP and email, cookies and sessions, secure coding with PHP, and PHP and MySQL integration.

**CIS 52Q MYSQL: IN-DEPTH 5 Units**

**4 hours lecture, 4 hours laboratory.**

In-depth study of MySQL 5.0. Overview of MySQL architecture and configuration; MySQL Administrator features; MySQL storage engines; table and user maintenance; backup and recovery; optimizing queries, databases, server, and the environment; and securing the MYSQL installation. This course also covers data manipulation and data definition language; triggers, stored procedures, and functions; and database metadata. Prepares students to take the MySQL 5.0 Database Administrator and MySQL 5.0 Developer Certification exams. [Transferability: CSU]

**CIS 54C      MICROSOFT SQL SERVER DATABASE DEVELOPMENT & DESIGN      5 Units**

**4 hours lecture, 4 hours laboratory.**  
Students will learn database development and designing database solutions and data access using Microsoft SQL Server 2008. This course covers materials that will prepare students for MCITP: Database Developer 2008: Exam 70-433 — TS: Microsoft SQL Server 2008, Database Development and Exam 70-451 — PRO: Designing Database Solutions and Data Access Using Microsoft SQL Server 2008. [Transferability: CSU]

**CIS 54D      MICROSOFT SQL SERVER IMPLEMENTATION & MAINTENANCE      5 Units**

**4 hours lecture, 4 hours laboratory.**  
This course provides students with the knowledge and skills in implementing and maintaining a database using Microsoft SQL Server 2008. The first course in the Microsoft MCITP certification series designed to prepare students for the Microsoft Certified IT Professional (MCITP): Database Administrator Exam 70-432 — TS: Microsoft SQL Server 2008 Implementation and Maintenance. This course will also help in preparing for the Microsoft Certified Technology Specialist (MCTS) certification exam. [Transferability: CSU]

**CIS 54E      MICROSOFT SQL SERVER DATABASE ADMINISTRATION      5 Units**

**Advisory: CIS 54D.**  
**4 hours lecture, 4 hours terminal time.**  
This course provides students with the knowledge and skills in optimizing and maintaining a database administration solution using Microsoft SQL Server 2008. The second course in the Microsoft MCITP certification series designed to prepare students for the Microsoft Certified IT Professional (MCITP): Database Administrator Exam 70-450:]  
PRO: Designing, Optimizing and Maintaining a Database Administrative Solution Using Microsoft SQL Server 2008 [Transferability: CSU]

**CIS 55A      INTRODUCTION TO GAMES      5 Units**

**4 hours lecture, 4 hours laboratory.**  
An overview of the game development industry including the positions and job responsibilities that each member of a game development team has along with the industry requirements for documentation. Introduces the student to the software development process. Students will create individual games using a game development environment. This class does not require any programming. [Transferability: CSU]

**CIS 55B      INTRODUCTION TO GAME DESIGN      5 Units**

**4 hours lecture, 4 hours laboratory.**  
A systematic approach to the design and construction of computer games and real time simulations. Covers topics such as design theory and programming techniques. Students will create small scale games and game components. [Transferability: UC/CSU]

**CIS 55C      PRACTICAL GAME DESIGN      5 Units**

**Advisory: CIS 55B.**  
**4 hours lecture, 4 hours laboratory.**  
A project based approach to the practice and art of computer game design and real-time simulations. Emphasizes the practical techniques and procedures necessary to create a game. Working in teams, students will design and create a realtime interactive game. The C++ programming language will be used to implement projects. [Transferability: CSU]

**CIS 60      INTRODUCTION TO BUSINESS INFORMATION SYSTEMS      5 Units**

**Advisory: MATH 220 or equivalent; eligibility for ENGL 1A or ESLL 26.**  
**4 hours lecture, 4 hours terminal time.**  
Introduction to the concepts of business information systems especially as used in business and similar organizations. Covers the need for information, how computers are used in business to provide information, elements of computer hardware and software, software development, data storage and communication, and the social impact of computers. Hands-on introduction to programming concepts, word processing, spreadsheet and database applications. [Foothill GE: Lifelong Understanding; Transferability: UC/CSU]

**CIS 61A      INFORMATICS      5 Units**

**Advisory: CIS 60 or equivalent.**  
**Corequisite: CIS 61B.**  
**4 hours lecture, 4 hours laboratory.**  
Introduction to the concepts, practice and tools underlying the study of Informatics. Topics include, but not limited to, Information representation and infrastructure, Meta data, the Semantic web, knowledge management, data warehousing, data mining, user interface, analytical tools, careers, industry trends, social, global and organizational impacts, and applications in business, industry and education. [Transferability: CSU]

**CIS 61B      PREPARATION FOR CAREERS IN INFORMATICS      2 Units**

**Advisory: Not open to students with credit in CIS 51A.**  
**2 hours lecture, 1 hour laboratory.**  
Orientation to the Foothill College Informatics program. The course has two goals for participating students - to help the student in differentiating among the potential careers paths in the field of informatics, and to prepare the student in the career path chosen. Opportunities in informatics and related careers to be discussed. Interest, aptitude and readiness for a career in informatics will be analyzed by the student. Professional and academic preparation, basic skills needed and resources available at Foothill College and aligned schools and industry will be covered through discussion and classroom laboratory applications. [Transferability: CSU]

**CIS 61C      INFORMATICS TOOLS & METHODS      5 Units**

**Advisory: CIS 61A or equivalent; MATH 10; familiarity with SQL.**  
**May be taken 3 times for credit.**  
**4 hours lecture, 4 hours terminal time.**  
Introduces students to the methods of using Excel, Access, Informatica, and SAS in solving informatics problems. Hands on use of each tool in combined directed data analysis, integration, and migration activities. Hands on exercises with business intelligence tools, creating reports, customizing dashboards, and use of Meta directories. Use of SQL queries on data cubes for creating custom and automated reports. [Transferability: CSU]

**CIS 61X      INFORMATICS PROJECTS      1 Unit**

**CIS 61Y      2 Units**

**CIS 61Z      3.5 Units**  
**Advisory: CIS 61A, 63B or equivalent.**  
**.5 hour lecture, 2 hours terminal time for each unit of credit.**  
Projects course for demonstrating working knowledge of Informatics process and architecture. Students will create an Informatics project incorporating data storage, analysis, and reporting. Typical projects will include, but not be limited to, data mining, visualization, Web-database integration, and XML report formats. Goal of the project is to demonstrate working knowledge, skills, and abilities in Informatics. Concurrent work experience and projects may be submitted with consent of instructor. [Transferability: CSU]

**CIS 62A      DATA WAREHOUSING & WEB MINING      5 Units**

**Advisory: CIS 52C or equivalent.**  
**4 hours lecture, 4 hours laboratory.**  
Students will learn the key aspects of data warehousing and data mining with emphasis on mining data from Internet Web sites using a project building approach. Through 'hands on' activities students will work with data models that detect patterns in business data sets and develop mining techniques for web intelligence. Topics include data warehouse design and implementation, data migration strategies, automation techniques, knowledge discovery and mining techniques, web usage mining, web content mining and web structure mining, tools integration and metadata for end user reporting and utilization. [Transferability: CSU]

<p><b>CIS 63A</b>      <b>SYSTEMS ANALYSIS, DESIGN &amp; HUMAN INTERFACE</b>      <b>5 Units</b></p> <p><b>Advisory:</b> CIS 60 or equivalent; familiarity with object-oriented computer applications; PowerPoint®, Flash® or equivalent presentation software. <b>4 hours lecture, 4 hours laboratory.</b></p> <p>Introduction to systems development, techniques and tools. Special emphasis is placed on analysis, design and evaluation techniques particularly relevant to HCI. Graphic interface tools are used as a design and implementation prototyping environment. [Transferability: CSU]</p>	<p><b>CIS 68C1</b>      <b>LINUX &amp; UNIX SYSTEM ADMINISTRATION</b>      <b>5 Units</b></p> <p><b>Advisory:</b> CIS 68A or equivalent. <b>4 hours lecture, 4 hours laboratory.</b></p> <p>Introduction to basic system administration of Linux and UNIX systems. Overview of basic PC hardware, system boot process, administration utilities, and management of user accounts, file systems, basic networking, printing, security, accounting and logging. Software install and removal using source code and package managers. Kernel updating and boot managers. [Transferability: UC/CSU]</p>
<p><b>CIS 63A1</b>      <b>SYSTEMS ANALYSIS &amp; DESIGN</b>      <b>5 Units</b></p> <p><b>Prerequisite:</b> CIS 60 or equivalent.</p> <p><b>Advisory:</b> Database or application programming; PowerPoint® or Visio® or equivalent presentation/diagramming software. <b>4 hours lecture, 4 hours laboratory.</b></p> <p>Introduction to systems development, techniques and tools. Emphasis is placed on analysis, design and evaluation techniques using traditional and object oriented models. Tools used for the elements of system development will include current popular project management and diagramming applications. The focus of the course is on systems analysis and design in relation business information systems development with the use of CASE tools. [Transferability: CSU]</p>	<p><b>CIS 68C2</b>      <b>LINUX &amp; UNIX NETWORKING ADMINISTRATION</b>      <b>5 Units</b></p> <p><b>Advisory:</b> CIS 68A, 68B and 68C1 or equivalent experience. <b>4 hours lecture, 4 hours laboratory.</b></p> <p>Advanced networking administration of the UNIX operating system. Hands on experience with network setup, configuration and maintenance. [Transferability: CSU]</p>
<p><b>CIS 63B</b>      <b>DESIGN &amp; ANALYSIS FOR INFORMATICS RESEARCH</b>      <b>5 Units</b></p> <p><b>Advisory:</b> MATH 10 and CIS 63A or equivalent. <b>May be taken 3 times for credit. 4 hours lecture, 4 hours laboratory.</b></p> <p>Examines the concepts, techniques, tools and methods used typically in informatics research. Topics presented are directed toward analysis of experimental, quasi-experimental and survey data. Hands-on experience with such packages as EXCEL and SAS or SPSS to collect, organize and process data. Emphasis on data integrity, data visualization descriptive statistics, ANOVA, and REGRESSION analyses. [Transferability: CSU]</p>	<p><b>CIS 68C3</b>      <b>UNIX NAME SERVICE ADMINISTRATION</b>      <b>3 Units</b></p> <p><b>Prerequisite:</b> CIS 68C2 or equivalent experience. <b>2 hours lecture, 2 hours lecture-laboratory, 2 hours terminal time.</b></p> <p>Administration of a UNIX system operating in remote mode using a name service. Hands-on experience with configuration and maintenance. [Transferability: CSU]</p>
<p><b>CIS 64A</b>      <b>COMPUTERIZED ACCOUNTING PRACTICE</b>      <b>1 Unit</b></p> <p><b>Prerequisite:</b> ACTG 1A or equivalent experience.</p> <p><b>Advisory:</b> MATH 10 or high school algebra; not open to students with credit in ACTG 64A. <b>2 hours lecture-laboratory.</b></p> <p>Practice in accounting procedures and review of accounting principles. Recording business transactions in accounting records and completing the accounting cycle using the computer. [Transferability: CSU]</p>	<p><b>CIS 68E</b>      <b>PROGRAMMING IN PERL</b>      <b>5 Units</b></p> <p><b>Advisory:</b> CIS 68A; one or more of CIS 15A or 25A or 27A or equivalent experience. <b>4 hours lecture, 4 hours laboratory.</b></p> <p>Perl, the Practical Extraction and Report Language, was conceived, created, and continuously developed as a text processing language for Unix-like(Linux and Unix) operating systems. Most of its semantics and syntax is tied directly to other Linux/Unix based languages such as C, awk, sh and Unix power utilities like grep and sed. Some of its power also derives from native Linux and Unix process control and file system operations. This course covers the core Perl language in a Linux and Unix based instruction environment to prepare the student for significant Perl programming challenges in the "real" world, as well as further study in intermediate and advanced Perl programming courses. [Transferability: UC/CSU]</p>
<p><b>CIS 64B</b>      <b>COMPUTERIZED ACCOUNTING: SPREADSHEET</b>      <b>1 Unit</b></p> <p><b>Prerequisite:</b> ACTG 1B or equivalent experience.</p> <p><b>Advisory:</b> MATH 10 or high school algebra; not open to students with credit in ACTG 64B. <b>2 hours lecture-laboratory.</b></p> <p>Practice in using an electronic spreadsheet program to organize and process financial and managerial accounting data. Includes analysis of spreadsheet reports. [Transferability: CSU]</p>	<p><b>CIS 68H</b>      <b>BIOPERL PROGRAMMING FOR BIOINFORMATICS</b>      <b>5 Units</b></p> <p><b>Advisory:</b> CIS 68E or COIN 68 or equivalent. <b>4 hours lecture, 4 hours laboratory.</b></p> <p>This course will introduce BioPerl modules in the analysis of bioinformatics data, including downloading, installing and configuring BioPerl in a Windows environment. Using BioPerl modules, this course will show the student how to retrieve, analyze and manipulate genomic/proteomics sequences from databases such as GenBank and GenPept, RefSeq, SWISSPROT, EMBL, etc. It will show how to use BioPerl modules to convert between and from various file formats including FASTA, SWISSPROT, and EMBL. It includes extracting annotations/features from sequence files, performing similar sequence searches and using sequence alignments. BioPerl modules exercises include running applications such as BLAST, Smith-Waterman, Clustalw, HMMER etc. This course is intended for bioinformatics students with a strong foundation in Perl, which is provided by the course CIS 68J. [Transferability: UC/CSU]</p>
<p><b>CIS 68A</b>      <b>INTRODUCTION TO LINUX &amp; UNIX</b>      <b>5 Units</b></p> <p><b>Advisory:</b> CIS 50A or 50B or equivalent. <b>4 hours lecture, 4 hours laboratory.</b></p> <p>An introduction to the Linux and UNIX operating systems, primarily focused on command line usage. Covers the kernel, file systems, shells and user utilities. Also introduces students to the fundamentals of shell programming, processes, communications, and basic security. [Transferability: UC/CSU]</p>	<p><b>CIS 68J</b>      <b>PERL PROGRAMMING FOR BIOINFORMATICS</b>      <b>5 Units</b></p> <p><b>Advisory:</b> CIS 50A or equivalent. <b>4 hours lecture, 4 hours laboratory.</b></p> <p>Provides a strong foundation in Perl programming for Bioinformatics, which has become a required 'lab skill' for biologists. It shows the student how to use Perl in a Windows environment to solve programming problems such as creating, modifying, comparing and deleting biological data files, searching for motifs in these data files, manipulating sequences found in these data files etc. Elucidates basic programming concepts such as operators, conditional and looping constructs, file operations and regular</p>
<p><b>CIS 68B</b>      <b>LINUX &amp; UNIX SHELL PROGRAMMING</b>      <b>5 Units</b></p> <p><b>Advisory:</b> CIS 68A or equivalent. <b>4 hours lecture, 4 hours terminal time.</b></p> <p>Linux shell script programming using the Bourne Again shell programming language (bash) and UNIX utilities to create practical shell scripts. [Transferability: UC/CSU]</p>	

expressions. Class exercises emphasize use of biological sequence data for bioinformatics problem solving. This course provides the requisite skills to successfully complete the CIS 68H course. [Transferability: UC/CSU]

**CIS 68K INTRODUCTION TO PYTHON PROGRAMMING 5 Units**

**Advisory: CIS 15A or 27A, and CIS 68A.**  
**4 hours lecture, 4 hours laboratory.**

This course will introduce students to the Python language and environment. Python is a portable, interpreted, object-oriented programming language that is often compared to Perl, Java, Scheme and Tcl. The language has an elegant syntax, dynamic typing, and a small number of powerful, high-level data types. It also has modules, classes, and exceptions. The modules provide interfaces to many system calls and libraries, as well as to various windowing systems (X11, Motif, Tk, Mac, MFC). New built-in modules are easily written in C or C++. Such extension modules can define new functions and variables as well as new object types. [Transferability: UC/CSU]

**CIS 68L INTERMEDIATE PYTHON PROGRAMMING 5 Units**

**Advisory: CIS 68K.**  
**4 hours lecture, 4 hours laboratory**

Extends the students' understanding of how to write effective applications in the Python programming language. Covers topics that allow a Python program to interface to users, networked applications and databases. Includes advanced topics like multithreading and regular expressions. Enforces object oriented design, thorough documentation, testing and conventional programming style. [Transferability: UC/CSU]

**CIS 68M INTERMEDIATE PERL PROGRAMMING 5 Units**

**Advisory: CIS 68E or some Perl programming experience; CIS 68B.**  
**4 hours lecture, 4 hours laboratory.**

This course presents core Perl language features used to manage the development and complexity of Perl programs requiring hundreds if not thousands of lines of code. An in depth presentation of references and arbitrarily complex data structures provide a basis for object-oriented Perl. Perl and Linux/Unix based mechanisms for release cycle control, unit testing, and code packaging (i.e. a distribution) are also presented.] This course is intended to leverage the environment of the Linux/UNIX operating systems and it's various subsystems (i.e. filesystems, process management, memory management, etc.) and therefore requires a working knowledge on the part of the student and a substantial background on the part of the instructor. [Transferability: CSU]

**CIS 78 SOFTWARE ENGINEERING 5 Units**

**Advisory: Any structured programming class.**  
**4 hours lecture, 4 hours laboratory.**

A language-independent study of current software development methodologies. The stages of systems analysis, product design, implementation and testing are practiced. Collaborative, interactive design and technical writing are problem solving techniques learned. [Transferability: UC/CSU]

**CIS 93U,V,W CIS EXPERIENTIAL INTERNSHIP 3 Units**

**May be taken for a maximum of 18 units of credit.**  
**Any combination of CIS 93U-W may be taken 6 times for credit, however, no single course may be taken more than 6 times for credit.**  
 Off-campus supervised experiential education of CIS students in database administration, computer software development or Informatics. Opportunity for practical application of knowledge, skills and abilities acquired in CIS and related course work. Exposure to varied protocols, methodologies and practices in a professional working environment. [Transferability: CSU]

**CIS 96 SPECIAL PROJECTS 1 Unit**  
**CIS 96X 2 Units**  
**CIS 96Y 3 Units**

**Any combination of CIS 96-96Y may be taken 6 times for credit, however, no single course may be taken more than 6 times for credit.**  
**3 hours laboratory for each unit of credit.**  
 Individual research and/or projects in computer information systems, computer science or data communication. [Transferability: CSU]

**CIS 102 COMPUTER KEYBOARDING SKILLS .5 Unit**

**Advisory: Pass/No Pass; not open to students with credit in CAST 102.**  
**1 hour lecture-laboratory.**

Beginning keyboarding course covering the operation of the keyboard using the touch system and the development of correct techniques to interact more efficiently with desktop computers, computer terminals, or electronic communication systems. Designed for independent skill learning.

**CIS 111 LEARNING-COLLABORATIVE TRAINING 1 Unit**

**Non-degree applicable credit course.**

**Prerequisite: An earned "A" or "B" grade with instructor recommendation in the computer, electronics or networking course in which learning assistance will be provided to students.**

**Advisory: Pass/No Pass.**

**May be taken 3 times for credit.**  
**1 hour lecture, 3 hours laboratory.**

Training in strategies and skills necessary for assisting students in a collaborative learning environment; including techniques of group learning, study skills and subject-specific instructional support.

**CIS 190 DIRECTED STUDY .5 Unit**  
**CIS 190X 1 Unit**  
**CIS 190Y 1.5 Units**  
**CIS 190Z 2 Units**

**Non-degree applicable credit course.**

**Advisory: Pass/No Pass.**

**Corequisite: Concurrent enrollment in a computer science class or enrollment in any class requiring computer usage.**

**Any combination of CIS 190-190Z may be taken 6 times for credit, however, no single course may be taken more than 6 times for credit.**  
**.5 hour lecture, 1.5 hours laboratory for each .5 unit of credit.**

Computer projects for students who desire or require additional help in attaining comprehension and competency in computer skills.

**CIS 191 WRITING/COMMUNICATION .5 Unit**  
**CIS 191X ACROSS THE CURRICULUM FOR 1 Unit**  
**CIS 191Y COMPUTERS, TECHNOLOGY & 1.5 Units**  
**CIS 191Z INFORMATION SYSTEMS 2 Units**

**Non-degree applicable credit course.**

**Advisory: Pass/No Pass.**

**Any combination of CIS 191-191Z may be taken 6 times for credit, however, no single course may be taken more than 6 times for credit.**  
**.5 hour lecture, 1.5 hour laboratory for each .5 unit of credit.**

For students who desire additional help in attaining improved writing and speaking abilities in specific computer, technology and information systems disciplines.

**COMPUTER NETWORKING & ELECTRONICS**

**Computers, Technology & Information Systems (650) 949-7236**  
**www.foothill.edu/ctis/**

**CNET 50 INTRODUCTION TO COMPUTER NETWORKING 5 Units**

**4 hours of lecture, 2 hours terminal time.**

This is a survey course designed to provide interested students with an overview of current networking technologies. For students who are pursuing a career in networking, CNET 50 is a requirement for all CNET certificates and degrees. Course content includes data representation, protocols, transmission media, analog and digital transmission, Local, Wide, Wireless, Cellular, and Satellite networks, network connecting devices, TCP/IP, and the Internet. [Transferability: CSU]

**CNET 52A INTRODUCTION TO COMPUTERS & INFORMATION COMMUNICATIONS TECHNOLOGY 5 Units**

**4 hours lecture, 4 hours laboratory.**

This course is a general introduction to the area of computers and information technology, and is designed for all students. This survey course will examine a broad overview of topics including software,

hardware, the networking of computer systems, information technology and survey of programming languages. The student will explore the implications of this technology with regard to today's information society. [Transferability: CSU]

**CNET 53A INTRODUCTION TO NETWORK MANAGEMENT 5 Units**

**Advisory: CNET 50 or equivalent.**

**4 hours lecture, 2 hours laboratory.**

The course covers industry-wide network and systems management topics, including SNMP data communication and data collection, infrastructure device discovery, topological mapping of the devices, capability to receive and respond to SNMP traps, architecture topics on managing network devices, servers, workstations, applications and databases using industry standard SNMP based tools such as OpenView. This course is designed to prepare the student for the General OpenView Certification Exam. [Transferability: CSU]

**CNET 53B OPERATING JUNIPER ROUTERS IN THE ENTERPRISE 5 Units**

**Advisory: Knowledge of network and routing protocols equivalent to CNET 54B.**

**May be taken 3 times for credit.**

**4 hours lecture, 4 hours laboratory.**

This course focuses on installation, configuration, operational analysis, and troubleshooting considerations of Juniper Networks routers in the enterprise. OJRE introduces Juniper Networks Enterprise Routing platforms including both M-series and J-series models. It then focuses on router configuration using both the J-Web graphical user interface (GUI) and the JUNOS software command-line interface (CLI). Real-world configuration and operational monitoring case studies are provided for general router configuration and for RIP, static, and OSPF routing. The class also provides an overview of common services such as the Virtual Router Redundancy Protocol (VRRP), the Multilink Point-to-Point Protocol (MLPPP) and Network Address Translation (NAT). Preparation for Juniper Networks Certified Internet Associate certification (JNCIA-ER, Exam JNO-342). [Transferability: CSU]

**CNET 53C ADVANCED JUNIPER NETWORKS ROUTING IN THE ENTERPRISE 5 Units**

**Advisory: Knowledge of network and routing protocols equivalent to CNET 53B.**

**May be taken 3 times for credit**

**4 hours lecture, 4 hours laboratory.**

The course is designed for networking professionals with advanced knowledge of, and experience with, Juniper Networks JUNOS-based routers and their deployment in the enterprise. JUNOS policy, BGP for enterprises, IGP Conversion, Layer 2 services, Layer 3 services overview, stateful firewall and NAT/PAT, IPSec VPNs, class of service, branch office connectivity, router management. Preparation for Juniper Networks Certified Internet Specialist (JNCIS-ER, Exam JNO-350). [Transferability: CSU]

**CNET 53F INFORMATION STORAGE MANAGEMENT 5 Units**

**ADVISORY: CNET 54A or equivalent.**

**4 hours lecture, 4 hours laboratory.**

This course provides a comprehensive introduction to storage technology including Storage Area Networks (SANs) that will enable the student to make informed decisions concerning the selection and implementation of storage systems in a complex IT environment. The student will learn about the architectures, features, and benefits of intelligent storage systems. Topics include networked storage technologies and long-term archiving solutions, information security, and the emerging field of storage virtualization technologies. This course focuses on storage technology concepts and principles that are reinforced with examples of actual solutions. Realistic case studies enable you to design the most appropriate solution for given sets of criteria. [Transferability: CSU]

**CNET 53M DESIGNING CISCO INTERNETWORKING SOLUTIONS 5 Units**

**May be taken 3 times for credit.**

**4 hours lecture, 4 hours laboratory.**

This teaches the student how to design enterprise networks. The student will learn about network design using the Enterprise Composite Network Model. Network complexity and methods to simplify your design are important aspects of this course. Specific topics include local-area network (LAN) and wide-area network (WAN) designs, Internet Protocol (IP) addressing, routing protocol selection, designing voice networks, including security in your designs and network management design. This course is prepare the student for the Cisco Certified Design Associate (CCDA) certification examination. [Transferability: CSU]

**CNET 53N FUNDAMENTALS OF ENTERPRISE NETWORK DESIGN 5 Units**

**May be taken 3 times for credit.**

**4 hours lecture, 4 hours laboratory.**

The course provides the student with an understanding of latest developments in network design and technologies. The course covers topics on network infrastructure, intelligent network services, and converged network solutions. The course is designed to prepare the student for the Certified Cisco Design Professional (CCDP) certification examination. [Transferability: CSU]

**CNET 54A NETWORKING FUNDAMENTALS & THE TCP/IP PROTOCOL SUITE (CCNA I) 5 Units**

**Advisory: CNET 50.**

**May be taken 3 times for credit.**

**4 hours lecture, 4 hours laboratory, 3 hours terminal time.**

This course is designed to provide students with classroom and laboratory experience in current and emerging networking technologies. Instruction includes networking, network terminology, cabling, cabling tools, network protocols, network standards, the OSI model, LANs, WANs, routers, network topology, IP addressing, TCP, and network standards. This is the first course in the Cisco Networking Academy Program. This program will prepare students for the Cisco Certified Networking Associate (CCNA) exam. [Transferability: CSU]

**CNET 54B ROUTING PROTOCOLS & CONCEPTS (CCNA II) 5 Units**

**Advisory: CNET 54A or equivalent.**

**May be taken 3 times for credit.**

**4 hours lecture, 4 hours laboratory, 3 hours terminal time.**

This course is an introduction to router and routing concepts and terminology including distance vector and link state routing, RIPv1 and RIPv2, IGRP and IGRP metric calculations, routing loop issues, routing theory, router IOS, and basic router configuration, scenario analysis and troubleshooting, and additional topics such as classless routing, discontinuous subnets, and Access Control Lists. The course also reviews TCP/IP basics, and IP addressing. This is the second course in the Cisco Networking Academy Program; it is designed to provide students with classroom and laboratory experience in current and emerging networking technology that will prepare them for the Cisco Certified Networking Associate (CCNA) exam. [Transferability: CSU]

**CNET 54C LAN SWITCHING & WIRELESS NETWORKS (CCNA III) 5 Units**

**Advisory: CNET 54B or equivalent.**

**May be taken 3 times for credit.**

**4 hours lecture, 4 hours laboratory, 3 hours terminal time.**

The course is designed to provide students with classroom and laboratory experience advanced features of routers and routing concepts including the OSPF and EIGRP routing protocols, network congestion issues, LAN segmentation using bridges and switches, cut-through and store-and-forward switches, and the operation of the Spanning Tree protocol. This class includes hands-on experience using Cisco routers. This is the third course in the Cisco Networking Academy CCNA curriculum. [Transferability: CSU]

**CNET 54D WAN TECHNOLOGIES (CCNA IV) 5 Units**  
**Advisory:** CNET 54C or equivalent.  
**May be taken 3 times for credit.**  
**4 hours lecture, 4 hours laboratory, 3 hours terminal time.**  
 Instruction includes increasingly sophisticated router configuration (WAN services: LAMP, Frame Relay, ISDN/LAPD, HDLC, PPP, and DDR.); WAN switch configuration; Network Address Translation; network troubleshooting. This is the fourth of four courses designed to introduce students to current and emerging networking technology, it is preparation for the Cisco Certified Networking Associate (CCNA) certification. [Transferability: CSU]

**CNET 54E CCNA SECURITY 5 Units**  
**Advisory:** CNET 54D, CCNA Certification or equivalent.  
**4 hours lecture, 4 hours laboratory.**  
 CCNA Security is a technology-focused course designed for students who are looking for career-oriented, entry-level Security specialist skills. It is designed for students with CCNA level knowledge and skills that are seeking to pursue advanced degrees and careers. The goals of this course are to: (1)provide an in-depth, theoretical understanding of Network Security, (2)provide students with the knowledge and skills necessary to design and support Network Security,(3)provide an experience-oriented course to students to prepare them for associate-level jobs in the industry through employing industry relevant instructional approaches, and(4) enable the student to have significant hands-on interaction with IT equipment to prepare them for certification exams and job opportunities. [Transferability: CSU]

**CNET 54G BUILDING SCALABLE CISCO INTERNETWORKS (CCNP I) 5 Units**  
**Advisory:** CNET 54C or CCNA Certification or equivalent.  
**May be taken 3 times for credit.**  
**4 hours lecture, 4 hours laboratory, 3 hours terminal time.**  
 This course is designed to provide students with classroom and laboratory experience in current and emerging networking technology that will prepare them for the Cisco Certified Networking Professional (CCNP) exam: Building Scalable Cisco Internetworks (BSCI). Instruction includes advanced IP addressing, advanced routing protocols including OSPF, EIGRP, IS-IS, and BGP, advanced access lists, multicast routing, and IPv6 [Transferability: CSU]

**CNET 54H IMPLEMENTING SECURE CONVERGED WANS (ISCW) 5 Units**  
**Advisory:** CNET 54D or CCNA Certification or equivalent.  
**May be taken 3 times for credit.**  
**4 hours lecture, 4 hours laboratory, 3 hours terminal time.**  
 This course is designed to provide students with classroom and laboratory experience in current and emerging networking technology that will prepare them for the Cisco Certified Networking Professional (CCNP) exam: Implementing Secure Converged WANS (ISCW) exam. This course will teach advanced skills required to secure and enhance services in enterprise networks for teleworkers and remote sites. It will focus on securing remote access and VPN client configuration. [Transferability: CSU]

**CNET 54I BUILDING CISCO MULTILAYER SWITCHED NETWORKS (BCMSN) (CCNP III) 5 Units**  
**Advisory:** CNET 54C or CCNA Certification or equivalent.  
**May be taken 3 times for credit.**  
**4 hours lecture, 4 hours laboratory, 3 hours terminal time.**  
 This course is designed to provide students with classroom and laboratory experience in current and emerging networking technology that will prepare them for the Cisco Certified Networking Professional (CCNP) exam: Building Cisco Multilayer Switching Networks. This course teaches advanced skills required for building enterprise-class switched networks with integrated VoIP and wireless applications. The course includes wireless LANs, basic QoS to support voice, high-availability features, and enhanced security for switches. [Transferability: CSU]

**CNET 54J OPTIMIZING CONVERGED CISCO NETWORKS (ONT) (CCNP IV) 5 Units**  
**Advisory:** CNET 54G, 54H and 54I or equivalent.  
**May be taken 3 times for credit.**  
**4 hours lecture, 4 hours laboratory, 2 hours terminal time.**  
 This course is designed to provide students with classroom and laboratory experience in current and emerging networking technology that will prepare them for the Cisco Certified Networking Professional (CCNP) exam: Optimizing Converged Cisco Networks (ONT). This course will teach the advanced skills required to optimize QoS in converged networks supporting voice, wireless, and security applications. [Transferability: CSU]

**CNET 54L NETWORK SECURITY I FIREWALLS, ACCESS, CONTROL & IDENTITY MANAGEMENT 5 Units**  
**Advisory:** CNET 54D or the Cisco CCNA Certification  
**May be taken 3 times for credit.**  
**4 hours lecture, 4 hours laboratory, 3 hours terminal time.**  
 This course provides students with the knowledge and skills necessary to select appropriate security hardware, software, policies, and configurations based on an organization's assessment of its security vulnerabilities in order to provide protection against known security threats. The course includes coverage of the Firewalls and the AAA Service. The concepts presented apply to all network security scenarios, the labs will feature Cisco hardware. [Transferability: CSU]

**CNET 54M CISCO NETWORK SECURITY II - VIRTUAL PRIVATE NETWORKS, INTRUSION DETECTION SYSTEMS & INTRUSION PREVENTION SYSTEMS 5 Units**  
**Advisory:** CNET 54D or the Cisco CCNA Certification.  
**May be taken 3 times for credit.**  
**4 hours lecture, 4 hours laboratory, 2 hours of terminal time.**  
 This course provides students with the knowledge and skills necessary to select appropriate security hardware, software, policies, and configurations based on an organization's assessment of its security vulnerabilities in order to provide protection against known security threats. The course includes coverage of the Firewalls, Intrusion Detection, the AAA Service, and VPNs. The concepts presented apply to all network security scenarios, the labs will feature Cisco hardware. [Transferability: CSU]

**CNET 54N FUNDAMENTALS OF CISCO WIRELESS LANS 5 Units**  
**Advisory:** CNET 54B or a basic knowledge of networking and Cisco Router configuration.  
**May be taken 3 times for credit.**  
**4 hours lecture, 4 hours laboratory, 3 hours terminal time.**  
 This course teaches students to plan, design, develop, implement, operate and troubleshoot wireless networks. It provides a comprehensive overview of technologies, security, and design best practices required for the successful implementation of wireless local area networks. The concepts presented apply to all wireless LAN designs, the labs will feature Cisco hardware. [Transferability: CSU]

**CNET 54Q INTRODUCTION TO VOICE OVER IP (VOIP) TECHNOLOGIES 5 Units**  
**Advisory:** CNET 54D or the Cisco CCNA Certification or equivalent experience.  
**May be taken 3 times for credit.**  
**4 hours lecture, 4 hours laboratory, 3 hours terminal time.**  
 This introductory course focuses on the basics of IP Telephony and Voice over IP technology. Participants will learn basic concepts and vocabulary of IPT as well as basic setup and configuration of an IP telephone system. Emphasis will be given to hands-on skills in the areas of basic setup, automated phone setup voice interfaces, dial-peers, call park, transfer and forward, customized phone display, telephony addressing schemes and voice quality. This course is intended for individuals with CCNA training or certification or equivalent experience. Students will be expected to actively participate in all class activities, course content discussions, hands-on labs, assessments and skills-based assessments. [Transferability: CSU]

<p><b>CNET 56A</b>      <b>INTRODUCTION TO NETWORK SECURITY</b>      <b>5 Units</b></p> <p><b>Advisory:</b> CNET 54A or equivalent.  <b>May be taken 3 times for credit.</b>  <b>4 hours lecture, 4 hours laboratory.</b>  The course covers industry-wide security topics, including data communication security, infrastructure security, cryptography, access control, authentication, external attack and operational and organization security, security policies, VPNs, and IDS/IPS, and Firewalls. This course is designed to prepare the student for the CompTIA 2008 Security+ Certification Exam. [Transferability: CSU]</p>	<p><b>CNET 60E</b>      <b>MICROSOFT WINDOWS 2003 NETWORK DESIGN</b>      <b>5 Units</b></p> <p><b>Advisory:</b> CNET 60D.  <b>4 hours lecture, 2 hours laboratory.</b>  This course provides students with the knowledge and skills necessary to design and implement a Microsoft Windows Server 2003 network infrastructure and Active Directory service in domain, tree, and forest network environments. The course provides the information necessary to pass the Microsoft Certification Exam 70-297, Designing a Microsoft Windows Server 2003 Active Directory and Network Infrastructure. [Transferability: CSU]</p>
<p><b>CNET 56B</b>      <b>INTRUSION DETECTION, AWARENESS, ANALYSIS &amp; PREVENTION</b>      <b>5 Units</b></p> <p><b>Advisory:</b> CNET 54A, 56A or equivalent.  <b>4 hours lecture, 4 hours laboratory.</b>  Students will apply network security concepts to the management of enterprise network threats, outages and incident response. Student work in teams to assess risk, identify abnormal occurrences, and propose countermeasures. They will get practice in reporting conclusions and recommendations, creating appropriate security procedures and taking steps to raise security awareness. [Transferability: CSU]</p>	<p><b>CNET 60F</b>      <b>MICROSOFT WINDOWS 2003 EXCHANGE SERVER</b>      <b>5 Units</b></p> <p><b>Advisory:</b> CNET 60E.  <b>4 hours lecture, 2 hours laboratory.</b>  This course provides students with the knowledge and skills necessary to install, configure, administer, and support Microsoft Exchange Server 2003. The course provides the information necessary to pass the Microsoft Certification Exam 70-284, Implementing and Managing Microsoft Exchange Server 2003. [Transferability: CSU]</p>
<p><b>CNET 56C</b>      <b>NETWORK SECURITY PENETRATION TESTING &amp; ETHICAL HACKING</b>      <b>5 Units</b></p> <p><b>Advisory:</b> CNET 56A or equivalent.  <b>May be taken 3 times for credit.</b>  <b>4 hours lecture, 4 hours laboratory, 3 hours terminal time.</b>  This course covers penetration-testing tools and techniques that ethical hackers and security testers use to protect computer networks. This course provides a structured knowledge base for preparing security professionals to discover vulnerabilities and recommend solutions for tightening network security and protecting data from potential attackers. [Transferability: CSU]</p>	<p><b>CNET 60J</b>      <b>WINDOWS SCRIPTING FOR SYSTEM ADMINISTRATORS</b>      <b>5 Units</b></p> <p><b>Advisory:</b> CNET 60A and 60D.  <b>May be taken 3 times for credit.</b>  <b>4 hours lecture, 4 hours terminal time.</b>  This course provides students with the knowledge and skills necessary to write and maintain scripts to automate all aspects of system administration for computers running the Microsoft Windows operating system. It covers scripting languages (the syntax necessary to write a script), scripting hosts (the service which will execute the script), scripting libraries (collections of pre-existing functions which scripts can take advantage of to perform complex tasks) and the interfaces built into the Windows operating system (eg. Windows Management Instrumentation - WMI and Active Directory Services Interfaces - ADSI) which scripts must call in order to manipulate the operating system. This course has been designed for system administrators and does not require an extensive background in programming. [Transferability: CSU]</p>
<p><b>CNET 56E</b>      <b>WINDOWS XP/2000/2003 SYSTEM SECURITY</b>      <b>5 Units</b></p> <p><b>Advisory:</b> CNET 54A, 56A, 60A, 60B, 60C, and 60D or equivalent experience.  <b>2 hours lecture, 4 hours lecture-laboratory.</b>  Installing, configuring and maintaining Windows systems from a security standpoint. Understanding systems attacks. Implementing and evaluating Windows security tools in the network. [Transferability: CSU]</p>	<p><b>CNET 60K</b>      <b>POWERSHELL SCRIPTING</b>      <b>5 Units</b></p> <p><b>Advisory:</b> CNET 60A, 60C, 60J.  <b>May be taken 3 times for credit.</b>  <b>4 hours lecture, 4 hours laboratory.</b>  This course provides students with the knowledge and skills necessary to write and maintain Powershell scripts to automate all aspects of system administration for computers running the Microsoft Windows operating system. In addition to basic Powershell concepts such as Cmdlets, Scripts and Pipelining, this course covers the interfaces built into the Windows operating system (eg. Windows Management Instrumentation - WMI and Active Directory Services Interfaces - ADSI) which scripts must call in order to manipulate the operating system. This course has been designed for system administrators and does not require an extensive background in programming. [Transferability: CSU]</p>
<p><b>CNET 56F</b>      <b>LINUX &amp; UNIX SYSTEM SECURITY</b>      <b>5 Units</b></p> <p><b>Advisory:</b> CNET 56A, CIS 68A, 68B1, 68C1 and 68C2, or equivalent experience.  <b>4 hours lecture, 4 hours laboratory.</b>  Installing, configuring and maintaining Linux systems from a security standpoint. Understanding systems attacks. Implementing and evaluating Linux security tools in the network. [Transferability: CSU]</p>	<p><b>CNET 65A</b>      <b>WIRELESS NETWORK ADMINISTRATION</b>      <b>5 Units</b></p> <p><b>Advisory:</b> CNET 50.  <b>4 hours lecture, 2 hours laboratory.</b>  This course provides students with knowledge &amp; skills necessary to install, manage, and support wireless networks. Content includes wireless technology standards, governing bodies, hardware, radio frequency spectrum, antennas, security, site survey, &amp; troubleshooting. [Transferability: CSU]</p>
<p><b>CNET 56G</b>      <b>THE CERTIFIED INFORMATION SYSTEMS PROFESSIONAL</b>      <b>5 Units</b></p> <p><b>Advisory:</b> CNET 56A or equivalent.  <b>4 hours lecture, 3 hours laboratory.</b>  The course covers industry-wide security topics, including data communication security, infrastructure security, cryptography, access control, authentication, external attack and operational and organization security. This course is designed to prepare the student for the CISSP Certification Exam. [Transferability: CSU]</p>	<p><b>CNET 65B</b>      <b>WIRELESS NETWORK SECURITY</b>      <b>5 Units</b></p> <p><b>Advisory:</b> CNET 50 and 65A.  <b>4 hours lecture, 2 hours laboratory.</b>  This course provides students with the knowledge and skills necessary to detect intrusion within a wireless network, provide a security policy template to prevent future attacks, and be able to implement a variety of hardware and software security solutions. [Transferability: CSU]</p>
<p><b>CNET 56J</b>      <b>FUNDAMENTALS OF COMPUTER FORENSICS</b>      <b>5 Units</b></p> <p><b>Advisory:</b> CNET 116A and 116B.  <b>4 hours lecture, 4 hours laboratory</b>  Course serves as a foundation class in the study of computer forensics. Topics include: disk concepts, analysis of digital media, data retrieval, data reconstruction, collection of evidence and documentation of a computer crime scene. Hands-on experience with digital forensics tools.</p>	

**CNET 65C WIRELESS NETWORK ANALYSIS 5 Units**  
**Advisory: CNET 50 and 65A.**  
**4 hours lecture, 2 hours laboratory.**

This course provides students with the knowledge and skills necessary to analyze and troubleshoot wireless LAN systems. Course content includes installation and configuration of a Cisco System Wireless LAN, IEEE 802.11 frame formats, system architecture, protocol analyzers, and performance variables. [Transferability: CSU]

**CNET 75A MICROSOFT WINDOWS VISTA 5 Units**  
**Advisory: CNET 50**  
**4 hours lecture, 2 hours laboratory.**

This course provides students with the knowledge and skills necessary to install, configure, administer, and support Microsoft VISTA client operating system in workgroup, domain, and multiple domain network environments. The course provides the information necessary to pass the Microsoft Certification Exam, 70-620 Configuring Microsoft VISTA Client. [Transferability: CSU]

**CNET 75B WINDOWS SERVER 2008 NETWORK INFRASTRUCTURE 5 Units**

**Advisory: CNET 50 and 75A.**

**4 hours lecture, 2 hours laboratory.**

This course provides the knowledge and skills to install, configure, monitor, and maintain Microsoft Server 2008 network services including DHCP, DNS, WINS, NAP, Print, and Communication servers. Course content includes TCP/IP versions 4 and 6, file systems, security, data backup, and restoration. CNET 75B maps to Microsoft Exam 70-642, Windows Server 2008 Network Infrastructure Configuration. [Transferability: CSU]

**CNET 75C WINDOWS SERVER 2008 ACTIVE DIRECTORY 5 Units**

**Advisory: CNET 75A and 75B.**

**4 hours lecture, 2 hours laboratory.**

This course provides the knowledge and skills to install, configure, manage and monitor Windows Server 2008 Active Directory services. Course content includes Domain, Certificate, Federation, Rights Management and Lightweight Directory Services. CNET 75C maps to Microsoft Exam 70-640, Windows Server 2008 Active Directory Configuration. [Transferability: CSU]

**CNET 75D WINDOWS SERVER 2008 APPLICATION PLATFORMS 5 Units**

**Advisory: CNET 75A and 75B.**

**4 hours lecture, 2 hours laboratory.**

This course covers Windows Server 2008 application platform technologies including IIS 7.0 Web Server, FTP, SMTP, RPC over HTTPS, Terminal Services and Streaming. Course content includes installations, configuration, monitoring, and troubleshooting. CNET 75D maps to Microsoft exam 70-643, Windows Server 2008 Application Platform Configuration. [Transferability: CSU]

**CNET 75E WINDOWS SERVER 2008 SERVER ADMINISTRATOR 5 Units**

**Advisory: CNET 75B and 75C.**

**4 hours lecture, 2 hours laboratory.**

This course covers the administration, hands-on deployment, and day-to-day operations of a subset of servers in an Enterprise network. Course content includes management of the network infrastructure, Active Directory, application platform servers, remote administration using Terminal Server, scripts, and batch files. CNET 75E maps to Microsoft exam 70-646, Windows Server 2008 Server Administrator. [Transferability: CSU]

**CNET 75F WINDOWS SERVER 2008 ENTERPRISE ADMINISTRATION 5 Units**

**Advisory: CNET 75C and 75B; CNET 75D.**

**4 hours lecture, 2 hours laboratory.**

This course covers the design, engineering, support, and operations of an Enterprise network. Course content includes network topology, TCP/IP, Active Directory and infrastructure design. Service and policy designs include DNS, NAP, IIS, Terminal Server, Network Load Balancing and Clustering, Certificates, and Group Policy. CNET 75F maps to Microsoft exam 70-647, Windows Server 2008 Enterprise Administrator. [Transferability: CSU]

**CNET 75G WINDOWS VISTA CLIENT ENTERPRISE SUPPORT TECHNICIANS 5 Units**

**Advisory: CNET 50, 75A.**

**4 hours lecture, 2 hours laboratory.**

This course provides students with the knowledge and skills necessary to deploy, configure, troubleshoot, and maintain Windows Vista clients and applications in a Enterprise network environment. Course content includes desktop operating systems, applications, hardware devices, drivers, network connectivity, and imaging. CNET 75G maps to Microsoft exam, 70-622, Supporting and Troubleshooting Applications on a Windows Vista Client for Enterprise Support Technicians. [Transferability: CSU]

**CNET 75I MICROSOFT WINDOWS 2007 EXCHANGE SERVER 5 Units**

**Advisory: CNET 75C.**

**4 hours lecture, 3 hours laboratory.**

This course provides students with the knowledge and skills necessary to install, configure, administer, and support Microsoft Exchange Server 2007. The course provides the information necessary to pass the Microsoft Exchange Server Configuration exam, Exam 70-236. [Transferability: CSU]

**CNET 76 ELECTRONICS FOR PC & NETWORKING TECHNOLOGY 5 Units**

**Advisory: Completion of, or concurrent enrollment in electronic mathematics recommended.**

**3 hours lecture, 2 hours lecture-laboratory.**

Introduces a wide spectrum of electronics technology with exposure to equipment commonly used in the electronic facility. Covers the fundamentals of DC and AC, solid-state discrete devices, linear and digital integrated circuits, and an introduction to microprocessors. Designed to complement a computer networking program. Practical examples of common PC electronics. [Transferability: CSU]

**CNET 80A SELECTED TOPICS IN NETWORK TECHNOLOGY 4 Units**

**Advisory: CNET 54A, 56A, 54M, 54N, 60A or equivalent depending on the topics covered.**

**May be taken 4 times for credit.**

**3 hours lecture, 4 hours laboratory.**

Introduction to various network operating systems and network technologies as they emerge. [Transferability: CSU]

**CNET 80B SELECTED TOPICS IN NETWORK TECHNOLOGY 5 Units**

**May be taken 4 times for credit.**

**4 hours lecture, 4 hours laboratory.**

Introduction to various network operating systems and network technologies as they emerge. [Transferability: CSU]

**CNET 80C SELECTED TOPICS IN NETWORK TECHNOLOGY 5 Units**

**May be taken 4 times for credit.**

**4 hours lecture, 4 hours laboratory.**

Introduction to various network operating systems and network technologies as they emerge. [Transferability: CSU]

**CNET 93V CNET EXPERIENTIAL INTERNSHIP 4 Units**  
**CNET 93W 6 Units**

**12 hours laboratory for 4 units of credit.**

Off-campus supervised experiential education of CNET students in network administration, network security or IT maintenance. Opportunity for practical application of knowledge, skills and abilities acquired in CNET and related course work. Exposure to varied protocols, methodologies and practices in a professional working environment. [Transferability: CSU]

**CNET 95A CABLE INSTALLATION & TERMINATION 2 Units**

**Advisory: CNET 50.**

**1 hour lecture, 3 hours laboratory.**

Methods and materials used in the installation and termination of network wiring topologies. [Transferability: CSU]

**CNET 95G NETWORK TESTING & TROUBLESHOOTING 2 Units**  
**Advisory:** CNET 95A or equivalent.  
**1 hour lecture, 1 hour lecture-laboratory, 3 hours terminal time.**  
 Methods and procedures required to test and troubleshoot systems in local- and wide-area networks. [Transferability: CSU]

**CNET 97A A PRACTICUM IN ENTERPRISE SECURITY 7 Units**  
**Advisory:** CNET 56A, 54A.  
**4 hours lecture, 9 hours laboratory.**  
 This course is designed to provide students with classroom and laboratory experience in current and emerging enterprise security technology and issues. Students work in teams to resolve authentic enterprise security tasks, reflect on outcomes, and create security policies and procedures. [Transferability: CSU]

**CNET 99 CNET PROJECT 2 Units**  
**1 hour lecture, 3 hours laboratory.**  
 Electronic project construct, test, documentation and reporting contracted with an instructor. [Transferability: CSU]

**CNET 112 LEARN TO BUILD YOUR OWN PC 5 Units**  
**Advisory:** Familiarity with basic PC operation and Windows XP.  
**May be taken 3 times for credit.**  
**4 hours lecture, 4 hours laboratory.**  
 A survey course designed to prepare students to assemble their own working PC. Step-by-step instructions and guidance will be provided.

**CNET 113 HOME TECHNOLOGY INTEGRATOR & COMPTIA/CEDIA INSTALLER I 5 Units**  
**Advisory:** Students should have some background in home construction, networking, PCs, audio/visual equipment or electronics.  
**May be taken 3 times for credit.**  
**4 hours lecture, 4 hours laboratory.**  
 A survey course designed to prepare students to pass the CompTIA HTI+ and CEDIA Installer Level I certification exams.

**CNET 116A INTRODUCTION TO PC ELECTRONICS & THE COMMAND LINE (A+ PREP) 5 Units**  
**Advisory:** MATH 220.  
**4 hours lecture, 4 hours laboratory.**  
 A comprehensive overview of electronics and of equipment commonly used to test PCs. Presents the fundamentals of DC and AC, solid-state diodes, linear and digital integrated circuits, and microprocessors. Includes hands-on lab circuit building and measuring using a digital multimeter (DMM).

**CNET 116B WINDOWS INSTALLATION, UPGRADING & TROUBLESHOOTING (A+ PREP) 5 Units**  
**Advisory:** CNET 116A.  
**4 hours lecture, 4 hours laboratory.**  
 Review of PC hardware and hardware troubleshooting. Detailed study of installing, upgrading and troubleshooting Windows O/S, in order to pass the A+ certification examinations. Troubleshooting techniques leading to the identification and solution of hardware or software problems. Replacement of system components or peripheral devices.

**CNET 118 OTI: WORK SKILLS IN A TECHNICAL SUPPORT ROLE 4 Units**  
**Advisory:** Familiarity with microcomputers, Windows 2000 Professional and Windows 2000 server set up; CIS 51A; ENGL 110 and ENGL 100, or ESLL 25 or equivalent.  
**4 hours lecture.**  
 Basic theory and application of technical support including customer interaction, tools, root cause analysis and problem solving.

**CNET 119 BUSINESS SKILLS FOR SERVICE/ SUPPORT & PROJECT MANAGEMENT 4 Units**  
**Prerequisite:** Basic computer skills (Word and Excel and, if possible, PowerPoint).  
**Advisory:** MATH 220; ENGL 110 or ESLL 25; CIS 50A, CNET 51A or equivalent.  
**1.5 hours lecture, 1.5 hours lecture-laboratory, 3 hours team laboratory.**  
 Project Management and Service/Support Skills are in high demand in the career marketplace. These include teamwork, decision-making, leadership, innovation, scoping, planning, budgeting, work breakdown, scheduling, interpersonal/intercultural communication, influence management, and problem solving. Initial exam preparation and training hours for Certified Associate Project Manager (CAPM), various service/support certifications, and Project Management Professional (PMP).

**CNET 190 DIRECTED STUDY .5 Unit**  
**CNET 190X 1 Unit**  
**CNET 190Y 1.5 Units**  
**CNET 190Z 2 Units**  
**Non-degree applicable credit course.**  
**Advisory:** Pass/No Pass.  
**Any combination of CNET 190–190Z may be taken 6 times for credit, however, no single course may be taken more than 6 times for credit.**  
**.5 hour lecture, 1.5 hour laboratory for each .5 unit of credit.**  
 Computer projects for students who desire or require additional help in attaining comprehension and competency in learning skills.

## COMPUTERS & SOFTWARE TRAINING

**Computers, Technology & Information Systems (650) 949-7236**  
**www.foothill.edu/ctis/**

**CAST 50 CAREER EXPLORATION USING THE INTERNET 2 Units**  
**Advisory:** Familiarity with general computing and email; not open to students with credit in CRLP 90; Pass/No Pass.  
**May be taken 3 times for credit.**  
**2 hours lecture-laboratory, 3 hours laboratory.**  
 Exploration of high-tech careers using the resources of the Internet. [Transferability: CSU]

**CAST 52A INTRODUCTION TO MACROMEDIA FLASH 5 Units**  
**Advisory:** CIS 50A or equivalent; COIN 61 and current Internet technologies (Web browsers, common graphics formats, FTP).  
**May be taken 2 times for credit.**  
**2 hours lecture, 2 hours lecture-laboratory, 6 hours laboratory.**  
 Introduction to the Macromedia Flash multimedia authoring environment. Hands-on experience developing streaming Web-based multimedia presentations incorporating animation, sound, graphics and interactivity. [Transferability: CSU]

**CAST 52B ADVANCED MACROMEDIA FLASH 5 Units**  
**Advisory:** CIS 50A or equivalent; COIN 61 and current Internet technologies (Web browsers, common graphics formats, FTP).  
**May be taken 3 times for credit.**  
**2 hours lecture, 2 hours lecture-laboratory, 6 hours laboratory.**  
 Advanced concepts and techniques of Macromedia Flash. Hands-on experience developing interactive Web-based multimedia presentations incorporating ActionScript, sound and graphics. This course is based on knowledge and principles of Macromedia Flash. [Transferability: CSU]

**CAST 52P INTERMEDIATE FLASH: PROJECTS 5 Units**  
**Advisory:** CAST 52A, CIS 50A or equivalent.  
**May be taken 3 times for credit.**  
**2 hours lecture, 2 hours lecture-laboratory, 6 hours laboratory.**  
 This is a projects-based Flash course teaching intermediate concepts and techniques of Macromedia Flash from a designer perspective. Basic programming skills will be acquired by those students who have no programming background but want to continue to develop Web technologies using Flash. Hands-on experience developing interactive Web-based multimedia presentations incorporating ActionScript, sound, and graphics will be taught. This course is based on knowledge and

principles of Macromedia Flash5 or FlashMX and will prepare students to continue with Advanced Flash programming concepts and projects. [Transferability: CSU]

**CAST 54A MICROSOFT VISIO 4 Units**

**Advisory:** CIS 50A or equivalent is strongly recommended. May be taken 3 times for credit.

**1.5 hours lecture, 1.5 hours lecture-laboratory, 4.5 hours laboratory.** This course will provide an introduction to Microsoft Visio, enabling students to produce flow charts, drawings, schematics, and documents used in a variety of technical disciplines. This course is specifically intended to teach the critical concepts and skills of using Visio to produce schematics and drawings for documenting networks, and to process flow charts for designing and documenting software applications for IT and business-related uses. This course is intended for IT technical staff and business professionals. [Transferability: CSU]

**CAST 55A INTRODUCTION TO ADOBE GOLIVE 4 Units**

**Advisory:** CIS 50A or equivalent; basic HTML concepts and practice is expected.

**1.5 hours lecture, 1.5 hours lecture-laboratory, 4.5 hours terminal time.** Introductory concepts and methods of Web page and Web site design using Adobe GoLive. Work with text, graphics, tables and hyperlinks. Smooth integration with other Adobe products including Photoshop and Illustrator. [Transferability: CSU]

**CAST 56A INTRODUCTION TO FILEMAKER PRO 4 Units**

May be taken 2 times for credit.

**1.5 hours lecture, 1.5 hours lecture-laboratory, 4.5 hours terminal time.** Introduction to using and designing databases on this popular relational, cross-platform database program. Hands-on experience creating databases structures and interfaces. [Transferability: CSU]

**CAST 56B INTERMEDIATE FILEMAKER PRO 4 Units**

**Advisory:** CAST 56A or equivalent.

May be taken 3 times for credit.

**1.5 hours lecture, 1.5 hours lecture-laboratory, 4.5 hours laboratory.** Conceptualizing and designing databases on this popular relational, cross-platform database program. Hands-on experience creating databases structures and interfaces, with special attention given to design objectives, relational theory, scripting methods and complex calculations. This course will provide real-world techniques and best practices for developers, and demonstrate how to take advantage of new features in FileMaker. Students will gain a comprehensive understanding of topics through reading course materials, in-depth discussion, example exercises, and hands-on practice via a self-directed project. [Transferability: CSU]

**CAST 58 USING XML SPY 2.5 Units**

**Prerequisite:** COIN 78.

**Advisory:** Familiarity with XML DTDs, schema, XPath, XSL, and XSLT. May be taken 3 times for credit.

**1.5 hours lecture-laboratory, 3 hours laboratory.**

Originally designed to solve the World Wide Web's compatibility problems, XML (eXtensible Markup Language) promotes the separation of data, presentation, and programming logic, and allows you to define your own elements, and it is platform neutral. XML Spy, a software program by Altova, is an Integrated Development Environment (IDE) for the eXtensible Markup Language. It is the most widely used development tool for XML, including all aspects of XML in one powerful and easy-to-use product. This class is designed to be taught as a workshop in three 6 hour sessions. This hands-on workshop teaches students how to use XML Spy to create, edit, and debug XML documents including schema files and XSL transformations. Starting with a review of XML fundamentals and mark-up, the course moves quickly from validation of XML documents using DTDs and schemas to presentation and transformation of XML documents using style-sheets (XSL and XSLT using the XSLT Designer in XML Spy). Validation (DTDs and Schemas) includes demonstration and hands-on exercises using XML Spy Schema Editor and IE plug-in. Workshop participants will learn how use Altova's xmlspy® 5 to support modeling, editing, debugging and validating any XML technology, including XML Schema, XSL/XSLT, and SOAP, and WSDL as used in Web services, as well as server-side XML and SOAP. [Transferability: CSU]

**CAST 63A INTRODUCTION TO COMPUTER-AIDED DRAFTING USING AUTODESK AUTOCAD 4 Units**

**Advisory:** Knowledge of drafting fundamentals.

**3 hours lecture, 2 hours lecture-laboratory.**

For students preparing for careers in General Design and Drafting; Architectural Building Design and Engineering; Mechanical Design and Engineering; Civil Design and Engineering; GIS and Mapping; and Visualization and Animation. An introduction to computer graphic systems, equipment and applications using Autodesk software. Special emphasis will be placed on the practical foundation/background to use this software, system and equipment. This course helps to prepare students for Autodesk certification exams. [Transferability: CSU]

**CAST 63B ADVANCED COMPUTER-AIDED DRAFTING USING AUTOCAD SOFTWARE 4 Units**

**Advisory:** CAST 63A or equivalent; a working knowledge of parametric solid modeling concepts.

**3 hours lecture, 2 hours lecture-laboratory.**

For students preparing for careers in General Design and Drafting; Architectural Building Design; Mechanical Design and Engineering; Civil Design and Engineering; GIS and Mapping; and Visualization and Animation. This course provides the foundation for a hands-on course that covers basic and advanced AutoCAD software used to create, edit, document, and print parts, assemblies. Special emphasis will be placed on the practical foundation/background to use this software, system and equipment. This course helps to prepare students for Autodesk certification exams. [Transferability: CSU]

**CAST 64A INTRODUCTION TO AUTODESK MECHANICAL DESKTOP SOFTWARE (AUTODESK INVENTOR PROFESSIONAL) 4 Units**

**Advisory:** CAST 63A, 63B; knowledge of drafting fundamentals.

**3 hours lecture, 2 hours lecture-laboratory.**

For students preparing for careers in General Design and Drafting; Mechanical Design and Engineering. An introduction to computer graphic systems, equipment and applications using Autodesk software. This course includes 3D design used in parametric solid part modeling, assembly modeling, surface modeling and engineering modeling and output of 2D engineering drawings. Special emphasis will be placed on the practical foundation/background to use this software, system and equipment. This course helps to prepare students for Autodesk certification exams. [Transferability: CSU]

**CAST 65A INTRODUCTION TO AUTODESK ARCHITECTURAL DESKTOP SOFTWARE 4 Units**

**Advisory:** CAST 63A; knowledge of drafting fundamentals.

**3 hours lecture, 2 hours lecture-laboratory.**

For students preparing for careers in General Design and Drafting; Architectural Building Design and Engineering. An introduction to computer graphic systems, equipment and applications using Autodesk software. Special emphasis will be placed on the practical foundation/background to use this software, system and equipment. This course helps to prepare students for Autodesk certification exams. [Transferability: CSU]

**CAST 66A INTRODUCTION TO AUTODESK CIVIL 3D SOFTWARE 4 Units**

**Advisory:** CAST 63A; knowledge of drafting fundamentals.

**3 hours lecture, 2 hours lecture-laboratory.**

For students preparing for careers in General Design and Drafting; Architectural Building Design and Engineering; and Civil Design and Engineering. An introduction to computer graphic systems, equipment and applications using Autodesk software. Special emphasis will be placed on the practical foundation/background to use this software, system and equipment. This course helps to prepare students for Autodesk certification exams. [Transferability: CSU]

<p><b>CAST 70A</b>      <b>INTRODUCTION TO ADOBE PREMIERE</b>      <b>4 Units</b></p> <p><b>Advisory:</b> CIS 50A or equivalent; GID 74 or equivalent.  <b>May be taken 3 times for credit.</b>  <b>1.5 hours lecture, 1.5 hours lecture-laboratory, 3 hours laboratory.</b>  Introduction to digital video and the production of multimedia using various software tools and hardware configurations. Hands-on experience with creating and editing digital video and integrating video, sound, animation and graphics into multimedia presentations. [Transferability: CSU]</p>	<p><b>CAST 70J</b>      <b>INTRODUCTION TO ADOBE PREMIERE ELEMENTS</b>      <b>3 Units</b></p> <p><b>May be taken 3 times for credit.</b>  <b>1.5 hours lecture, 1.5 hours lecture-laboratory, 3 hours terminal time.</b>  Introduction to digital video and the production of multimedia using software that combines ease of use with a powerful editing tool. Hands-on experience includes creating and editing digital video and integrating video, sound, animation, and graphics into multimedia presentations. Ideal for professionals and business users as well as hobbyists and home users. [Transferability: CSU]</p>
<p><b>CAST 70B</b>      <b>MULTIMEDIA DESIGN &amp; AUTHORING</b>      <b>4 Units</b></p> <p><b>Advisory:</b> CIS 50A or 50B, or equivalent.  <b>1.5 hours lecture, 1.5 hours lecture-laboratory, 3 hours laboratory.</b>  Introduction to the principles of interface design, conceptualization, and prototyping of multimedia projects with software tools. [Transferability: CSU]</p>	<p><b>CAST 74G</b>      <b>WEB PUBLISHING TOOLS: DREAMWEAVER</b>      <b>3 Units</b></p> <p><b>Advisory:</b> COIN 60; Familiarity with current Internet technologies (e-mail, Web browsers, common graphics formats, FTP); not open to students with credit in COIN 74.  <b>May be taken 2 times for credit.</b>  <b>1.5 hours lecture, 1.5 hours lecture-laboratory, 3 hours terminal time.</b>  Principles and methods of creating dynamic, 'fourth generation' Web sites using the latest Web technologies: JavaScript, Cascading Style Sheets, Java, audio, video and animation plug-ins. Techniques of authoring Web pages for different browsers and different end use platforms. Principles of designing and maintaining efficient and successful Web sites. [Transferability: CSU]</p>
<p><b>CAST 70C</b>      <b>INTERACTIVE MULTIMEDIA PROJECT</b>      <b>4 Units</b></p> <p><b>Advisory:</b> CAST 52A, 70B or equivalent.  <b>May be taken 3 times for credit.</b>  <b>1.5 hours lecture, 1.5 hours lecture-laboratory, 3 hours laboratory.</b>  Completion of interactive multimedia projects, including production, testing, and delivery of an original CD-ROM title, kiosk presentation, or interactive multimedia Web site. [Transferability: CSU]</p>	<p><b>CAST 80</b>      <b>SELECTED TOPICS IN SOFTWARE APPLICATIONS</b>      <b>4 Units</b></p> <p><b>May be taken 3 times for credit.</b>  <b>1.5 hours lecture, 1.5 hours lecture-laboratory, 3 hours laboratory.</b>  Introduction to various software application technologies as they emerge. [Transferability: CSU]</p>
<p><b>CAST 70D</b>      <b>3D MODELING &amp; ANIMATION FOR MULTIMEDIA</b>      <b>4 Units</b></p> <p><b>Advisory:</b> CIS 50A or 50B, or equivalent.  <b>May be taken 3 times for credit.</b>  <b>1.5 hours lecture, 1.5 hours lecture-laboratory, 3 hours laboratory.</b>  Fundamentals of 3D modeling and animation for multimedia. Hands-on experience with modeling, rendering, and animation; and conversion techniques utilizing QuickTime and other technologies. [Transferability: CSU]</p>	<p><b>CAST 86A</b>      <b>INTRODUCTION TO ADOBE INDESIGN</b>      <b>4 Units</b></p> <p><b>Advisory:</b> CIS 50A or equivalent.  <b>May be taken 3 times for credit.</b>  <b>1.5 hours lecture, 1.5 hours lecture-laboratory, 3 hours laboratory.</b>  Introduction to Adobe InDesign and its use in electronic layout and print media problem solving. Hands-on experience with the basic elements and tools of InDesign. [Transferability: CSU]</p>
<p><b>CAST 70E</b>      <b>INTRODUCTION TO DVD AUTHORIZING</b>      <b>4 Units</b></p> <p><b>Advisory:</b> CIS 50A or 50B, or equivalent; familiarity with digital video, digital audio, common graphics formats.  <b>May be taken 2 times for credit.</b>  <b>1.5 hours lecture, 1.5 hours lecture-laboratory, 3 hours laboratory.</b>  Introduction to DVD authoring environment. Hands-on experience developing DVD-based multimedia presentations incorporating video, animation, sound, graphics and interactivity. [Transferability: CSU]</p>	<p><b>CAST 86B</b>      <b>ADVANCED ADOBE INDESIGN</b>      <b>4 Units</b></p> <p><b>Advisory:</b> CAST 86A.  <b>May be taken 3 times for credit.</b>  <b>1.5 hours lecture, 1.5 hours lecture-laboratory, 3 hours laboratory.</b>  Advanced Adobe InDesign is an exploration of the advanced concepts of InDesign in document management, page layout, online and printing applications. Hands-on experience of these concepts. [Transferability: CSU]</p>
<p><b>CAST 70G</b>      <b>INTRODUCTION TO MACROMEDIA DIRECTOR</b>      <b>5 Units</b></p> <p><b>Formerly: CAST 70B1</b>  <b>May be taken 3 times for credit.</b>  <b>2 hours lecture, 2 hours lecture-laboratory, 4 hours laboratory.</b>  Introduction to the Macromedia Director multimedia authoring environment. Hands-on experience developing interactive multimedia presentations incorporating simple animation, sound, graphics and digital video movies. This course is based on knowledge and principles of multimedia design and authoring. [Transferability: CSU]</p>	<p><b>CAST 89A</b>      <b>INTRODUCTION TO QUARKXPRESS</b>      <b>4 Units</b></p> <p><b>Advisory:</b> CIS 50A or equivalent.  <b>May be taken 3 times for credit.</b>  <b>1.5 hours lecture, 1.5 hours lecture-laboratory, 3 hours laboratory.</b>  Introduction to QuarkXPress and its use in electronic layout and print media problem solving. Hands-on experience with the basic elements and tools of QuarkXPress. [Transferability: CSU]</p>
<p><b>CAST 70H</b>      <b>ADVANCED MACROMEDIA DIRECTOR</b>      <b>5 Units</b></p> <p><b>Formerly: CAST 70B2</b>  <b>May be taken 3 times for credit.</b>  <b>2 hours lecture, 2 hours lecture-laboratory, 4 hours laboratory.</b>  Advanced concepts and techniques of Macromedia Director and its use in developing interactive multimedia projects. Software capabilities and limitations; hands-on experience. This course is based on knowledge and principles of multimedia authoring utilizing Macromedia Director. [Transferability: CSU]</p>	<p><b>CAST 89B</b>      <b>ADVANCED QUARKXPRESS</b>      <b>4 Units</b></p> <p><b>Advisory:</b> CAST 89A or equivalent.  <b>May be taken 3 times for credit.</b>  <b>1.5 hours lecture, 1.5 hours lecture-laboratory, 3 hours laboratory.</b>  Advanced concepts and methods of QuarkXPress and its use in electronic layout, print media, and problem solving. Software capabilities and limitations; hands-on experience. [Transferability: CSU]</p>
	<p><b>CAST 90A</b>      <b>INTRODUCTION TO ADOBE ILLUSTRATOR</b>      <b>4 Units</b></p> <p><b>May be taken 3 times for credit.</b>  <b>1.5 hours lecture, 1.5 hours lecture-laboratory, 3 hours laboratory.</b>  Introduction to Adobe Illustrator, a software drawing tool. Hands-on experience with the basic elements and tools of Adobe Illustrator to produce one-page illustrations. [Transferability: CSU]</p>

- CAST 90B      ADVANCED ADOBE ILLUSTRATOR      4 Units**  
**Advisory:** CAST 90A or equivalent.  
**May be taken 3 times for credit.**  
**1.5 hours lecture, 1.5 hours lecture-laboratory, 3 hours laboratory.**  
 Advanced concepts and methods of Adobe Illustrator and its use in graphic illustrations and problem solving. Software capabilities and limitations. [Transferability: CSU]
- CAST 91A      INTRODUCTION TO PAINTER      4 Units**  
**Advisory:** CIS 50A or equivalent.  
**May be taken 3 times for credit.**  
**1.5 hours lecture, 1.5 hours lecture-laboratory, 3 hours laboratory.**  
 An introduction to Painter software and its use in image-making and image-editing problem solving; hands-on software experience with the basic elements and tools of Painter. [Transferability: CSU]
- CAST 91B      ADVANCED PAINTER      4 Units**  
**Advisory:** CAST 91A or equivalent.  
**May be taken 3 times for credit.**  
**1.5 hours lecture, 1.5 hours lecture-laboratory, 3 hours laboratory.**  
 Advanced concepts and methods of Painter and its use in image-making, image-editing, and problem solving. Software capabilities and limitations; hands-on experience. [Transferability: CSU]
- CAST 92A      INTRODUCTION TO ADOBE PHOTOSHOP      4 Units**  
**May be taken 3 times for credit.**  
**1.5 hours lecture, 1.5 hours lecture-laboratory, 3 hours laboratory.**  
 Introduction to Adobe Photoshop, an image processing software tool. Hands-on experience with the basic elements and tools to set up files, manage documents, and perform basic image processing. [Transferability: CSU]
- CAST 92B      ADVANCED ADOBE PHOTOSHOP      4 Units**  
**May be taken 3 times for credit.**  
**1.5 hours lecture, 1.5 hours lecture-laboratory, 3 hours laboratory.**  
 Advanced concepts and methods of Adobe Photoshop and its use in developing images and creating special effects and problem solving. Software capabilities and limitations; hands-on experience. [Transferability: CSU]
- CAST 92E      INTRODUCTION TO ADOBE PHOTOSHOP ELEMENTS      4 Units**  
**May be taken 3 times for credit.**  
**1.5 hours lecture, 1.5 hours lecture-laboratory, 3 hours laboratory.**  
 Introduction to Adobe Photoshop Elements, an image management (organizing) and editing software tool. Hands-on experience with the basic features and tools to set up files, manage documents, and perform basic image processing. [Transferability: CSU]
- CAST 93A      POWERPOINT: EFFECTIVE PRESENTATIONS      4 Units**  
**Advisory:** CIS 50A.  
**May be taken 2 times for credit.**  
**1.5 hours lecture, 1.5 hours lecture-laboratory, 3 hours laboratory.**  
 Provides the student with a step-by-step approach to developing efficient and effective presentations using an assortment of presentation media. The dual focus is on the development and delivery of presentation content and the use of sophisticated computer applications for effective presentations. Topics include organizing the presentation, developing content, use of presentation applications such as Powerpoint and Astound, putting a presentation on the Web and other presentation delivery techniques. [Transferability: CSU]
- CAST 102      COMPUTER KEYBOARDING SKILLS      .5 Unit**  
**Advisory:** Pass/No Pass; not open to students with credit in CIS 102.  
**1 hour lecture-laboratory.**  
 Beginning keyboarding course covering the operation of the keyboard using the touch system and the development of correct techniques to interact more efficiently with desktop computers, computer terminals or electronic communication systems. Designed for independent skill learning. [Transferability: CSU]
- CAST 102B      MICROSOFT WINDOWS: BASICS      4 Units**  
**May be taken 2 times for credit.**  
**1.5 hours lecture, 1.5 hours lecture-laboratory, 3 hours laboratory.**  
 An overview of computer hardware, software and operating systems concepts. Shows the use of help, launching applications, managing files and folders with Explorer and My Computer as well as handling disk maintenance.
- CAST 102C      WINDOWS: HARD DISK MANAGEMENT & UTILITIES      3 Units**  
**1.5 hours lecture, 1.5 hours lecture-laboratory, 1.5 hours laboratory.**  
 Hands-on introduction to hard disk management, memory management, and the use of utility software; virus software, software installation and peripherals.
- CAST 102E      PC: VIRUS PROTECTION      3 Units**  
**1.5 hours lecture, 1.5 hours lecture-laboratory, 1.5 hours laboratory.**  
 Introduction to virus protection, detection, and repair for DOS and Windows microcomputer systems. Hands-on experience with installation and maintenance of selected virus software packages.
- CAST 104A      MICROSOFT WORD I      3 Units**  
**Advisory:** CIS 50A.  
**May be taken 4 times for credit.**  
**1.5 hours lecture, 1.5 hours lecture-laboratory, 1.5 hours terminal time.**  
 Hands-on experience, including formatting, editing, saving, and printing letters, memos and other short documents, with an introduction to the spelling checker and use of the thesaurus.
- CAST 104B      MICROSOFT WORD II      3 Units**  
**Advisory:** CAST 50A or equivalent; CAST 104A or equivalent.  
**May be taken 4 times for credit.**  
**1.5 hours lecture, 1.5 hours lecture-laboratory, 1.5 hours laboratory.**  
 Continuation of MS Word. Hands-on experience with Word and its use in file management, the creation of tables, forms, brochures, and newspaper columns; as well as exporting files into Desktop Publishing Packages.
- CAST 107      INTRODUCTION TO EXCEL      3 Units**  
**Advisory:** CIS 50A.  
**May be taken 4 times for credit**  
**1.5 hours lecture, 1.5 hours lecture-laboratory, 1.5 hours laboratory.**  
 Hands-on introduction to Excel and its use in creating worksheets, graphs, formulas, functions, formatting, web queries, what-if analysis, charting, working with large worksheets, creating web pages, financial functions, data tables, amortization schedules, creating/sorting/querying tables, creating templates, working with multiple worksheets/workbooks, applying SmartArt and images to worksheets, and working with databases across various microcomputer platforms.
- CAST 107D      EXCEL: BASICS      3 Units**  
**Advisory:** CIS 50A  
**May be taken 4 times for credit.**  
**1.5 hours lecture, 1.5 hours lecture-laboratory, 1.5 hours laboratory.**  
 Hands-on introduction to Excel and its use in creating worksheets, graphs, databases and macros across various microcomputer platforms.
- CAST 109F      USING ACCESS      3 Units**  
**Advisory:** CIS 50A or equivalent.  
**.5 hours lecture, 1.5 hours lecture-laboratory, 1.5 hours laboratory.**  
 Introduction to Microsoft Access, a relational database management software tool. [Transferability: CSU]

CAST 190	DIRECTED STUDY	.5 Unit	CAST 232A	MACROMEDIA DIRECTOR I	1 Unit
CAST 190X		1 Unit	Non-degree applicable credit course.		
CAST 190Y		1.5 Units	Advisory: CAST 200A or equivalent.		
CAST 190Z		2 Units	1 hour lecture.		
Non-degree applicable credit course.					
Advisory: Pass/No Pass.					
Corequisite: Concurrent enrollment in a computer science class or enrollment in any class requiring computer usage.					
Any combination of CAST 190–190Z may be taken 6 times for credit, however, no single course may be taken more than 6 times for credit.					
.5 hour lecture, 1.5 hour laboratory for each .5 unit of credit.					
Computer projects for students who desire or require additional help in attaining comprehension and competency in computer skills.					
CAST 200A	INTRODUCTION TO MICROSOFT OFFICE	1 Unit	CAST 240A	MICROSOFT ACCESS BASICS	1 Unit
Non-degree applicable credit course.					
1 hour lecture.					
Introduction to MS Office and its use in problem solving. Office capabilities and limitations; hands-on experience with the Office interface, Word, Excel and Power Point©.					
CAST 203A	MICROSOFT WINDOWS BASICS	1 Unit	CAST 241A	MICROSOFT EXCEL: WORKSHEETS	1 Unit
Non-degree applicable credit course.					
1 hour lecture.					
Introduction to MS Windows and its use in problem solving. Windows graphical user interface capabilities and limitations; hands-on experience.					
CAST 204A	MICROSOFT WORD BASICS	1 Unit	CAST 242A	MICROSOFT EXCEL: DATABASES	1 Unit
Non-degree applicable credit course.					
1 hour lecture.					
Hands-on experience, including formatting, editing, saving, and printing letters, memos, and other short documents, with an introduction to MS Word tools.					
CAST 206A	PC CONSTRUCTION & OPERATION	1 Unit	CAST 243A	MICROSOFT EXCEL: CHARTS & MACROS	1 Unit
Non-degree applicable credit course.					
Advisory: Not open to students with credit in PCS 111.					
1 hour lecture.					
Learn how to assemble and maintain your own PC-compatible computer; hands-on experience. Intended for continuing education.					
CAST 207A	PC HARD DISK MANAGEMENT	1 Unit	CAST 250	FUNDAMENTALS OF PC NETWORKING	1 Unit
Non-degree applicable credit course.					
Advisory: Not open to students with credit in CAST 102C.					
1 hour lecture.					
Learn how to manage your hard drive effectively; hands-on experience. Intended for continuing education.					
CAST 221	OVERVIEW OF ADOBE PHOTOSHOP	1 Unit	<b>COMPUTERS ON THE INTERNET</b>		
Non-degree applicable credit course.					
Advisory: Not open to students with credit in CAST 92A.					
1 hour lecture.					
Hands-on experience with the basic elements and tools of Photoshop to set up files, manage documents, and perform basic image processing. Intended for continuing education.					
CAST 222A	INTRODUCTION TO PRESENTATION SOFTWARE: POWERPOINT	1 Unit	Computers, Technology & Information Systems (650) 949-7236 <a href="http://www.foothill.edu/ctis/">www.foothill.edu/ctis/</a>		
Non-degree applicable credit course.					
1 hour lecture.					
Introduction to presentation software using Microsoft PowerPoint hands-on experience to produce text, graphic, chart and graph images for professional presentations.					
CAST 230L	OVERVIEW OF MULTIMEDIA	.5 Unit	COIN 51	INTERNET TECHNOLOGY & APPLICATIONS: INTRODUCTION	5 Units
Non-degree applicable credit course.					
.5 hour lecture.					
Introduction to the various components of multimedia and the production process, and various software tools and hardware systems. Hands-on experience various software to integrate text, graphics, animation, sound and movies.					
Advisory: CIS 50A or equivalent, or familiarity with UNIX.					
May be taken 2 times for credit.					
4 hours lecture, 4 hours laboratory.					
Using the Internet to connect and communicate over the World Wide Web and e-mail, retrieve current useful information using searching tools, prepare a simple HTML Web page, locate Internet resources to find software and answers to troubleshooting problems and use evolving internet technologies and resources. [Foothill GE: Lifelong Understanding; Transferability: CSU]					

**COIN 53 LEARNING WITH ETUDES 2 Units****Advisory: Familiarity with an Internet Browser and E-mail.****1 hour lecture, 2 hours laboratory.**

This course covers what it takes to be successful in an online course; how to use the tools of an ETUDES-NG online course; aspects on online communication; online discussions; submitting online assignments; posting attachments; taking online tests, quizzes and surveys; monitoring your progress; understanding the challenges of an online environment; and figuring out if online learning is for you. [Transferability: CSU]

**COIN 53A INTRODUCTION TO ETUDES 2 Units****May be taken 3 times for credit.****2 hours lecture.**

This online course offers an overview of the core tools and basic functionality of ETUDES in a collaboration, teaching, and learning environment. ETUDES offer a complete set of tools to help instructors develop, deliver, supplement, and manage courses over the Internet. A hands-on learning experience, this course takes participants through a step-by-step process to learn best uses of the core tools of the system to support teaching and learning. Participants read tutorials, participate in discussions, and apply the skills taught in a practice site. Additionally, they share best practices and reflect on good uses of the tools. [Transferability: CSU]

**COIN 56 E-BUSINESS 5 Units****Advisory: CIS 50A or equivalent; COIN 61 or equivalent; familiarity with Internet commerce and E-business; Internet connectivity.****May be taken 3 times for credit.****4 hours lecture, 3 hours laboratory.**

Foundations and principles of electronic commerce and doing business on the Internet. Topics include business models, value and supply chains, business strategy, electronic data interchange (EDI), electronic payments & digital currency, integrating channels of business (walk-in, mail, phone, Internet), e-marketing, intranets and extranets, security risks and legal issues in e-commerce, and Electronic Document Management Systems (EDMS). Current topics about latest e-business trends will be discussed, including peer-to-peer commerce, public and private exchanges, e-hubs and e-marketplaces, technology trends in enterprise computing including Web services and knowledge management, and global e-commerce and development considerations. [Transferability: CSU]

**COIN 58 ELECTRONIC COMMERCE PROJECTS 5 Units****Advisory: COIN 51 and 56 or equivalent; familiarity with Internet commerce and business models strongly recommended.****May be taken 3 times for credit.****3 hours lecture, 6 hours laboratory.**

Principles and methods of setting up a functional electronic commerce site on the World Wide Web. Upon completion of a class project estimated to take 40 to 60 hours to complete, students will be able to select software and commerce service providers for creating a Web site with searchable inventory and capable of processing orders and accepting payment, and will create a functional Web store business plan for designing, building, launching, and marketing a WWW commerce site. [Transferability: CSU]

**COIN 61 PUBLISHING ON THE WEB USING HTML/XHTML 5 Units****Advisory: CIS 50A or equivalent; COIN 51.****May be taken 3 times for credit.****4 hours lecture, 4 hours laboratory.**

Introduction to electronic publishing on the Web using HTML and XHTML. Students will produce a multi-page Web site with image, text, and links; tables, frames, forms and simple multimedia. Uploading and modifying documents to a web server, interacting with a client, and planning, designing, testing and maintaining a Web site will also be emphasized. This course is based on knowledge of navigating the Internet and browsing the Web. [Transferability: CSU]

**COIN 63 ADVANCED TOPICS IN WEB PUBLISHING 5 Units****Advisory: CIS 50A, COIN 51 or equivalent, and COIN 61.****May be taken 3 times for credit.****4 hours lecture, 4 hours laboratory.**

Exploration of advanced technologies in Web publishing which work with Hypertext Mark-up Language (HTML) and electronic publishing on the Web. Hands-on experience in producing a multi-page Web site using technologies such as Cascading Style Sheets, Multimedia, Dynamic HTML, XML, CGI, JavaScript and other relevant technologies; uploading and modifying Web documents to a Web server; interacting with a client; planning, designing, testing and maintaining a web site. This course is based on knowledge of navigating the Internet and browsing the Web, and prior experience coding in basic HTML. [Transferability: CSU]

**COIN 65 USING CASCADING STYLE SHEETS FOR DESIGN 5 Units****Advisory: COIN 61 and 63 strongly advised.****May be taken 2 times for credit.****4 hours lecture, 4 hours laboratory.**

Cascading Style Sheets (CSS) have changed the focus of web development from presentation to structure. This class will discuss separating web content from formatting so that the resulting markup will render more quickly and, through the use of CSS, be presented in a variety of user agents. The class is designed for students who intend to pursue a web development career or for those who want a more advanced understanding of web site creation to enhance their own work or career path. Basic concepts include XHTML markup, methods of styling a document, CSS syntax, fonts and text, positioning elements, basic and advanced page layout and interface components. [Transferability: CSU]

**COIN 66 APACHE WEB SERVER MANAGEMENT 5 Units****Advisory: COIN 70A and CIS 68A or equivalent strongly recommended; familiarity with the concept of web servers, HTTP, browsers, protocols, scripting, basic and other Internet-related subjects.****May be taken 2 times for credit.****4 hours lecture, 3 hours laboratory.**

Practices and procedures in the installation, operation, maintenance, and security of a World Wide Web server. [Transferability: CSU]

**COIN 67 RUBY ON RAILS - WEB APPLICATION DEVELOPMENT 5 Units****Advisory: Prior programming experience; CIS 52A or database experience.****4 hours lecture, 4 hours laboratory.**

Introduction to web application development with Ruby on Rails. Students learn how to create database-driven web applications using the Ruby language and the Rails framework. [Transferability: CSU]

**COIN 70A INTRODUCTION TO PROGRAMMING USING JAVASCRIPT 5 Units****Advisory: COIN 63.****May be taken 3 times for credit.****4 hours lecture, 4 hours laboratory.**

An introduction to computer programming using the JavaScript language. Students will receive a strong foundation of understanding and practice with basic programming concepts including problem solving strategies and syntax including data types, variables, functions, events, control structures, arrays, strings, dates and math and basic form validation. The class is designed for students who intend to pursue careers in web programming or web administration or those who want a basic understanding of programming to enhance other web-related career paths. No prior programming experience is required or expected. [Transferability: CSU]

**COIN 70B USING JAVASCRIPT 5 Units****Advisory: COIN 63 and 70A or prior experience with an object oriented programming language (C/C++/JAVA).****May be taken 3 times for credit.****4 hours lecture, 4 hours laboratory.**

Using JavaScript to create interactive web sites by taking advantage of the Document Object Model (DOM), dynamic creation of content, advanced forms processing, window/frame manipulation, cookies, shopping carts,

browser detection and other related elements. This class is designed for students who have intermediate-level knowledge of an object-oriented programming language. [Transferability: CSU]

**COIN 71 APPLICATION SOFTWARE DEVELOPMENT WITH AJAX 5 Units**

**Advisory:** COIN 61; COIN 70A or 70B and 78.

**May be taken 2 times for credit.**

**4 hours lecture, 4 hours laboratory.**

JavaScript and XML are used to create highly interactive Web sites that function like desktop applications. You will learn to write advanced JavaScript programs that request XML data from the server "on the fly", and you will learn to use an existing framework to implement a complex design. Software engineering principles will be stressed, including separating the content from the presentation, programming style and documentation. [Transferability: CSU]

**COIN 72 WEB MARKETING 4 Units**

**Advisory:** CIS 50A or equivalent; COIN 51, 56, and 61 or equivalent.

**May be taken 3 times for credit.**

**1.5 hours lecture, 1.5 hours lecture-laboratory, 3 hours laboratory time.**

Marketing concepts and theories on how to market and advertise your web site effectively on the Internet. Classroom critiques of your site, fine tuning to compete with successful online business models. [Transferability: CSU]

**COIN 74 WEB PUBLISHING TOOLS: DREAMWEAVER 5 Units**

**Advisory:** COIN 61 or equivalent; familiarity with current Internet technologies (e-mail, Web browsers, common graphics formats, FTP); not open to students with credit in CAST 74G.

**May be taken 2 times for credit.**

**4 hours lecture, 3 hours laboratory.**

Principles and methods of creating dynamic, 'fourth-generation' Web sites using the latest Web technologies: JavaScript, Cascading Style Sheets, Java, audio, video and animation plug-ins. Techniques of authoring Web pages for different browsers and different end user platforms. Principles of designing and maintaining efficient and successful Web sites. [Transferability: CSU]

**COIN 74A WEB PUBLISHING TOOLS: DREAMWEAVER BASICS 5 Units**

**Advisory:** CIS 50A, COIN 51 and 61 strongly advised.

**May be taken 2 times for credit.**

**2 hours lecture, 2 hours lecture-laboratory, 3 hours laboratory.**

An introduction to the Dreamweaver environment including principals and methods of planning, designing and creating successful web sites. The class is designed for students who intend to pursue a Web development career or for those who want a basic understanding of web site creation to enhance their own work or career path. Basic concepts include creating a basic web site, remote site access (FTP), text formatting and manipulation, linking, cascading style sheets, graphics (including image maps, rollovers and navigation bars), tables and layout, layers, frames and site marketing using metadata. Techniques of authoring, maintaining and testing for different users, browsers and platforms will be discussed. [Transferability: CSU]

**COIN 74B WEB PUBLISHING TOOLS: DREAMWEAVER INTERACTIVE 5 Units**

**Advisory:** CIS 50A, COIN 51, 61 and 74A strongly advised; COIN 70B or an understanding of a programming language.

**May be taken 2 times for credit.**

**2 hours lecture, 2 hours lecture-laboratory, 3 hours laboratory.**

A more in-depth look at the Dreamweaver environment including principals and methods of planning and creating successful interactive web sites. The class is designed for students who intend to pursue a Web development career or for those who want a more in-depth understanding of the more advanced features of Dreamweaver to enhance their own work or career path. Advanced interactive concepts include client interactions, thorough understanding of the use and issues involved with cascading style sheets, collaborative development, table layout, interactive forms, layers, Dreamweaver behaviors, rich media additions, reusable assets and site marketing. Advanced XHTML and XML practice including RSS feeds, Google XML site maps, and creating

and editing XML documents is also reviewed. Techniques of authoring, maintaining and testing for different users, browsers and platforms will be emphasized. A good working knowledge of Dreamweaver 8 and/or Studio 8 is expected. [Transferability: CSU]

**COIN 74C WEB PUBLISHING TOOLS: DREAMWEAVER INTERACTIVE II 5 Units**

**Advisory:** COIN 61, 74A and 74B strongly advised.

**May be taken 2 times for credit.**

**2 hours lecture, 2 hours lecture-laboratory, 3 hours laboratory.**

An advanced exploration of the Dreamweaver environment, and database integration. The class is designed for students who intend to pursue a Web development career and for those who want an in-depth understanding of web site creation to enhance their work or career path. Concepts investigated include adding interactivity through the use of media objects, database functionality and dynamic pages techniques of authoring, maintaining and testing for different users, accessibility and browsers and platforms will be discussed. [Transferability: CSU]

**COIN 76 WEB PUBLISHING TOOLS: MULTIMEDIA 5 Units**

**Advisory:** CIS 50A, COIN 51 and 61.

**May be taken 3 times for credit.**

**4 hours lecture, 4 hours laboratory.**

Fundamentals of a variety of multimedia publishing tools which may include Flash, Photoshop/Elements, Adobe Acrobat, sound and/or video digitizing software and video editing and processing software. Hands-on experience in producing validated Web pages which utilize these technologies. This course is based on knowledge of the Internet, XHTML, and Web publishing. [Transferability: CSU]

**COIN 78 EXTENSIBLE MARKUP LANGUAGE (XML) 5 Units**

**Advisory:** COIN 61 or equivalent; working knowledge of HTML.

**May be taken 3 times for credit.**

**4 hours lecture, 4 hours laboratory.**

Introduction to eXtensible Markup Language (XML) and document structuring. Hands-on exercises developing XML documents, validation with Document Type Definition (DTD) and XML schema (XSD), and data presentation with eXtensible Style Language (XSL) and Cascading Style Sheets (CSS). Survey of recommended XML documents including XHTML, and a brief introduction to RSS, RDF, and XML sitemaps. [Transferability: CSU]

**COIN 78B INTERNET PROGRAMMING WITH XML 5 Units**

**Advisory:** COIN 78; familiarity with HTML, JavaScript and JAVA or C# programming language, SQL and XML.

**May be taken 3 times for credit.**

**4 hours lecture, 4 hours laboratory.**

Advanced topics in Internet programming focusing on the use and integration of XML, DHTML, AJAX, Java/.NET and database technologies for Web 2.0 application development. This course is intended for students in the Internet programming discipline and professionals who need to develop hands-on programming skills specifically for integrating XML with other technologies and development of Web Services, including the use of REST, SOAP, WSDL, and UDDI. [Transferability: CSU]

**COIN 78C XML FOR INFORMATICS 5 Units**

**Advisory:** COIN 78.

**May be taken 3 times for credit.**

**3 hours lecture, 1 hour lecture-laboratory, 4 hours laboratory.**

The World Wide Web is transitioning from a content Web, to a process Web, to a knowledge Web. This course introduces the Semantic Web and Semantic Web technologies to students with a firm command of XML and an interest in knowledge engineering. Topics include RSS, RDF, RDDL, Ontologies and Taxonomies, Concept Maps, and XML topic maps. Students will integrate an RSS feed into a blog, build a machine readable XML meta data document, and create a small XML topic map from an ontology, taxonomy, and concept map. This course provides a firm understanding of the Semantic Web initiative, including current activities in RKF (Rapid Knowledge Formation), DAML, and Web based inference and ontology engines. [Transferability: CSU]

**COIN 78D USER INTERFACE DESIGN WITH EXPRESSION BLEND 5 Units**

**Advisory:** CIS 19M, COIN 78.  
**May be taken 3 times for credit.**  
**4 hours lecture, 4 hours laboratory.**  
Expression Blend is a new tool from Microsoft for designing both Windows and Web user interfaces using XAML, an XML derivative. Blend seamlessly permits the incorporation of audio, video, 2D and 3D vector art, bitmap images and animations into stunning user interfaces. Through data binding and other markup extensions, XAML permits the implementation of a considerable degree of functionality without requiring a full fledged programming language such as C#. At the same time, Blend is able to totally coordinate with Visual Studio so that the same project can be worked on simultaneously by a designer using Blend and by a C# developer using Visual Studio. Blend will ultimately be used both by professional user interface designers and by developers for most WPF (Windows Presentation Foundation) UIs since its feature set for design purposes is considerably richer than the equivalent designer in Visual Studio. **[Transferability: CSU]**

**COIN 79 XML FOR BIOINFORMATICS 5 Units**

**Advisory:** COIN 51 or equivalent; BTEC 51A and 52A.  
**May be taken 3 times for credit.**  
**4 hours lecture, 4 hours laboratory.**  
Introduction to mark-up languages, including HTML and XML, as a method of gaining practical experience and learning the fundamentals of BIOML (BioPolymer Markup Language). This course is intended for students in the bioinformatics discipline who need to understand mark-up languages for encapsulating, transmitting, and presenting biological data on the World Wide Web, with special emphasis placed on interaction and collaboration with bioinformatics databases, and rendering biopolymer data with BIOML. **[Transferability: CSU]**

**COIN 80 SELECTED TOPICS IN INTERNET TECHNOLOGY 4 Units**

**Advisory:** COIN 63.  
**1.5 hours lecture, 1.5 hours lecture-laboratory, 3 hours laboratory.**  
Introduction to various Internet technologies and Web development tools. **[Transferability: CSU]**

**COIN 81 INTRODUCTION TO BIOINFORMATICS TOOLS & DATABASES 5 Units**

**Prerequisite:** Knowledge of molecular biology.  
**Advisory:** COIN 51 or equivalent; BTEC 51A and 52A.  
**May be taken 3 times for credit.**  
**4 hours lecture, 3 hours laboratory.**  
This practical course provides an introduction to Internet databases, tools and methods used in bioinformatics, emphasizing genomic and protein databases including NCBI, GenBank, UniProt, SWISS-PROT, SWISS-MODEL, PDB, PIR, and Pfam. Course focus on the practical use of bioinformatics tools and databases to explore the genome, proteome, and transcriptome in applied problem spaces. The use of BioPerl modules is introduced a method to interrogate bioinformatics data. XML data formats including BSMML and MAGe-ML are demonstrated. Lab exercises focus on software tools including BLAST and Smith-Waterman for methods of aligning and comparing sequences, and SWISS-MODEL and The Protein Data Bank for protein structure modeling. Statistical analysis of bioinformatics includes hypothesis testing and problem posing. Current topics including microarray technology for measuring gene expression are also introduced. A working knowledge of both key concepts and vocabulary used in molecular biology is strongly encouraged. Experience with markup languages and programming is useful but not required. **[Transferability: CSU]**

**COIN 82 IMAGES FOR THE WEB 4 Units**

**Advisory:** CAST 92A or equivalent.  
**May be taken 3 times for credit.**  
**3 hours lecture, 3 hours laboratory.**  
Image preparation and design for the Web using Photoshop and other tools. Image acquisition and correction, conversion and optimizing images for the Web with application to various browsers. Software capabilities and limitations; hands-on experience. **[Transferability: CSU]**

**COIN 83 SOCIAL COMPUTING IN A GLOBAL CONTEXT 5 Units**

**Advisory:** Internet Technology, social and/or behavioral science (sociology/psychology).  
**May be taken 3 times for credit.**  
**3 hours lecture, 2 hours lecture-laboratory, 3 hours laboratory.**  
Introduction to the field of social computing, social networking, and collaboration tools and process. Emphasis on human and social interactions mediated by technology networks, and engineering and optimization of high performance workgroups, especially in addressing complex social and environmental problems. Overview of Web 2.0 tools, social portals, and current Internet technology, and the benefits of social collaboration tools in local and global problem solving. Introduction to the field of social computing and social network analysis, and implementation of effective collaboration tools and process, including workflow and workgroups. Course work will include developing and deploying social networking tools and strategy as part of a local (or global) community problem or issue. A key learning outcome of this interdisciplinary course is developing a working understanding of collaboration as both a core competency and practice for effective social development. **[Transferability: CSU]**

**COIN 88 USING UML FOR WEB APPLICATION DEVELOPMENT 4 Units**

**Advisory:** Object oriented programming course (Java recommended); hands-on use of Microsoft Visio; CIS 60 or equivalent.  
**May be taken 3 times for credit.**  
**1.5 hours lecture, 1.5 hours lecture-laboratory, 3 hours laboratory.**  
This course will provide a basic understanding of visual modeling tools and methods for software application development, focusing on the Unified Modeling Language (UML). Microsoft Visio, Visual Studio, and/or specific industry applications (Rational Rose) will be used to model Web-deployed software applications. Special emphasis will be placed on understanding business process requirements gathering and effective modeling techniques using the UML. **[Transferability: CSU]**

**COIN 93U COIN EXPERIENTIAL INTERNSHIP 3 Units**  
**COIN 93V 4 Units**  
**COIN 93W 6 Units**

**May be taken 6 times for credit.**  
**3 hours laboratory for each unit of credit.**  
Off-campus supervised experiential education of COIN students in web site creation, E-business, or Web site maintenance. Opportunity for practical application of knowledge, skills and abilities acquired in COIN and related course work. Exposure to varied protocols, methodologies and practices in a professional working environment. **[Transferability: CSU]**

**COOPERATIVE WORK EXPERIENCE EDUCATION**

**Computers, Technology & Information Systems (650) 949-7232**  
[www.foothill.edu/coop](http://www.foothill.edu/coop)

- CWE 55 OCCUPATIONAL WORK EXPERIENCE 1 Unit**
- CWE 55A 2 Units**
- CWE 55B 3 Units**
- CWE 55C 4 Units**
- CWE 55D 5 Units**
- CWE 55E 6 Units**
- CWE 55G 8 Units**

**Formerly: CWE 51X,Y,Z**  
**Prerequisite:** Student must be working in a job related to a declared occupational, vocational, or educational goal. 50 hours of paid employment for each unit of credit is required.

**Any combination of CWE 55, 55A-G and 56A-G may be taken for a maximum of 24 units for credit, however, no single course may be taken more than 6 times for credit.**

**5 hours laboratory for each unit of credit.**  
The CWE Program promotes on-the-job learning experiences for a student employed in a job related vocational, occupational or educational major. The program reinforces students to apply academic knowledge and theory gained from college course work to the workplace. The work

experience will increase the students' awareness of cultural, global, and generational diversity in the work environment in addition to building communication, problem solving, interpersonal and transferable skills. A proactive approach towards a students' career decision making process will be implemented by the development of concrete and measurable learning objectives. [Transferability: CSU]

**CWE 55X GENERAL WORK EXPERIENCE 2 Units**  
**CWE 55Y 3 Units**

**Formerly: CWE 70X,Y**

**Advisory: Student must be currently employed and obtain approval of Work Experience instructional personnel.**

**Corequisite: Concurrent enrollment in at least 7 units, including Work Experience (Fall, Winter and Spring quarters), or in at least one other course during Summer Session.**

**Any combination of CWE 70 series courses may be taken for a maximum of 9 units, not to exceed 24 units total of any Cooperative Work Experience courses.**

**50 hours of paid employment for each unit of credit.**

Students will acquire and identify transferable skills gained under actual working conditions. Students will develop understanding, appreciation and respect for work and workers. Through holding a job, fulfilling work-related assignments and participating in on-campus activities, students are assisted in the process of developing a concept of self, understanding their role in the work world and setting realistic goals. An assigned faculty coordinator helps the student focus on the job skills necessary for transition into a chosen career. [Transferability: CSU]

**CWE 56A OCCUPATIONAL WORK EXPERIENCE: 2 Units**  
**CWE 56B COMMUNITY SERVICE 3 Units**  
**CWE 56C 4 Units**  
**CWE 56D 5 Units**  
**CWE 56E 6 Units**  
**CWE 56G 8 Units**

**Prerequisite: Student must be volunteering in a non-profit organization. 40 hours of volunteer work per quarter for each unit of credit.**

**Any combination of CWE 55, 55A–G and 56A–G may be taken for a maximum of 24 units for credit, however, no single course may be taken more than 6 times for credit.**

**80 hours of volunteered employment.**

The course promotes community service/volunteering learning in a supervised setting within a community agency. The community service agency must be approved by the instructor. The experience reinforces students to apply academic knowledge and theory gained from college course work to the workplace. The community service experience will increase the students' awareness of cultural, global skills as well as knowledge of the human service agency dynamics and environment. Awareness of and sensitivity to community needs will be developed through measurable learning objectives with an emphasis on transition to a career path in a social services setting. [Transferability: CSU]

**CWE 60A OCCUPATIONAL WORK EXPERIENCE: APPRENTICE 6 Units**

**Prerequisite: Must be enrolled in Building Trade Union Apprenticeship Program.**

**May be taken 4 times for credit.**

**Three hundred hours of paid employment.**

The CWE program promotes on-the-job learning experiences for an apprentice/student employed in a job related vocational or occupational major. The program reinforces students to apply occupational knowledge and theory gained from Building Trade courses to the workplace. The work experience will build communication, problem-solving, interpersonal and transferable skills in addition to increasing the apprentices'/students' awareness of cultural, global, and generational diversity in the work environment. A proactive approach towards a students' /apprentices, career decision making process will be implemented by the development of concrete and measurable learning objectives. [Transferability: CSU]

**CWE 65A OCCUPATIONAL WORK EXPERIENCE: 4 Units**  
**APPRENTICE-SHEET METAL**

**Formerly: CWE 60A**

**Student must be working in a trade related job and be attending a building trade apprenticeship program. 50 hours of paid employment per unit of credit is required**

**May be taken 6 times for credit.**

**Two hundred hours paid employment.**

The CWE program promotes on-the-job learning experiences for an apprentice/student employed in a job related vocational or occupational major. The program reinforces apprentice/student to apply occupational knowledge and theory gained from Sheet Metal Trade courses to the workplace. The work experience will build communication, problem-solving, interpersonal and transferable skills, in addition to increasing the apprentices'/students' awareness of cultural, global, and generational diversity in the work environment. A proactive approach towards a students' /apprentices, career decision making process will be implemented by the development of concrete and measurable learning objectives. [Transferability: CSU]

**CWE 65B OCCUPATIONAL WORK EXPERIENCE: APPRENTICE-SOUND & COMMUNICATIONS 4 Units**

**Formerly: CWE 60A**

**Student must be working in a trade related job and be attending a building trade apprenticeship program. 50 hours of paid employment per unit of credit is required.**

**May be taken 6 times for credit.**

**Two hundred hours paid employment.**

The CWE program promotes on-the-job learning experiences for an apprentice/student employed in a job related vocational or occupational major. The program reinforces apprentice/student to apply occupational knowledge and theory gained from Sound and Communications Trade courses to the workplace. The work experience will build communication, problem-solving, interpersonal and transferable skills, in addition to increasing the apprentices'/students' awareness of cultural, global, and generational diversity in the work environment. A proactive approach towards a students' /apprentices, career decision making process will be implemented by the development of concrete and measurable learning objectives. [Transferability: CSU]

**CWE 65C OCCUPATIONAL WORK EXPERIENCE: 4 Units**  
**APPRENTICE-PLUMBING**

**Student must be working in a trade related job and be attending a building trade apprenticeship program. 50 hours of paid employment per unit of credit is required**

**May be taken for a maximum of 24 units.**

**Two hundred hours paid employment.**

The CWE program promotes on-the-job learning experiences for an apprentice/student employed in a job related vocational or occupational major. The program reinforces apprentice/student to apply occupational knowledge and theory gained from Plumbing Trade courses to the workplace. The work experience will build communication, problem-solving, interpersonal and transferable skills, in addition to increasing the apprentices'/students' awareness of cultural, global, and generational diversity in the work environment. A proactive approach towards a students' /apprentices, career decision making process will be implemented by the development of concrete and measurable learning objectives. [Transferability: CSU]

**CWE 65D OCCUPATIONAL WORK EXPERIENCE: 4 Units**  
**APPRENTICE-ELECTRICAL**

**Student must be working in a trade related job and be attending a building trade apprenticeship program. 50 hours of paid employment per unit of credit is required.**

**May be taken 6 times for credit.**

**Two hundred hours paid employment.**

The CWE program promotes on-the-job learning experiences for an apprentice/student employed in a job related vocational or occupational major. The program reinforces apprentice/student to apply occupational knowledge and theory gained from Electrical Trade courses to the workplace. The work experience will build communication, problem-solving, interpersonal and transferable skills, in addition to increasing the apprentices'/students' awareness of cultural, global, and

generational diversity in the work environment. A proactive approach towards a students' /apprentices, career decision making process will be implemented by the development of concrete and measurable learning objectives [Transferability: CSU]

<b>CWE 75</b>	<b>GENERAL WORK EXPERIENCE</b>	<b>1 Unit</b>
<b>CWE 75A</b>		<b>2 Units</b>
<b>CWE 75B</b>		<b>3 Units</b>
<b>CWE 75C</b>		<b>4 Units</b>
<b>CWE 75D</b>		<b>5 Units</b>
<b>CWE 75E</b>		<b>6 Units</b>

**Prerequisite: Student must be employed. 50 hours of paid employment per quarter for each unit of credit.**

**Any combination of CWE 55X, 55Y, 75, 75A–G, 76 and 76A–E may be taken for a maximum of 9 units for credit, however, no single course may be taken more than 6 times for credit.**

**One hundred hours paid employment.**

The CWE Program promotes on-the-job learning experiences for students who are employed. The program reinforces workplace effectiveness and the attainment of transferable skills gained at the worksite. The work experience will increase a students' awareness of cultural, global, and generational diversity in the work environment in addition to building communication, problem solving, interpersonal and transferable skills. Workplace competencies will be developed through measurable learning objectives and with an emphasis on exploring career options in the workplace. [Transferability: CSU]

<b>CWE 76</b>	<b>GENERAL WORK EXPERIENCE:</b>	<b>1 Unit</b>
<b>CWE 76A</b>	<b>COMMUNITY SERVICE</b>	<b>2 Units</b>
<b>CWE 76B</b>		<b>3 Units</b>
<b>CWE 76C</b>		<b>4 Units</b>
<b>CWE 76D</b>		<b>5 Units</b>
<b>CWE 76E</b>		<b>6 Units</b>

**Prerequisite: Student must be volunteering at a community service organization. 40 hours of volunteer community service per quarter for each unit of credit.**

**Any combination of CWE 55X, 55Y, 75, 75A–G, 76 and 76A–E may be taken for a maximum of 9 units for credit, however, no single course may be taken more than 6 times for credit.**

**40 hours of volunteer employment.**

The course promotes community service/volunteering learning in a supervised setting within a community agency. The community service agency must be approved by the instructor. The experience reinforces students to apply academic knowledge and theory gained from college course work to the workplace. The community service experience will increase the students' awareness of cultural, global skills as well as knowledge of the human service agency dynamics and environment. Awareness of and sensitivity to community needs will be developed through measurable learning objectives with an emphasis on transition to a career path in a social services setting. [Transferability: CSU]

## COUNSELING

**Counseling & Student Services** (650) 949-7296  
[www.foothill.edu/transfer/counseling.html](http://www.foothill.edu/transfer/counseling.html)

<b>CNSL 1</b>	<b>COLLEGE SUCCESS</b>	<b>3 Units</b>
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**3 hours lecture.**

Examination of factors that contribute to college success, including responsibility/control; competition; task-precision; expectations; wellness; time management; college involvement; family/support systems involvement. Activities include: testing and individualized evaluations; group processing and practicum. [Foothill GE: Lifelong Understanding; Transferability: UC/CSU]

<b>CNSL 2</b>	<b>COLLEGE &amp; LIFE MANAGEMENT</b>	<b>4 Units</b>
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**3 hours lecture, 3 hours laboratory.**

Examination of psycho-social and wellness issues related to personal and academic success. Explores theories and practice for effective goal-setting, communication, health and wellness, learning and social growth. [Foothill GE: Lifelong Understanding; Transferability: CSU]

<b>CNSL 50</b>	<b>INTRODUCTION TO COLLEGE</b>	<b>1 Unit</b>
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**1 hour lecture.**

Orientation to Foothill College academic policies, resources, programs and services; introduction to California systems of higher education; formulation of educational plan. [Transferability: CSU]

<b>CNSL 51</b>	<b>PASS THE TORCH TRAINING: LEARNING STRATEGIES FOR STUDENTS PAIRED IN ONE-ON-ONE STUDY TEAMS</b>	<b>1 Unit</b>
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**1 hour lecture.**

Pass the Torch is a one-on-one study team program that pairs two students in English Composition, English as Second Language Composition and Mathematics classes. One student has earned an A in the class or a higher level of the subject and as Team Leader provides academic support to the other student who is currently enrolled in the class and as Team Member is the recipient of the academic support. Exploration of learning concepts and strategies essential to succeeding in Pass the Torch as a team member in mathematics, English/ESL composition classes. [Transferability: CSU]

<b>CNSL 53</b>	<b>EFFECTIVE STUDY</b>	<b>3 Units</b>
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**3 hours lecture.**

Approaches to college learning, including diagnosis of difficulties and a development of new skills. [Transferability: CSU]

<b>CNSL 72</b>	<b>STRESS, WELLNESS &amp; COPING</b>	<b>3 Units</b>
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**3 hours lecture.**

Explore and become familiar with symptoms of stress, depression, and anxiety. Examine the social and psychological factors that contribute to these problems and the patterns of behavior which result. Learn, utilize, and understand effective coping strategies to promote self awareness, personal wellness, and academic success and model these strategies for members of the community. Emphasis placed on mental health and application of self-help skills. [Foothill GE: Lifelong Understanding; Transferability: CSU]

<b>CNSL 85H</b>	<b>TRANSFER READINESS</b>	<b>1 Unit</b>
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**1 hour lecture.**

Learn to choose a college or university; prepare academically; apply and use counselors and transfer programs to enhance transfer eligibility.

<b>CNSL 86</b>	<b>INTRODUCTION TO LEADERSHIP</b>	<b>1 Unit</b>
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**Advisory: Eligibility for ENGL 110 or ESLL 25.**

**May be taken 3 times for credit.**

**1 hour lecture.**

Introduction to the dynamics of working groups and the impact of leadership on the effectiveness of groups; examination of the linkage between concepts and theories of leadership to the everyday functioning of student organizations; understand the role played by structure and governance models in organizational effectiveness. [Transferability: CSU]

<b>CNSL 86LX</b>	<b>LEADERSHIP LABORATORY</b>	<b>1 Unit</b>
<b>CNSL 86LY</b>		<b>2 Units</b>
<b>CNSL 86LZ</b>		<b>3 Units</b>

**Any combination of CNSL 86LX–86LZ may be taken 6 times for credit, however, no single course may be taken more than 6 times for credit.**

**3 hours laboratory for each unit of credit.**

Practical field experience for students in campus leadership positions, related to material being presented in CNSL 86. [Transferability: CSU]

<b>CNSL 86X</b>	<b>LEADERSHIP: THEORIES, STYLES &amp; REALITIES</b>	<b>2 Units</b>
<b>CNSL 86Y</b>		<b>3 Units</b>

**Advisory: Eligibility for ENGL 110 or ESLL 25.**

**Any combination of CNSL 86–86Y may be taken 6 times for credit, however, no single course may be taken more than 6 times for credit.**

Introduction to the dynamics of working groups and the impact of leadership on the effectiveness of groups; examination of the linkage between concepts and theories of leadership to the everyday functioning of student organizations; understand the role played by structure and governance models in organizational effectiveness. [Transferability: CSU]

**CNSL 87 LEADERSHIP: THEORIES & PRACTICES 1 Unit**

**Advisory:** Eligibility for ENGL 110 or ESLL 25.  
**May be taken 3 times for credit.**  
**1 hour lecture.**

Exploration into the dynamics of working groups and the impact of leadership on the effectiveness of groups; examination of the linkage between concepts and theories of leadership to the everyday functioning of student organizations; understand the role played by structure and governance models in organizational effectiveness. [Transferability: CSU]

**CNSL 88 LEADERSHIP: THEORIES, STYLES & REALITIES 1 Unit**

**Advisory:** Eligibility for ENGL 110 or ESLL 25.  
**May be taken 3 times for credit.**  
**1 hour lecture.**

Continued development and further study into the dynamics of working groups and the impact of leadership on the effectiveness of groups; examination of the linkage between concepts and theories of leadership to the everyday functioning of student organizations; understand the role played by structure and governance models in organizational effectiveness. [Transferability: CSU]

**CNSL 89 ADVANCED LEADERSHIP: THEORIES, STYLES & REALITIES 1 Unit**

**Advisory:** Eligibility for ENGL 110 or ESLL 25.  
**May be taken 3 times for credit.**  
**1 hour lecture.**

Advanced study in the dynamics of working groups and the impact of leadership on the effectiveness of groups; examination of the linkage between concepts and theories of leadership to the everyday functioning of student organizations; understand the role played by structure and governance models in organizational effectiveness. [Transferability: CSU]

**CNSL 90 INTRODUCTION TO ONLINE LEARNING 1 Unit**

**Advisory:** Familiarity with an Internet Browser and E-mail.  
**1 hour lecture, 1.5 hours computer time.**

This course covers concepts, tools and techniques for success in on-line learning. Through self-assessment, On-line interaction, and use of the various tools and resources of the Internet the student will develop an understanding of the skills needed to be successful when engaging in on-line instruction. [Foothill GE: Lifelong Understanding; Transferability: CSU]

**CNSL 175 EOPS: THE ROAD TO COLLEGE SUCCESS—MORE THAN JUST BOOKS 1 Unit**

**1 hour lecture.**

Course will introduce EOPS/CARE students to various EOPS services, policies and requirements governing programs. Course encourages collaborative learning, educational attainment, promotes student retention, persistence, success. Topics included: financial aid/scholarship applications, identifying campus resources, budgeting and managing money, cultural identity and experiences, goal-setting, self-esteem, career options, managing time.

**CREATIVE WRITING**

Language Arts

(650) 949-7678  
[www.foothill.edu/la/](http://www.foothill.edu/la/)

**CRWR 6 INTRODUCTION TO CREATIVE WRITING 5 Units**

**Prerequisite:** Eligibility for ENGL 1A.  
**5 hours lecture, 1 hour laboratory.**

Explicit instruction and practice in writing poetry and short fiction. Assignments include reading, analyzing and responding to published and student work and writing original work. Analysis of public readings and/or interviews with writers. Lecture and workshop. [Foothill GE: Humanities; Transferability: CSU]

**CRWR 34H HONORS INSTITUTE SEMINAR IN CREATIVE WRITING 1 Unit**

**Formerly: CRWR 34**

**Prerequisite:** Honors Institute participant; eligibility for ENGL 1A.  
**1 hour lecture.**

A seminar in directed readings, discussions and projects in creative writing. Specific topics to be determined by the instructor. [Transferability: CSU; UC credit may be granted after transfer and upon portfolio review.]

**CRWR 36C SCREENPLAY WRITING 4 Units**

**Advisory:** Not open to students with credit in DRAM 5C, F TV 5C or VART 5B.

**May be taken 6 times for credit.**  
**4 hours lecture.**

Intermediate writing for television and film. Examination and practice of story structure, character development, dialogue crafting, with an emphasis on understanding the visual nature and unique requirements of writing for television and film. [Transferability: CSU; UC approval is pending.]

**CRWR 39A INTRODUCTION TO SHORT FICTION WRITING 5 Units**

**Advisory:** Eligibility for ENGL 1A.  
**May be taken 2 times for credit.**  
**5 hours lecture.**

Explicit instruction and practice in writing a variety of short fiction forms, including short narratives, flash fiction, and traditional short stories. Assignments include reading, analyzing and responding to published works and student work, as well as writing original work. Lecture and workshop. Analysis of public readings and/or interviews with writers. [Foothill GE: Humanities; Transferability: UC/CSU]

**CRWR 39B ADVANCED SHORT FICTION WRITING 5 Units**

**Prerequisite:** CRWR 39A.

**May be taken 2 times for credit.**  
**5 hours lecture.**

Explicit instruction and practice in writing a variety of short fiction forms, including short narratives, flash fiction, and traditional short stories. Assignments include reading, analyzing and responding to published works and student work, as well as writing original work. Class presentations and workshop leadership. Lecture and workshop. Analysis of public readings and/or interviews with writers. [Foothill GE: Humanities; Transferability: UC/CSU]

**CRWR 40 INTRODUCTION TO WRITING THE NOVEL 5 Units**

**Advisory:** Eligibility for ENGL 1A.

**May be taken 4 times for credit.**  
**5 hours lecture, 1 hour laboratory.**

Explicit instruction and practice in writing sequenced chapters for a novella or a novel. Assignments include reading, analyzing and responding to published works and student work, as well as writing original work. Lecture and workshop. Analysis of public readings and/or interviews with writers. [Foothill GE: Humanities; Transferability: UC/CSU]

**CRWR 41A POETRY WRITING 5 Units**

**Advisory:** Eligibility for ENGL 1A.

**May be taken 2 times for credit.**  
**5 hours lecture, 1 hour laboratory.**

Explicit instruction and practice in writing poetry. Assignments include reading, analyzing and responding to published and student work and writing original work. Lecture and workshop. [Foothill GE: Humanities; Transferability: UC/CSU]

**CRWR 41B      ADVANCED POETRY WRITING      5 Units**  
**Prerequisite:** CRWR 41A.  
**May be taken 2 times for credit.**  
**5 hours lecture, 1 hour laboratory.**  
 Explicit instruction and practice in writing poetry. Assignments include reading, analyzing and responding to published and student work and writing original work. Class presentations and workshop leadership. Lecture and workshop. [Foothill GE: Humanities; Transferability: UC/CSU]

**CRWR 60      MEMOIR WRITING      5 Units**  
**Advisory:** Eligibility for ENGL 1A.  
**May be taken 4 times for credit.**  
**5 hours lecture.**  
 Explicit instruction and practice in writing memoir and autobiography. Assignments include reading, analyzing and responding to published and student work and writing original work. Analysis of public readings and/or interviews with writers. Lecture and workshop. [Foothill GE: Humanities; Transferability: CSU]

## DANCE

**Physical Education      (650) 949-7741**  
**www.foothill.edu/dance**

**DANC 1A      FUNDAMENTALS OF BALLET I      1 Unit**  
**May be taken 6 times for credit.**  
**3 hours laboratory.**  
 Introduction to the elementary fundamentals of ballet technique and training. Includes the basic vocabulary and practice of barre and center floor exercises. [Foothill GE: Lifelong Understanding; Transferability: UC/CSU]

**DANC 1B      FUNDAMENTALS OF BALLET II      1 Unit**  
**May be taken 6 times for credit.**  
**3 hours laboratory.**  
 Continuation into the intermediate/advanced fundamentals of ballet technique and training. Includes the intermediate/advanced vocabulary and practice of barre and center floor exercises. [Foothill GE: Lifelong Understanding; Transferability: UC/CSU]

**DANC 2      BEGINNING MODERN DANCE      1 Unit**  
**Formerly: H P 32**  
**May be taken 6 times for credit.**  
**3 hours laboratory.**  
 This course is designed to develop the student's ability to integrate expressive body movement in a creative dance form. Fundamental modern dance locomotor and axial movement are presented and practiced in class. [Foothill GE: Lifelong Understanding; Transferability: UC/CSU]

**DANC 3A      BEGINNING JAZZ DANCE      1 Unit**  
**Formerly: H P 33**  
**May be taken 6 times for credit.**  
**3 hours laboratory.**  
 Introduction to the fundamental technique of jazz dance. Emphasis is placed on class participation so that students may develop their knowledge and understanding of the basic principles of jazz dancing, including warm-up, stretch, isolations and choreography. [Foothill GE: Lifelong Understanding; Transferability: UC/CSU]

**DANC 3B      INTERMEDIATE JAZZ DANCE      1 Unit**  
**Formerly: H P 33A**  
**May be taken 6 times for credit.**  
**3 hours laboratory.**  
 Designed to give students an opportunity to practice and perfect intermediate jazz techniques. Emphasis on techniques presented as well as information on historical and stylistic perspectives of this dance form. [Foothill GE: Lifelong Understanding; Transferability: UC/CSU]

**DANC 4      BALLROOM & SOCIAL DANCE      1 Unit**  
**May be taken 6 times for credit.**  
**3 hours laboratory.**  
 Introduction to ballroom and social dance techniques. Instruction and practice in Swing, Cha-Cha, Waltz, Fox Trot, Rhumba and Tango dances. [Foothill GE: Lifelong Understanding; Transferability: UC/CSU]

**DANC 5      WORLD DANCE      1 Unit**  
**Formerly: H P 47D**  
**May be taken 6 times for credit.**  
**3 hours laboratory.**  
 Introduction to the history and origins of multicultural dance forms. Students will learn the basic steps, combinations, and finished dances of many traditional world dance forms. [Foothill GE: Lifelong Understanding; Transferability: UC/CSU]

**DANC 6      BEGINNING COUNTRY-WESTERN LINE DANCING      1 Unit**  
**Formerly: H P 47**  
**May be taken 6 times for credit.**  
**3 hours laboratory.**  
 Introduction to the fundamental skills for Country and Western Line Dancing. Students will participate in a variety of dance steps designed to develop the coordination, skill, choreography and timing necessary for social line dancing. [Foothill GE: Lifelong Understanding; Transferability: UC/CSU]

**DANC 7      CHOREOGRAPHY      1 Unit**  
**Formerly: H P 34**  
**May be taken 6 times for credit.**  
**3 hours laboratory.**  
 Exploration of the basic principles and theories of choreography and composition and the tools for defining the creative process. [Foothill GE: Lifelong Understanding; Transferability: UC/CSU]

**DANC 8      DANCE PRODUCTION: REHEARSAL & PERFORMANCE      2 Units**  
**Formerly: H P 52**  
**May be taken 6 times for credit.**  
**6 hours laboratory.**  
 Foothill repertory and touring dance company. Students gain professional- and advance-level technique training in various dance disciplines and work with master guest artists. [Transferability: UC/CSU]

**DANC 9      MOVEMENT FOR ACTORS      2 Units**  
**Formerly: H P 72**  
**May be taken 6 times for credit.**  
**4 hours lecture-laboratory.**  
 Principles and practice of body awareness and movement for actors focusing on movement derived from jazz, musical theater, contemporary dance. Emphasis on alignment and centering, concentration and relaxation, development of the kinesthetic sense and exploration of the body/mind connection. [Transferability: UC/CSU]

**DANC 10      TOPICS IN DANCE HISTORY      4 Units**  
**Formerly: H P 70**  
**4 hours lecture.**  
 A comprehensive study of the evolution of theatrical dance in the western world from the 16<sup>th</sup> century through the present day. Includes the eras of French court ballet, ballet d'action, romantic and classical ballet, modern, post-modern and contemporary dance. Examines topics in dance as an art form, including history, traditions, trends; outstanding artists and works; practice in observing and understanding dance in a historical and cultural context. Analysis of dance as an expression of social order, power, classical art, a medium of cultural fusion, and as an expression of individual artists. [Transferability: UC/CSU]

**DANC 11 Foothill Repertory Dance Company** 3 Units  
**Formerly: HP 40P**  
**Advisory: DANC 11 and PHED 34G are interchangeable.**  
**May be taken 6 times for credit.**  
**15 hours lecture-laboratory.**  
 Supervised participation in scheduled productions of the dance department, in cast or crew. A laboratory course for the resident and touring company of the college, including instruction on the how to of a full-scale theatrical production for public performance. [Transferability: UC/CSU]

**D A 53B DENTAL RADIOGRAPHY** 2 Units  
**Prerequisite: D A 53A.**  
**1 hour lecture, 3 hours laboratory.**  
 Intraoral techniques continued; evaluation of film quality, recognition of anomalies and variations in tissue density, specialized procedures for the pedodontic, endodontic, and edentulous patient, forensic and legal considerations, and principles of panoramic and cephalometric film. [Transferability: CSU]

**D A 53C DENTAL RADIOGRAPHY** 1 Unit  
**Prerequisite: D A 53A and 53B.**  
**3 hours laboratory.**  
 Intraoral techniques and film evaluation continued; film interpretation for dental charting; introduction to short cone and bisecting angle radiographic techniques. [Transferability: CSU]

**D A 56 DENTAL HEALTH EDUCATION** 1 Unit  
**Prerequisite: Admission to Dental Assisting Program.**  
**1 hour lecture, 1 hour field study.**  
 Principles of patient motivation and education; etiology, process and prevention of dental decay and periodontal disease; design and management of a plaque control program, brushing, flossing, adjunctive aids; dietary counseling. [Transferability: CSU]

**D A 57 OFFICE EMERGENCY PROCEDURES** 2 Units  
**Prerequisite: Admission to Dental Assisting Program.**  
**2 hours lecture.**  
 Overview of psychological or common medical problems which could lead to an emergency situation in a dental office. Emphasis placed on prevention, management, and legal issues of an emergency response. [Transferability: CSU]

**D A 58 SPECIALITY PRACTICE PROCEDURES** 1 Unit  
**Advisory: Admission to the Dental Assisting Program.**  
**1 hour lecture.**  
 Familiarization with the scope of practice in both general and specialty dental office settings. The emphasis of this survey class will be on the role of the auxiliary personnel in each of the different types of dental practices. [Transferability: CSU]

**D A 60A DENTAL OFFICE BUSINESS PRACTICES** 2 Units  
**Prerequisite: Admission to Dental Assisting Program.**  
**2 hours lecture, 1 hour laboratory.**  
 Introduction to appointment management, telephone techniques, dental and office records; correspondence, billing procedures, treatment plan and case presentation; bookkeeping and accounting procedures, and the use of computers in the dental office. [Transferability: CSU]

**D A 60B DENTAL OFFICE BUSINESS PRACTICES** 3 Units  
**Prerequisite: Admission to Dental Assisting Program.**  
**3 hours lecture, 1 hour laboratory.**  
 Introduction to purchasing, inventory and cost control; banking, payroll and tax procedures; resume writing and interviewing techniques. Includes billing and insurance procedures, collection of accounts, treatment plans and case presentations, bookkeeping and accounting procedures. Instruction in both manual and computer applications. [Transferability: CSU]

**D A 62A DENTAL SCIENCES** 2 Units  
**Prerequisite: Admission to Dental Assisting Program.**  
**2 hours lecture, 1 hour laboratory.**  
 Discussion of anatomy and morphology of the teeth, the eruption sequence and process; normal occlusion, development and class of malocclusions; anatomy of the skull, arteries and veins, musculature and nervous structures of the head and neck. [Transferability: CSU]

**DENTAL ASSISTING**

**Biological & Health Sciences (650) 949-7351**  
[www.foothill.edu/bio/programs/dental/](http://www.foothill.edu/bio/programs/dental/)

**D A 50 ORIENTATION TO DENTAL ASSISTING** 2.5 Units  
**Prerequisite: Admission to Dental Assisting Program.**  
**2.5 hours lecture, 1 hour collaborative learning.**  
 Preview of dental practice, including specialties, history, professional and legal responsibilities and the role of the dental auxiliary; dental forms, record keeping, patient communication and office personnel relations. [Transferability: CSU]

**D A 51A INTRODUCTION TO CHAIRSIDE DENTAL ASSISTING** 5.5 Units  
**Prerequisite: Admission to Dental Assisting Program.**  
**2.5 hours lecture, 1 hour seminar, 9 hours laboratory, 8 hours field experience**  
 Introduction to chairside assisting; use and care of dental equipment, patient management, instrument identification; overview of common dental procedures such as composite, amalgam, partials, dentures, root canals, crown and bridge appointments; manipulation of dental materials commonly prepared or used by the dental assistant including temporary dressings, Impression materials, cement bases and liners, topical agents, composites, resins and amalgams. [Transferability: CSU]

**D A 51B INTERMEDIATE CLINICAL DENTAL ASSISTING** 2 Units  
**Prerequisite: Admission to Dental Assisting Program.**  
**1.5 hours lecture, 2 hours laboratory.**  
 Continuation of techniques introduced in D A 51A; periodontal and oral surgery procedures. Registered Dental Assistant orthodontic functions, fabrication of bleaching splints, dental sealants. [Transferability: CSU]

**D A 51C ADVANCED DENTAL ASSISTING SKILLS** 3 Units  
**Prerequisite: Admission to Dental Assisting Program.**  
**2.5 hours lecture, 4 hours laboratory.**  
 Continuation of techniques introduced in D A 51A and 51B to include pulp vitality testing, fluoride administration, intraoral/extraoral exam, polishing removable partial and full dentures, dental implants, and pedodontic procedures. Theory and practice of coronal polishing. [Transferability: CSU]

**D A 53A INTRODUCTION TO RADIOGRAPHY** 3 Units  
**Prerequisite: Admission to Dental Assisting Program.**  
**2 hours lecture, 3 hours laboratory.**  
 Production, characteristics, and biologic effects of radiation; function, components, and operation of the X-ray unit; radiation protection and monitoring; chemistry and techniques associated with X-ray film and developing solutions. Review of anatomic landmarks, introduction to intraoral long-cone radiographic techniques in the bitewing, periapical and occlusal surveys. [Transferability: CSU]

**D A 62B DENTAL SCIENCES 2 Units**

**Prerequisite:** Admission to Dental Assisting Program.  
**2 hours lecture.**

An overview of the embryologic development of the structures and tissues of the head, neck, teeth and oral cavity, histology of the hard and soft tissues of the oral cavity. Developmental and structural defects involving the oral cavity and the teeth. Periodontal diseases, caries process and oral pathology. [Transferability: CSU]

**D A 62C DENTAL SCIENCES 2 Units**

**Prerequisite:** Admission to Dental Assisting Program.  
**2 hours lecture.**

Microbiologic and nutritional conditions related to dentistry; etiology, symptoms, transmission and control of infective and contagious diseases, nutritional physiology, and counseling, effect of nutrition on general dental health. Pharmacology of local anesthetic solutions, analgesic gases, and psychosedatives, and antibiotic agents. Use of nitrous oxide equipment. [Transferability: CSU]

**D A 63 SPECIAL PATIENT POPULATIONS 1 Unit**

**1 hour lecture**  
Discussion and development of techniques and/or equipment needed to meet the needs of special patient populations, including the physically and/or emotionally limited. [Transferability: CSU]

**D A 71 INFECTION CONTROL & HAZARDOUS WASTE MANAGEMENT 1.5 Units**

**Prerequisite:** Admission to Dental Assisting Program.  
**1.5 hour lecture, 1 hour field study.**

Introduction to infectious diseases important to dentistry. Instruction on disinfection, instrument decontamination, sterilization procedures and tray set-up preparation. Regulatory compliance agencies such as OSHA, CDC and ADA recommendations. Hazardous materials management and waste management. Protocols and emergency procedures for hazardous and biohazardous waste or materials. [Transferability: CSU]

**D A 73 DENTAL ASSISTING SUPERVISED CLINIC 3 Units**

**Prerequisite:** D A 51A.  
**16 hours clinic, 2 hours field study.**

Continuation of techniques introduced in D A 51A; supervised clinical experience in externship environment, chairside dental assisting in general practice and specialty clinics at the UCSF School of Dentistry. [Transferability: CSU]

**D A 74 DENTAL ASSISTING CLINICAL PRACTICE 3 Units**

**Prerequisite:** Admission to Dental Assisting Program.  
**17 hours clinic, 2 hours field study.**

Continuation of techniques introduced in D A 51A, 51B and 73; supervised clinical experience in externship environment; advanced and specialty chair side procedures. [Transferability: CSU]

**D A 85 RDA REVIEW 1 Unit**

**Prerequisite:** D A 51A and 51B.  
**May be taken 3 times for credit.**

**1 hour lecture, 3 hours laboratory, 2 hours field study.**  
Information necessary for completion of requirements for national certification and Registered Dental Assisting (RDA) licensure in the State of California. Review of chairside dental assisting procedures to prepare for written and practical examinations. Sizing of stainless steel crowns. Fabrication of temporary crowns and Class II temporary restorations. [Transferability: CSU]

**D A 88 PIT & FISSURE SEALANTS 1.5 Units**

**Prerequisite:** Admission to Dental Assisting Program.  
**1 hour lecture, 2 hours laboratory.**

Theory and practice for placement of sealants by the Registered Dental Assistant to prevent decay in the pit and fissure areas of the dentition. [Transferability: CSU]

**DENTAL HYGIENE**

**Biological & Health Sciences (650) 949-7538**  
[www.foothill.edu/bio/programs/dentalh/](http://www.foothill.edu/bio/programs/dentalh/)

**D H 50 ORIENTATION TO DENTAL HYGIENE 1 Unit**

**Prerequisite:** Admission to Dental Hygiene Program.  
**1.5 hours lecture-laboratory.**

Overview of dental hygiene as a career. Dental terminology, introduction to instrumentation skills, including: modified pen grasp, fulcrums, adaptation, insertion and activation of the explorer. The course will involve some online work, observation in clinic, and instrumentation on typodonts. Strategies & skills for student success in the dental hygiene program. [Transferability: CSU]

**D H 52A ORAL BIOLOGY 3 Units**

**Prerequisite:** Admission to Dental Hygiene Program.  
**2 hours lecture, 2 hours laboratory.**

Discussion of the anatomy and identification of the teeth, the eruption sequence, normal occlusion, and classification of occlusion. Anatomy of the skull, arteries, veins, and lymphatics, musculature and nervous structures of the head and neck. [Transferability: CSU]

**D H 52B ORAL BIOLOGY 3 Units**

**Prerequisite:** D H 52A.  
**2 hours lecture, 2 hours laboratory.**

The embryologic development of the structures and tissues of the head, neck, teeth and oral cavity; histology of the hard and soft tissues of the oral cavity. Anatomy of the tooth crown, root and pulp; development and structural defects involving the oral cavity and the teeth. The normal periodontal tissues, oral mucous membranes, and salivary glands. [Transferability: CSU]

**D H 53 ASSESSMENT PROCEDURES IN THE DENTAL HYGIENE PROCESS 4 Units**

**Prerequisite:** Admission to Dental Hygiene Program.  
**4 hours lecture.**

The first in a 3 course series in dental hygiene theory and practice. This course will focus on the principles of assessment techniques as the first phase of the dental hygiene process of care. The rationale for collection of assessment data, and associated clinical procedures will be discussed. Introduces infectious diseases important to dentistry, hazardous materials management, and waste management, and rules of regulatory agencies (OSHA, CDC and ADA). [Transferability: CSU]

**D H 54 PRE-CLINICAL DENTAL HYGIENE 4 Units**

**Prerequisite:** Admission to Dental Hygiene Program.  
**1 hour lecture, 9 hours laboratory, 3 hours field experience.**

The first in a seven-course series in dental hygiene clinical practices. This course integrates the scientific and clinical principles underlying the practice of dental hygiene. Clinical procedures and techniques for patient assessment, including prevention of disease transmission, health history, extra-intraoral examination, gingival evaluation and periodontal examination are taught in a pre-clinical setting. Students will work on typodonts and classmates. The course requires evaluation of clinical performance through demonstration of skill acquisition and level of competency. Field experiences reinforce and amplify the knowledge and skills needed to perform dental hygiene procedures in the clinical setting. [Transferability: CSU]

**D H 55A FUNDAMENTALS OF PATHOLOGY I 2 Units**

**Prerequisite:** D H 52B.  
**2 hours lecture.**

Introduction to general pathology and specific pathologic processes, repair, healing, and regressive changes. Social significance of pathology. [Transferability: CSU]

**D H 55B FUNDAMENTALS OF PATHOLOGY II 2 Units**

**Prerequisite:** DH 55A.  
**2 hours lecture.**

Pathology of the head, neck, and oral structures. Developmental conditions caries, diseases of bacterial and viral origin, neoplasms of the oral cavity. [Transferability: CSU]

<b>D H 56</b>	<b>APPLIED PHARMACOLOGY IN DENTISTRY</b>	<b>2 Units</b>	<b>D H 60D</b>	<b>DENTAL RADIOGRAPHY</b>	<b>.5 Unit</b>
<b>Prerequisite:</b> BIOL 58, D H 61A or licensed dental hygienist or dentist. <b>2 hours lecture.</b> This course is a study of drugs by groups with special emphasis on those drugs and medications used in dentistry. The physical and chemical properties, dosage and therapeutic effects of each group of drug will be discussed. The dental hygiene implications for patients taking different drugs will be emphasized. [Transferability: CSU]			<b>Prerequisite:</b> D H 60C. <b>1 hour lecture.</b> Production characteristics and biologic effects of radiation, function, components, and operation of the X-ray unit. Radiation protection and monitoring of personnel. Chemistry and techniques associated with X-ray film and developing solutions. Review of anatomic landmarks and principles of shadow casting. [Transferability: CSU]		
<b>D H 57A</b>	<b>PERIODONTICS</b>	<b>2 Units</b>	<b>D H 60E</b>	<b>DENTAL RADIOGRAPHY</b>	<b>.5 Unit</b>
<b>Prerequisite:</b> D H 52B. <b>2 hours lecture.</b> Examination of anatomy and physiology of periodontium. Correlation of basic sciences with the clinical aspects of periodontal diseases. Etiology and pathogenesis of periodontal diseases. [Transferability: CSU]			<b>Prerequisite:</b> D H 60D. <b>1 hour lecture-laboratory.</b> Continuation of film exposure, processing and mounting; group-individual evaluation and interpretations of film. [Transferability: CSU]		
<b>D H 57B</b>	<b>PERIODONTICS</b>	<b>2 Units</b>	<b>D H 61A</b>	<b>CLINICAL TECHNIQUE</b>	<b>6 Units</b>
<b>Prerequisite:</b> D H 57A. <b>2 hours lecture.</b> Fundamental principles of periodontology, including normal periodontium, etiology and classification of periodontal disease; relationship of dental deposits to periodontal diseases. Development of periodontal pocket and abscess. Process of bone loss. [Transferability: CSU]			<b>Prerequisite:</b> DH 52A and 54 or completion of a dental hygiene program with equivalent courses. <b>3 hours lecture, 9 hours laboratory, 3 hours field experience.</b> This course is a continuation of dental hygiene clinical practice and instrumentation techniques including: periodontal examination, scaling and root planing, sharpening. Adjunctive dental hygiene procedures taught include: fluorides, selective coronal polishing. Clinical activities utilize typodonts and student partners. The course requires evaluation of clinical performance through demonstration. Supportive labs and observation to reinforce and amplify the knowledge and skills needed to perform dental hygiene procedures in the clinical setting for D H 61A. [Transferability: CSU]		
<b>D H 57C</b>	<b>PERIODONTICS</b>	<b>2 Units</b>	<b>D H 61B</b>	<b>INTRODUCTION TO CLINIC</b>	<b>4 Units</b>
<b>Prerequisite:</b> D H 57B. <b>2 hours lecture.</b> The purpose of this course is to examine the role of the dental hygienist in nonsurgical periodontal therapy, periodontal surgical therapy, and periodontal maintenance therapy. A periodontal competency report both oral and written is required. [Transferability: CSU]			<b>Prerequisite:</b> Completion of D H 61A and 52B with grade of "C" or higher; possession of a current CPR certificate. <b>3 hours lecture, 6 hours clinic, 3 hours field experience.</b> Continuation of clinical dental hygiene practice. Assessing, planning, and implementing dental hygiene care on patients in a clinical setting. Dental hygiene care for patients with special needs. Development of progress in clinical performance with each successive academic period. [Transferability: CSU]		
<b>D H 59</b>	<b>SURVEY OF DENTISTRY</b>	<b>1 Unit</b>	<b>D H 62A</b>	<b>CLINICAL DENTAL HYGIENE</b>	<b>3.5 Units</b>
<b>Prerequisite:</b> Admission to the Dental Hygiene Program. <b>1 hour lecture, 1 hour field experience.</b> This course is an introduction to dental procedures in the specialty office with emphasis on dental auxiliary duties and collaboration with dental specialties for comprehensive patient/client care. Legal scope of practice for the dental hygienist and appropriate referral protocol is emphasized. [Transferability: CSU]			<b>Prerequisite:</b> D H 61B. <b>1 hour lecture, 9 hours clinic, 1 hour field experience.</b> Continuation of dental hygiene clinical practice. Assessing, planning, implementing, and evaluating dental hygiene care on patients in a clinical setting. Development of progress in clinical performance with each successive academic period. [Transferability: CSU]		
<b>D H 60A</b>	<b>INTRODUCTION TO DENTAL RADIOGRAPHY</b>	<b>2 Units</b>	<b>D H 62B</b>	<b>CLINICAL DENTAL HYGIENE</b>	<b>5 Units</b>
<b>Prerequisite:</b> Admission to Dental Hygiene Program. <b>2 hours lecture.</b> Production characteristics and biologic effects of radiation, function, components, and operation of the X-ray unit. Radiation protection and monitoring of personnel. Chemistry and techniques associated with X-ray film and developing solutions. Review of anatomic landmarks and principles of shadow casting. [Transferability: CSU]			<b>Prerequisite:</b> D H 57A and 61A. <b>1 hour lecture, 15 hours clinic, 3 hours field experience.</b> Continuation of clinical dental hygiene practice. Assessing, planning, implementing and evaluation dental hygiene care on patients in a clinical setting. Adjunctive clinical procedures to be performed include: dental charting, desensitization of hypersensitive teeth, ultrasonic scaling, amalgam finishing and administration of local anesthetics. [Transferability: CSU]		
<b>D H 60B</b>	<b>DENTAL RADIOGRAPHY</b>	<b>1 Unit</b>	<b>D H 62C</b>	<b>CLINICAL DENTAL HYGIENE</b>	<b>5 Units</b>
<b>Prerequisite:</b> D H 60A. <b>3 hours laboratory.</b> Introduction to intraoral techniques in dental radiography, including film exposure, processing, and mounting. Group and individual evaluation and interpretation of films exposed on mannequin and lab partner. Continuation of exposure of dental radiographs on clinical patients. [Transferability: CSU]			<b>Prerequisite:</b> D H 62B. <b>1 hour lecture, 15 hours clinic, 3 hours field experience.</b> Continuation of dental hygiene clinical practice. Assessing, planning, implementing and evaluating dental hygiene care on patients in a clinical setting. Adjunctive clinical procedures to be performed include: dental charting, desensitization of hypersensitive teeth, ultrasonic scaling, soft tissue curettage, and administration of local anesthetic. [Transferability: CSU]		
<b>D H 60C</b>	<b>DENTAL RADIOGRAPHY</b>	<b>.5 Unit</b>			
<b>Prerequisite:</b> D H 60B. <b>1 hour lecture-laboratory.</b> Practice of dental radiographic techniques on clinic patients, including the exposure, processing, and mounting of films. Continuation of group and individual evaluation and interpretation of films exposed in clinic. [Transferability: CSU]					

<b>D H 62D</b>	<b>CLINICAL DENTAL HYGIENE</b>	<b>5 Units</b>	<b>D H 71</b>	<b>OFFICE EMERGENCY PROCEDURES</b>	<b>2 Units</b>
<b>Prerequisite:</b> D H 62C. <b>1 hour lecture, 15 hours clinic, 3 hours field experience.</b> Continuation of clinical dental hygiene practice. Continuation of on- and off-campus clinical experiences. Assessing, planning, implementing and evaluating dental hygiene care on patients in a clinical setting. Designed to complete the development of competencies demanded of the hygienist entering the field. [Transferability: CSU]			<b>Prerequisite:</b> Admission to Dental Hygiene Program. <b>2 hours lecture.</b> This course is a study of common medical emergencies that may occur during delivery of dental care. Emphasis is placed on methods to prevent emergencies from occurring and procedures to manage emergency situations. Ethical and legal aspects in assisting during emergencies are also discussed. [Transferability: CSU]		
<b>D H 63C</b>	<b>COMMUNITY DENTAL HEALTH</b>	<b>3 Units</b>	<b>D H 72</b>	<b>DENTAL MATERIALS</b>	<b>3 Units</b>
<b>Prerequisite:</b> D H 73. <b>2 hours lecture, 2 hours field experience.</b> Introduction into community dental health problems and school dental health programs; development and implementation of a community dental health program. [Transferability: CSU]			<b>Prerequisite:</b> Admission to Dental Hygiene Program. <b>2 hours lecture, 3 hours laboratory.</b> Properties of dental materials, characteristics and manipulation of impression materials, gypsum products, investment, cements, resins, metallic and non-metallic restorative materials. [Transferability: CSU]		
<b>D H 63D</b>	<b>COMMUNITY DENTAL HEALTH II</b>	<b>3 Units</b>	<b>D H 73</b>	<b>DENTAL HEALTH EDUCATION</b>	<b>2 Units</b>
<b>Prerequisite:</b> D H 63C. <b>2 hours lecture, 3 hours laboratory, 3 hours research project.</b> This course is a continuation of community dental health from fall quarter. The emphasis of this course in on the steps to developing community dental health programs, including health promotion programs. Local, state, and federal departments of public health services, types of fluoridation, and school-based dental health programs and screenings will be evaluated. The evidence-based decision making process will be applied to the dental public health setting. [Transferability: CSU]			<b>Prerequisite:</b> Admission to the Dental Hygiene Program. <b>Advisory:</b> PSYC 1. <b>2 hours lecture.</b> This course provides the fundamentals of patient education to include: communication theory, development of client/clinician relationships, mechanical plaque removal techniques, antimicrobial therapies, nutritional counseling for dental hygiene, smoking cessation counseling, patient motivation with particular attention to psychological, social, and economic, cultural & life stage factors. There is an emphasis on prevention of dental diseases through effective patient education. Preventive dental products will be reviewed and analyzed. [Transferability: CSU]		
<b>D H 64</b>	<b>ETHICS, LAW &amp; DENTAL OFFICE PRACTICES</b>	<b>2 Units</b>	<b>D H 75A</b>	<b>CLINICAL DENTAL HYGIENE THEORY</b>	<b>1.5 Units</b>
<b>2 hours lecture.</b> This course covers the subjects of ethics, jurisprudence and practice aspects of dental hygiene practice. Emphasis will be placed on the challenges of providing ethical care in the clinical setting. The laws and regulations effecting the practice of dental hygiene will be analyzed and the scope of practice of dental professionals as outlined by the California Dental Practice Act will be examined. [Transferability: CSU]			<b>Prerequisite:</b> Admission to Dental Hygiene Program. <b>1 hour lecture, 3 hours laboratory.</b> Discussion and demonstration of supplemental dental hygiene functions: digital intraoral photography, dental hygiene instrumentation, ultrasonic and microultrasonic scaling techniques. Supportive course to reinforce and amplify the knowledge and skills needed to perform dental hygiene procedures in the clinical setting for D H 62B. [Transferability: CSU]		
<b>D H 65</b>	<b>CLINICAL LOCAL ANESTHESIA</b>	<b>2.5 Units</b>	<b>D H 75B</b>	<b>CLINICAL DENTAL HYGIENE THEORY</b>	<b>1.5 Units</b>
<b>Prerequisite:</b> D H 54, or completion of a ADA approved dental hygiene program ; possession of a current CPR certificate. <b>2 hours lecture, 1.5 hours laboratory.</b> Review of pharmacology, anatomy, physiology, and emergency procedures associated with local anesthetic procedures. Preparation for and administration of conduction and infiltration anesthesia in dental procedures. Laboratory and clinical experience in administration. [Transferability: CSU]			<b>Prerequisite:</b> Admission to Dental Hygiene Program. <b>1 hour lecture, 3 hours laboratory.</b> Discussion and demonstration of supplemental dental hygiene functions, amalgam overhang removal, orthodontic therapy and dental hygiene, advanced instrumentation technique, air polishing, advanced local anesthesia delivery techniques, implants in dentistry and new technology in dental hygiene. Supportive course to reinforce and amplify the knowledge and skills needed to perform dental hygiene procedures in the clinical setting for D H 62C. [Transferability: CSU]		
<b>D H 66</b>	<b>SOFT TISSUE CURETTAGE</b>	<b>1 Unit</b>	<b>D H 75C</b>	<b>CLINICAL DENTAL HYGIENE THEORY</b>	<b>1.5 Units</b>
<b>Prerequisite:</b> D H 65. <b>1 hour lecture.</b> Training for the dental hygiene student or dental hygienist in performing soft tissue curettage. [Transferability: CSU]			<b>Prerequisite:</b> Admission to Dental Hygiene Program. <b>1 hour lecture, 3 hours laboratory.</b> This course is designed to aid the student in identifying an appropriate patient for the California State Board Exam for Dental Hygienists and in identifying and anticipating methods which will influence a successful state board experience. Supportive course to reinforce and amplify the knowledge and skills needed to perform dental hygiene procedures. [Transferability: CSU]		
<b>D H 67</b>	<b>NITROUS OXIDE/ OXYGEN ANALGESIA</b>	<b>1 Unit</b>	<b>D H 86</b>	<b>CALIFORNIA STATE BOARD PREPARATION</b>	<b>.5 Unit</b>
<b>2 hours lecture-laboratory.</b> Training for the dental hygiene student or dental hygienist in performing nitrous oxide/oxygen analgesia. [Transferability: CSU]			<b>Prerequisite:</b> Completion of D H 62D or equivalent. <b>Advisory:</b> Pass/No Pass. <b>May be taken 2 times for credit.</b> <b>1.5 hours lecture-laboratory.</b> This course is designed to aid the student in identifying an appropriate patient for the California State Board Exam for Dental Hygienists and in identifying and anticipating methods which will influence a successful state board experience. [Transferability: CSU]		
<b>D H 68A</b>	<b>RADIOGRAPHIC INTERPRETATION</b>	<b>2 Units</b>			
<b>Prerequisite:</b> D H 60A. <b>2 hours lecture.</b> Continued experiences in the interpretation of intraoral and panoramic radiographs, including identification of normal and non-normal structures, radiographic considerations of bone and teeth and signs of pathology. Identification and interpretation of radiographic caries, periodontal disease, trauma, and dental anomalies. Introduction to digital radiography. [Transferability: CSU]					

**D H 190 DIRECTED STUDY .5 Unit**  
**D H 190X 1 Unit**  
**D H 190Y 1.5 Units**  
**D H 190Z 2 Units**

**Prerequisite:** Admission to the Dental Hygiene Program.  
**Advisory:** Pass/No Pass.  
 Any combination of D H 190–190Z may be taken 6 times for credit, however, no single course may be taken more than 6 times for credit.  
 1.5 hours laboratory for each .5 unit of credit.  
 Enrichment activities to facilitate competency in dental hygiene skills. May include off-campus clinical rotations, community service, patient case study seminars, and attendance at professional dental hygiene meetings.

**D H 200L INTRODUCTION TO DENTAL HYGIENE 1.5 Units**  
**3 hours lecture-laboratory.**  
 Introduction to the profession of dental hygiene. Emphasis on dental terminology, communication skills, licensure requirements and clinical and lab techniques related to dental hygiene clinical practice.

**DIAGNOSTIC MEDICAL SONOGRAPHY**

**Biological & Health Sciences (650) 949-7538**  
[www.foothill.edu/bio/programs/ultra/](http://www.foothill.edu/bio/programs/ultra/)

**DMS 50A DIAGNOSTIC MEDICAL SONOGRAPHY PRINCIPLES & PROTOCOLS 4 Units**

**Prerequisite:** Admission to Diagnostic Medical Sonography Program.  
**4 hours lecture.**  
 An intensive course about fundamentals of ultrasound principles, protocols, and scanning involving the major abdominal organ structures, gynecology, obstetrics, and vessels. Sonographic terminology, orientation and descriptions of normal and abnormal structures. It is assumed the student has a thorough knowledge of gross and sectional anatomy. [Transferability: CSU]

**DMS 50B SONOGRAPHY & PATIENT CARE 2 Units**  
**Prerequisite:** Admission to Diagnostic Medical Sonography Program.  
**2 hours lecture.**

This course is designed to define the student sonographer's role on the medical team. It prepares the student to enter the clinical environment including instruction in sonographer safety and ergonomics. Legal, ethical, legislative and regulatory issues including scope of practice and standards. Patient care techniques, clinical assessment, diagnosis and treatment. Interacting with cultural, age, and the special needs populations. Professionalism, competency-based education and leadership. [Transferability: CSU]

**DMS 51A SECTIONAL ANATOMY 3 Units**  
**Prerequisite:** BIOL 40A, B, C or equivalent; some background with medical terminology or equivalent or health care professional or student of allied health occupation.  
**3 hours lecture.**

Sectional human anatomy for health care professionals, students of Allied Health and nursing professions. Emphasis on transverse, coronal and sagittal planes and correlation to other imaging modalities. Discussions include pathology-related alterations to sectional anatomy images. [Transferability: CSU]

**DMS 52A PHYSICAL PRINCIPLES OF DIAGNOSTIC MEDICAL SONOGRAPHY I 2 Units**

**Prerequisite:** Admission to the Diagnostic Medical Sonography Program.  
**2 hours lecture.**  
 Principles of diagnostic ultrasound, wave characteristics, artifacts, propagation, acoustic variables, and review of mathematical skills. [Transferability: CSU]

**DMS 52B PHYSICAL PRINCIPLES OF DIAGNOSTIC MEDICAL SONOGRAPHY II 2 Units**

**Prerequisite:** DMS 52A.  
**2 hours lecture.**  
 A continuation of Physical Principles A with an emphasis on transducers, pulsed waves, real-time imaging and image display. [Transferability: CSU]

**DMS 52C PHYSICAL PRINCIPLES OF DIAGNOSTIC MEDICAL SONOGRAPHY III 2 Units**

**Prerequisite:** DMS 52B.  
**2 hours lecture.**  
 A continuation of Physical Principles B with an emphasis on advanced principles in medical ultrasound instrumentation, harmonic imaging, volume rendering, hemodynamics, use of doppler imaging and sonographic quality control procedures. Preparation for national examinations. [Transferability: CSU]

**DMS 53A DIAGNOSTIC MEDICAL SONOGRAPHY I 2 Units**

**Prerequisite:** Admission to the Diagnostic Medical Sonography Program.  
**2 hours lecture, 1 hour ETUDES-NG internet skills.**  
 Anatomy and physiology related to the major abdominal organs and major abdominal vessels. Assessment including physical, clinical symptoms, and laboratory findings. Related pathology and its sonographic appearance involving these structures. Scanning protocols, technical factors and image quality. [Transferability: CSU]

**DMS 53B DIAGNOSTIC MEDICAL SONOGRAPHY II 2 Units**

**Prerequisite:** Admission to the Diagnostic Medical Sonography Program.  
**2 hours lecture, 1 hour ETUDES-NG internet skills.**  
 Anatomy and physiology related to major and superficial structures and organs including sonography of abdominal organs and superficial structures. Assessment including physical, clinical symptoms, laboratory findings, and pathology including the sonographic appearances. Scanning protocols, technical factors and image quality. [Transferability: CSU]

**DMS 53C DIAGNOSTIC MEDICAL SONOGRAPHY III 2 Units**

**Prerequisite:** Admission to the Diagnostic Medical Sonography Program.  
**2 hours lecture, 1 hour ETUDES-NG internet skills.**  
 Anatomy, physiology and pathology of abdominal organs not yet covered, neurosonography, superficial structures, transplant, and the pediatric patient. Use of sonography in the operating room with a review of aseptic technique. Discussion of related medical ethics and legal issues. [Transferability: CSU]

**DMS 54A GYNECOLOGY 2 Units**

**Prerequisite:** Admission to the Diagnostic Medical Sonography Program.  
**2 hours lecture, .5 hour ETUDES-NG internet skills.**  
 Anatomy and physiology of the nongravid pelvis. Pathology, sonographic appearance, and clinical symptoms of the female patient. Sonographic protocols and measurements with correlations to accepted standards. [Transferability: CSU]

**DMS 54B GYNECOLOGY & OBSTETRICS 2 Units**

**Prerequisite:** Admission to the Diagnostic Medical Sonography Program.  
**2 hours lecture, .5 hour ETUDES-NG internet skills.**  
 Anatomy and physiology of the nongravid pelvis and first trimester pregnancy. Pathology, sonographic appearance, and clinical symptoms of the female patient. Sonographic protocols and measurements with correlations to accepted standards. [Transferability: CSU]

**DMS 55A OBSTETRICS I 2 Units**

**Prerequisite:** Admission to the Diagnostic Medical Sonography Program.  
**2 hours lecture, .5 hour ETUDES-NG skills.**  
 Normal fetal growth and sonographic measurements with correlation to accepted standards. Development of the placenta, amniotic fluid and cord. Abnormalities, pathology and maternal complications. [Transferability: CSU]

<b>DMS 55B</b>	<b>OBSTETRICS II</b>	<b>2 Units</b>	<b>DMS 60F</b>	<b>CRITIQUE &amp; PATHOLOGY VI</b>	<b>1 Unit</b>
<b>Prerequisite:</b> Admission to the Diagnostic Medical Sonography Program. <b>2 hours lecture, .5 hour ETUDES-NG internet skills.</b> Advanced obstetrical sonography. Abnormal 2 <sup>nd</sup> and 3 <sup>rd</sup> trimester fetal growth and sonographic measurements with correlations to accepted standards. Abnormalities, pathology and maternal complications. [Transferability: CSU]			<b>Prerequisite:</b> Admission to the Diagnostic Medical Sonography Program. <b>1 hour lecture.</b> Interpretation and critique of normal and abnormal anatomy with correlation of didactic, clinical and image information. Written and oral case presentations with emphasis on superficial parts, pediatric, neonatal and vascular subjects. [Transferability: CSU]		
<b>DMS 56A</b>	<b>VASCULAR SONOGRAPHY</b>	<b>3 Units</b>	<b>DMS 70A</b>	<b>CLINICAL PRECEPTORSHIP I</b>	<b>8.5 Units</b>
<b>Prerequisite:</b> Admission to Diagnostic Medical Sonography Program. <b>3 hours lecture.</b> Vascular terminology, principles including doppler physics. Interpretation of frequency spectral analysis. Intracranial, cerebrovascular and peripheral venous applications related to vascular technology. Normal, abnormal and pathologic states of the human vascular system. [Transferability: CSU]			<b>Prerequisite:</b> DMS 72A. <b>32 hours laboratory, 1 hour skills, 1 hour research &amp; presentation.</b> <b>This is a 13 week course.</b> A continuation of DMS 72A. This preceptorship is to obtain the technical expertise with emphasis on mastery of knowledge, skills, and abilities required performing sonographic studies and procedures. The major emphasis is on elementary level for abdominal and gynecological examinations as to delineate complete anatomic and functional information for interpretation. [Transferability: CSU]		
<b>DMS 56B</b>	<b>ADVANCED APPLICATIONS OF VASCULAR TECHNOLOGY</b>	<b>2 Units</b>	<b>DMS 70B</b>	<b>CLINICAL PRECEPTORSHIP II</b>	<b>8 Units</b>
<b>Prerequisite:</b> DMS 56A. <b>May be taken 3 times for credit.</b> <b>2 hours lecture.</b> A continuation of DMS 56A for the advanced principles & theory of noninvasive vascular technology. Comprehensive study of arterial and venous applications including peripheral arterial, abdominal vascular, and assessment of the reproductive tract. Designed to help prepare individuals for the National Board for credentialing as a Registered Vascular Technologist. [Transferability: CSU]			<b>Prerequisite:</b> DMS 70A. <b>32 hours laboratory, 1 hour skills, 1 hour case research &amp; presentation.</b> <b>This is a 12 week course.</b> Designed as a preceptorship in a medical setting to obtain the technical expertise with emphasis on mastery of knowledge, skills, and abilities required performing sonographic studies and procedures. The student is exposed to varied methodologies and practice philosophies in a variety of clinical settings. The major emphasis is on the knowledge and performance for abdominal, obstetrics, and gynecology examinations. [Transferability: CSU]		
<b>DMS 60A</b>	<b>CRITIQUE &amp; PATHOLOGY I</b>	<b>2 Units</b>	<b>DMS 70C</b>	<b>CLINICAL PRECEPTORSHIP III</b>	<b>8.5 Units</b>
<b>Prerequisite:</b> Admission to the Diagnostic Medical Sonography Program. <b>2 hours lecture.</b> Interpretation and critique of normal and abnormal anatomy with correlation of didactic, clinical and image information. Emphasis on communication skills via written and oral case presentations and critiques. [Transferability: CSU]			<b>Prerequisite:</b> DMS 70B. <b>32 hours laboratory, 1 hour skills, 1 hour case research &amp; presentation.</b> <b>This is a 13 week course.</b> Designed as a preceptorship in a medical setting to obtain the technical expertise with emphasis on mastery of knowledge, skills, and abilities required performing sonographic studies and procedures. The major emphasis is on intermediate-advanced level of knowledge and competency for abdominal, gynecology, obstetrics, and vascular sonography. [Transferability: CSU]		
<b>DMS 60B</b>	<b>CRITIQUE &amp; PATHOLOGY II</b>	<b>1 Unit</b>	<b>DMS 70D</b>	<b>CLINICAL PRECEPTORSHIP IV</b>	<b>8.5 Units</b>
<b>Prerequisite:</b> Admission to Diagnostic Medical Sonography Program. <b>1 hour lecture.</b> Interpretation and critique of normal and abnormal anatomy with correlation of didactic, clinical and image information. Written and oral case presentations with emphasis on abdominal subjects. [Transferability: CSU]			<b>Prerequisite:</b> DMS 70C. <b>32 hours laboratory, 1 hour skills, 1 hour case research &amp; presentation.</b> <b>This is a 13 week course.</b> Designed as a preceptorship in a medical setting to obtain the technical expertise with emphasis on the advanced mastery of knowledge, skills, and abilities required performing all types of sonographic studies and procedures. [Transferability: CSU]		
<b>DMS 60C</b>	<b>CRITIQUE &amp; PATHOLOGY III</b>	<b>1 Unit</b>	<b>DMS 70E</b>	<b>CLINICAL PRECEPTORSHIP V</b>	<b>8.5 Units</b>
<b>Prerequisite:</b> Admission to the Diagnostic Medical Sonography Program. <b>1 hour lecture.</b> Interpretation and critique of normal and abnormal anatomy with correlation of didactic, clinical and image information. Written and oral case presentations with emphasis on gynecological and abdominal subjects. [Transferability: CSU]			<b>Prerequisite:</b> DMS 70D. <b>32 hours laboratory, 1 hour skills, 1 hour case research &amp; presentation.</b> <b>This is a 13 week course.</b> Designed as a preceptorship in a medical setting to obtain the technical expertise with emphasis on the advanced-graduate mastery of knowledge, skills, and abilities required performing all types of sonographic studies and procedures. The major emphasis is on terminal competencies leading to program completion. [Transferability: CSU]		
<b>DMS 60D</b>	<b>CRITIQUE &amp; PATHOLOGY IV</b>	<b>1 Unit</b>	<b>DMS 72A</b>	<b>DIAGNOSTIC MEDICAL SONOGRAPHY PROCEDURES &amp; APPLICATIONS</b>	<b>8 Units</b>
<b>Prerequisite:</b> Admission to the Diagnostic Medical Sonography Program. <b>1 hour lecture.</b> Interpretation and critique of normal and abnormal anatomy with correlation of didactic, clinical and image information. Written and oral case presentations with emphasis on obstetrical subjects. [Transferability: CSU]			<b>Prerequisite:</b> Admission to Diagnostic Medical Sonography Program. <b>1 hour lecture, 32 hours laboratory.</b> Instruction to develop the fundamental skills, procedures and applications for sonographic image acquisition. Includes instruction in establishing technical quality, interpretation, analysis, and case presentation. Includes hands-on participation in a structured lab setting with emphasis on simulation and live scanning exercises plus clinical preceptorship. [Transferability: CSU]		
<b>DMS 60E</b>	<b>CRITIQUE &amp; PATHOLOGY V</b>	<b>1 Unit</b>			
<b>Prerequisite:</b> Admission to the Diagnostic Medical Sonography Program. <b>1 hour lecture.</b> Interpretation and critique of normal and abnormal anatomy with correlation of didactic, clinical and image information. Written and oral case presentations with emphasis on superficial parts, pediatric, neonatal and vascular subjects. [Transferability: CSU]					

**DMS 72E      DIAGNOSTIC MEDICAL SONOGRAPHY PROCEDURES & APPLICATIONS      2 Units**

**Prerequisite:** Admission to Diagnostic Medical Sonography Program. 1 hour lecture, 3 hours laboratory. Advanced proficiency levels toward image acquisition, implementing technical quality, interpretation and case analysis with an emphasis on the advanced practice sonographer. Will demonstrate skills through hands-on participation in a controlled lab setting with both simulation and live scanning exercises and demonstration of instructional techniques. [Transferability: CSU]

**DMS 80A      ADVANCED SONOGRAPHIC PRINCIPLES      3 Units**

**Prerequisite:** Admission to the Diagnostic Medical Sonography Program; completion of all prior didactic and clinical practicum courses required in the Diagnostic Medical Sonography Program. 3 hours lecture, 3 hours ETUDES-NG internet. Continuation of all courses as well as new developments with advanced analysis of current sonographic practice. Student presentation and critique of neoplastic cases. Information necessary for completion and participation of national registry examination. [Transferability: CSU]

**DMS 190      DIRECTED STUDY      .5 Unit**  
**DMS 190X      1 Unit**  
**DMS 190Y      1.5 Units**  
**DMS 190Z      2 Units**

**Advisory:** Pass/No Pass  
 Any combination of DMS 190–190Z may be taken 6 times for credit, however, no single course may be taken more than 6 times for credit. .5 hour lecture, 1.5 hours laboratory. For students who desire or require additional help in attaining comprehension and competency in learning skills.

**ECONOMICS**

**Business & Social Sciences      (650) 949-7322**  
[www.foothill.edu/bss/](http://www.foothill.edu/bss/)

**ECON 1A      PRINCIPLES OF MACROECONOMICS      5 Units**  
**Advisory:** Eligibility for ENGL 1A or ESLL 26. 5 hours lecture.

Fundamental economic concepts; determination of national income and employment; income fluctuation; money and the banking system; government monetary and fiscal policies; current economic problems; economic development; international trade. ECON 1A or ECON 1B may be taken in either order. [Foothill GE: Social & Behavioral Sciences; Transferability: UC/CSU]

**ECON 1B      PRINCIPLES OF MICROECONOMICS      5 Units**  
**Advisory:** Eligibility for ENGL 1A or ESLL 26. 5 hours lecture.

Micro analysis of economic life. Allocation of resources. Consumer behavior. Pricing and output decisions. Distribution of wealth and income. Nature and characteristics of business enterprises. International trade. Comparative economic systems. ECON 1A and ECON 1B may be taken in either order. [Foothill GE: Social & Behavioral Sciences; Transferability: UC/CSU]

**ECON 9      POLITICAL ECONOMY      4 Units**  
**Advisory:** Not open to students with credit in POLI 9. 4 hours lecture.

Overview of political economy emphasizing the interplay between economics and politics in the formulation of public policy. Policy issues of current significance emphasized. [Foothill GE: Social & Behavioral Sciences; Transferability: UC/CSU]

**ECON 25      INTRODUCTION TO THE GLOBAL ECONOMY      4 Units**

**Advisory:** ECON 1A. 4 hours lecture. Analysis of increasing economic integration in the post-WW II era with a focus on international trade and investment. Introduction to international economic organizations such as the WTO and IMF. [Foothill GE: Social & Behavioral Sciences; Transferability: UC/CSU]

**ECON 34H      HONORS INSTITUTE SEMINAR IN ECONOMICS      1 Unit**

**Formerly:** ECON 34  
**Prerequisite:** Honors Institute participant. 1 hour lecture. A seminar in directed readings, discussions and projects in economics. Specific topics to be determined by the instructor. [Transferability: CSU; UC credit may be granted after transfer and upon portfolio review.]

**ECON 35      DEPARTMENT HONORS PROJECTS IN ECONOMICS      1 Unit**

May be taken 6 times for credit. 1 hour lecture. Seminar in readings, research, critical techniques and practice. Specific topics vary. [Transferability: CSU]

**ECON 36      SPECIAL PROJECTS IN ECONOMICS      1 Unit**  
**ECON 36X      2 Units**  
**ECON 36Y      3 Units**  
**ECON 36Z      4 Units**

Any combination of ECON 36–36Z may be taken 6 times for credit, however, no single course may be taken more than 6 times for credit. 1 hour lecture for each unit of credit. Advanced readings research, and/or project in economics. Specific topics determined in consultation with instructor. [Transferability: CSU]

**EDUCATION**

**Business & Social Sciences      (650) 949-7322**  
[www.foothill.edu/bss/](http://www.foothill.edu/bss/)

**EDUC 50      PRINCIPLES OF EDUCATION: THE TEACHING CHALLENGE      4 Units**

4 hours lecture. Exploration of the professional field of education for those interested in the educational system of the United States. Particular emphasis placed upon learning to understand the educational system in California. [Transferability: UC/CSU]

**EDUC 301      INSTRUCTIONAL METHODS & MEDIA      1 Unit**  
**EDUC 301X      2 Units**  
**EDUC 301Y      3 Units**  
**EDUC 301Z      4 Units**

Non-degree applicable credit course. **Advisory:** Pass/No Pass. Any combination of EDUC 301–301Z may be taken 6 times for credit, however, no single course may be taken more than 6 times for credit. 1 hour lecture for each unit of credit. Analysis, selection and application of the methods, media and materials which facilitate learning in subjects commonly taught in the community college with emphasis on culturally diverse student populations; including psychology of skills and learning; motivation; professional/community resources; content preparation, presentation, evaluation.

## EMERGENCY MEDICAL TECHNICIAN

Biological & Health Sciences (650) 949-6955  
[www.foothill.edu/bio/programs/emt/](http://www.foothill.edu/bio/programs/emt/)

### EMT 303 EMERGENCY MEDICAL TECHNICIAN: 1.5 Units BASIC CONTINUING EDUCATION

**Prerequisite:** Students must either possess a current EMT-1 certificate or a certification which has been expired for no more than 24 months (must complete before the end of that month); current certification in American Red Cross CPR-BLS.

**May be taken 6 times for credit.**

**3 hours lecture-laboratory.**

This is a 36 hour course which meets the education requirements as specified by the California Emergency Medical Services Authority and the Emergency Medical Authority of Santa Clara County. It is designed for both pre-employed personnel and those persons currently employed by a fire department within the County of Santa Clara. It will be a review and update the knowledge and skills required for basic certification.

### EMT 304 EMERGENCY MEDICAL TECHNICIAN: 3 Units BASIC PART A

**Prerequisite:** HLTH 55 or First Responder Course or equivalent work experience as determined by the instructor.

**7 hours lecture-laboratory.**

This course is designed to instruct a student to the level of Emergency Medical Technician-Basic who serves as a vital link in the chain of the health care team. It is recognized that the majority of prehospital emergency medical care will be provided by the EMT-Basic. This course includes all skills necessary for the individual to provide emergency medical care at a basic life support level with a fire department, or other specialized service. This course is the first of two courses required to be eligible to take the California written and practical exam for certification as an Emergency Medical Technician I.

### EMT 305 EMERGENCY MEDICAL TECHNICIAN: 4 Units BASIC PART B

**Prerequisite:** Successful completion of EMT 304 in the last six months.  
**Advisory:** EMT 305 is part two of two courses required to be eligible to take the California State written and practical exam for certification as an Emergency Medical Technician-I.

**7 hours lecture-laboratory, 1.5 hours clinic.**

This course is the second of two courses required to be eligible to take the California State written and practical exam for certification as an Emergency Medical Technician - I. Designed to instruct a student to the level of Emergency Medical Technician-Basic who serves as a vital link in the chain of the health care team. This course includes all skills necessary for the individual to provide emergency medical care at a basic life support level with a fire department, ambulance, or other specialized service.

## EMERGENCY MEDICAL TECHNICIAN - PARAMEDIC

Biological & Health Sciences (650) 949-6955  
[www.foothill.edu/bio/programs/paramed/](http://www.foothill.edu/bio/programs/paramed/)

### EMTP 60A MOBILE INTENSIVE CARE 11 Units PARAMEDIC PROGRAM: COGNITIVE & AFFECTIVE IA

**Formerly: EMTP 100A**

**Prerequisite:** Admission to the Paramedic Program.

**Advisory:** Not open to students with credit in EMTP 100A.

**Corequisite:** EMTP 60B.

**11 hours lecture.**

The cognitive and affective basis for EMT students wishing to become EMT paramedics. The paramedic: anatomy and physiology; EMS systems/roles and responsibilities; patient assessment; venous access and medication administration; airway; pharmacology; general principles of pathophysiology; cardiology; the well-being of the paramedic; illness and injury prevention; medical/legal issues; ethics; life span development/human development; therapeutic communications/

patient communication; patient history taking; techniques of physical examination; clinical decision making/critical thinking; communications; and documentation. [Transferability: CSU]

### EMTP 60B MOBILE INTENSIVE CARE 8.5 Units PARAMEDIC PROGRAM: COGNITIVE, PSYCHOMOTOR & AFFECTIVE IB

**Formerly: EMTP 100A**

**Prerequisite:** Admission to the Paramedic Program.

**Corequisite:** EMTP 60A.

**5.5 hours lecture, 4 hours lecture-laboratory, 3 hours laboratory.**

The cognitive, psychomotor, and affective basis for EMT students wishing to become EMT paramedics. The paramedic: anatomy and physiology; proper hand washing; personal protective equipment; patient assessment; intravenous access; intraosseous infusion; pharmacology; medication administration; airway management: endotracheal intubation, oropharyngeal airway, nasopharyngeal airway, suctioning, dual lumen airways; advanced cardiac life support ambulance 911 call simulations and case studies; synchronized cardioversion; transcutaneous pacing; defibrillation; cardiovascular/chest pain emergency 911 call simulations; end tidal carbon dioxide monitoring; capnography; 12 lead ECG interpretation. [Transferability: CSU]

### EMTP 61A MOBILE INTENSIVE CARE 11 Units PARAMEDIC PROGRAM: COGNITIVE & AFFECTIVE IIA

**Formerly: EMTP 100B**

**Prerequisite:** EMTP 60A and 60B.

**Advisory:** Not open to students with credit in EMTP 100B.

**Corequisite:** EMTP 61B and 63A.

**11 hours lecture.**

The cognitive and affective basis for EMT students wishing to become EMT paramedics. The paramedic: anatomy and physiology; pharmacology; ambulance 911 call simulations and case studies in the following areas: respiratory, neurologic, endocrine, gastrointestinal, renal & urologic, hematologic, environmental, behavioral emergencies, toxicology; substance abuse and poisoning, allergies and anaphylaxis, infectious and communicable diseases, and pediatric advanced life support. [Transferability: CSU]

### EMTP 61B MOBILE INTENSIVE CARE 8.5 Units PARAMEDIC PROGRAM: COGNITIVE, AFFECTIVE & PSYCHOMOTOR IIB

**Formerly: EMTP 100B**

**Prerequisite:** EMTP 60A and 60B.

**Advisory:** Not open to students with credit in EMTP 100B.

**Corequisite:** EMTP 61A and 63A.

**5.5 hours lecture, 4 hours lecture-laboratory, 3 hours laboratory.**

The cognitive, psychomotor, and affective basis for EMT students wishing to become EMT paramedics. The paramedic: anatomy and physiology; patient assessment; respiratory ambulance 911 call simulations and case studies; nebulizer/BVM set-up; pleural decompression; digital intubation; foreign body airway obstruction; neurological ambulance 911 call simulations and case studies; 12 lead ECG interpretation; diabetic ambulance 911 call simulations and case studies; blood glucose analysis; medication administration; pharmacology; pediatric advanced life support ambulance 911 call simulations and case studies; non-traumatic abdominal ambulance 911 call simulations and case studies; bleeding control & shock management; pressure infusers; intubation with spinal immobilization; intravenous access; overdose and poisoning ambulance 911 call simulations and case studies. [Transferability: CSU]

### EMTP 62A MOBILE INTENSIVE CARE 11 Units PARAMEDIC PROGRAM: COGNITIVE & AFFECTIVE IIIA

**Formerly: EMTP 100C**

**Prerequisite:** EMTP 60A, 60B, 61A, and 61B.

**Advisory:** Not open to students with credit in EMTP 100C.

**Corequisite:** EMTP 62B.

**11 hours lecture.**

The cognitive and affective basis for EMT students wishing to become EMT paramedics. The paramedic: anatomy and physiology; pharmacology; ambulance operations; medical incident command; terrorism and weapons of mass destruction; rescue awareness and operations

hazardous material incidents; crime scene awareness; ambulance 911 call simulations and case studies for the following topics: prehospital trauma life support; neonatology; pediatrics; geriatrics; abuse, neglect, and assault; gynecology; obstetrics; patients with special challenges; chronic care patients. [Transferability: CSU]

**EMTP 62B MOBILE INTENSIVE CARE 8.5 Units**  
**PARAMEDIC PROGRAM: COGNITIVE, AFFECTIVE & PSYCHOMOTOR IIIB**

**Prerequisite:** EMTP 60A, 60B, 61A, and 61B.  
**Corequisite:** EMTP 62A.

**5.5 hours lecture, 4 hours lecture-laboratory, 3 hours laboratory.**

The cognitive and affective basis for EMT students wishing to become EMT paramedics. The paramedic: anatomy and physiology; pharmacology; ambulance operations; medical incident command; terrorism and weapons of mass destruction; rescue awareness and operations hazardous material incidents; crime scene awareness; ambulance 911 call simulations and case studies for the following topics: prehospital trauma life support; neonatology; pediatrics; geriatrics; abuse, neglect, and assault; gynecology; obstetrics; patients with special challenges; chronic care patients. [Transferability: CSU]

**EMTP 63A MOBILE INTENSIVE CARE 3 Units**  
**PARAMEDIC PROGRAM: HOSPITAL SPECIALTY ROTATIONS**

**Formerly:** EMTP 102

**Prerequisite:** EMTP 60A and 60B.

**Advisory:** Not open to students with credit in EMTP 102.

**Corequisites:** EMTP 61A and 61B.

**May be taken 4 times for credit.**

**1.5 hour lecture, 6.5 hours clinic.**

Specialty hospital rotations in the following departments: pediatrics, pediatric intensive care unit, labor and delivery, surgery (airway management), respiratory therapy, and other selected hospital areas. [Transferability: CSU]

**EMTP 63B MOBILE INTENSIVE CARE 5 Units**  
**PARAMEDIC PROGRAM: HOSPITAL EMERGENCY DEPARTMENT ROTATIONS**

**Formerly:** EMTP 102

**Prerequisite:** EMTP 62A, and 62B.

**Advisory:** Not open to students with credit in EMTP 102.

**Corequisite:** Completion of, or concurrent enrollment in EMTP 63A.

**May be taken 4 times for credit.**

**2.5 hours lecture, 12 hours clinic.**

The hospital emergency department rotations give the paramedic student an opportunity to take the paramedic theoretical knowledge, laboratory skills and 911 ambulance call simulations, and appropriate attitudes learned in the classroom and apply them to live patients in a controlled setting with the assistance of the hospital preceptor/s and faculty in preparation for the for the chaotic, uncontrolled environment of the ambulance field internship. [Transferability: CSU]

**EMTP 63C MOBILE INTENSIVE CARE 3 Units**  
**PARAMEDIC PROGRAM: EXTENSION HOSPITAL ROTATION**

**Prerequisite:** EMTP 61A and 61B.

**Corequisite:** Completion of, or concurrent enrollment in EMTP 62A, 62B, 63A and 63B.

**May be taken 4 times for credit.**

**16 hours of clinic.**

Extended hospital rotations. Offers additional period of clinical exposure for students needing further clinical time to develop requisite skills. The hospital emergency department and specialty rotations give the paramedic student an opportunity to take the paramedic theoretical knowledge, laboratory skills and 911 ambulance call simulations, and appropriate attitudes learned in the classroom and apply them to live patients in a controlled setting with the assistance of the hospital preceptor/s and faculty in preparation for the for the chaotic, uncontrolled environment of the ambulance field internship. [Transferability: CSU]

**EMTP 64A MOBILE INTENSIVE CARE 9.5 Units**  
**PARAMEDIC PROGRAM: AMBULANCE FIELD INTERNSHIP**

**Formerly:** EMTP 103A

**Prerequisite:** EMTP 62B, 63A and 63B.

**Advisory:** Not open to students with credit in EMTP 103A.

**Corequisite:** EMTP 64B.

**May be taken 4 times for credit.**

**1.5 hours of lecture, 40 hours clinic.**

Students are required to take the theoretical knowledge from the classroom, the laboratory simulations on manikins, and appropriate attitudes learned in the classroom, the hospital-clinical experience on live patients and combine these components to function as an intern responding on a 911 ambulance to ill and injured patients while being instructed and evaluated by a field preceptor. The student has the daunting task of initiating, providing, and directing entire emergency patient care while in a sometimes chaotic, uncontrolled environment. [Transferability: CSU]

**EMTP 64B MOBILE INTENSIVE CARE 9.5 Units**  
**PARAMEDIC PROGRAM: AMBULANCE FIELD INTERNSHIP**

**Formerly:** EMTP 103B

**Prerequisite:** EMTP 62A, 62B, 63A and 63B.

**Advisory:** Not open to students with credit in EMTP 103B.

**Corequisite:** EMTP 64A.

**May be taken 4 times for credit.**

**1.5 hours of lecture, 40 hours clinic.**

Students are required to take the theoretical knowledge from the classroom, the laboratory simulations on manikins, and appropriate attitudes learned in the classroom, the hospital-clinical experience on live patients and combine these components to function as an intern responding on a 911 ambulance to ill and injured patients while being instructed and evaluated by a field preceptor. The student has the daunting task of initiating, providing, and directing entire emergency patient care while in a sometimes chaotic, uncontrolled environment. [Transferability: CSU]

**EMTP 64C MOBILE INTENSIVE CARE 9.5 Units**  
**PARAMEDIC PROGRAM: EXTENSION AMBULANCE FIELD INTERNSHIP**

**Prerequisite:** EMTP 62B, 63A and 63B.

**Corequisite:** EMTP 64D.

**May be taken 4 times for credit.**

**1.5 hour lecture, 40 hours clinic.**

Extended ambulance internship. Offers additional period of clinical exposure for students needing further clinical time to develop requisite skills. Students are required to take the theoretical knowledge from the classroom, the laboratory simulations on manikins, and appropriate attitudes learned in the classroom, the hospital-clinical experience on live patients and combine these components to function as an intern responding on a 911 ambulance to ill and injured patients while being instructed and evaluated by a field preceptor. The student has the daunting task of initiating, providing, and directing entire emergency patient care while in a sometimes chaotic, uncontrolled environment. [Transferability: CSU]

**EMTP 64D MOBILE INTENSIVE CARE 9.5 Units**  
**PARAMEDIC PROGRAM: EXTENSION AMBULANCE FIELD INTERNSHIP**

**Prerequisite:** EMTP 64A and 64B.

**Corequisites:** EMTP 64C.

**May be taken 4 times for credit.**

**1.5 hour lecture, 40 hours clinic.**

Extended ambulance internship. Offers additional period of clinical exposure for students needing further clinical time to develop requisite skills. Students are required to take the theoretical knowledge from the classroom, the laboratory simulations on manikins, and appropriate attitudes learned in the classroom, the hospital-clinical experience on live patients and combine these components to function as an intern responding on a 911 ambulance to ill and injured patients while being instructed and evaluated by a field preceptor. The student has the

daunting task of initiating, providing, and directing entire emergency patient care while in a sometimes chaotic, uncontrolled environment. [Transferability: CSU]

**EMTP 65A**      **MOBILE INTENSIVE CARE  
PARAMEDIC PROGRAM:  
CONTINUING EDUCATION-  
REFRESHER AMBULANCE  
FIELD EXPERIENCE**      **.5 Unit**

**Prerequisite:** Paramedic licensure or certification and/or paramedic national registry status.

**May be taken 4 times for credit.**

**2 hours clinic.**

Continuing education and refresher of the ambulance field experience for students who are licensed and/or nationally registered as paramedics. Offers additional period of clinical exposure for students needing further clinical time to develop and enhance paramedic knowledge, psychomotor skills, and attitudes. Students are required to take the theoretical knowledge from the classroom, the laboratory simulations on manikins, and appropriate attitudes learned in the classroom, the hospital-clinical experience on live patients and combine these components to function as an intern responding on a 911 ambulance to ill and injured patients while being instructed and evaluated by a field preceptor. The student has the daunting task of initiating, providing, and directing entire emergency patient care while in a sometimes chaotic, uncontrolled environment. [Transferability: CSU]

**EMTP 65B**      **MOBILE INTENSIVE CARE  
PARAMEDIC PROGRAM:  
CONTINUING EDUCATION-  
REFRESHER AMBULANCE  
FIELD EXPERIENCE**      **1 Unit**

**Prerequisite:** Paramedic licensure, certification, and/or national registry status.

**4 clinic hours.**

Continuing education and refresher of the ambulance field experience for students who are licensed and/or nationally registered as paramedics. Offers additional period of clinical exposure for students needing further clinical time to develop and enhance paramedic knowledge, psychomotor skills, and attitudes. Students are required to take the theoretical knowledge from the classroom, the laboratory simulations on manikins, and appropriate attitudes learned in the classroom, the hospital-clinical experience on live patients and combine these components to function as an intern responding on a 911 ambulance to ill and injured patients while being instructed and evaluated by a field preceptor. The student has the daunting task of initiating, providing, and directing entire emergency patient care while in a sometimes chaotic, uncontrolled environment. [Transferability: CSU]

**EMTP 65C**      **MOBILE INTENSIVE CARE  
PARAMEDIC PROGRAM:  
CONTINUING EDUCATION-  
REFRESHER AMBULANCE  
FIELD EXPERIENCE**      **1.5 Units**

**Prerequisite:** Paramedic licensure or certification and/or national registry status.

**May be taken 4 times for credit.**

**6 hours clinic.**

Continuing education and refresher of the ambulance field experience for students who are licensed and/or nationally registered as paramedics. Offers additional period of clinical exposure for students needing further clinical time to develop and enhance paramedic knowledge, psychomotor skills, and attitudes. Students are required to take the theoretical knowledge from the classroom, the laboratory simulations on manikins, and appropriate attitudes learned in the classroom, the hospital-clinical experience on live patients and combine these components to function as an intern responding on a 911 ambulance to ill and injured patients while being instructed and evaluated by a field preceptor. The student has the daunting task of initiating, providing, and directing entire emergency patient care while in a sometimes chaotic, uncontrolled environment. [Transferability: CSU]

**EMTP 65D**      **MOBILE INTENSIVE CARE  
PARAMEDIC PROGRAM:  
CONTINUING EDUCATION-  
REFRESHER AMBULANCE  
FIELD EXPERIENCE**      **2 Units**

**Prerequisite:** Paramedic licensure or certification and/or national registry status.

**May be taken 4 times for credit.**

**8 hours clinic.**

Continuing education and refresher of the ambulance field experience for students who are licensed and/or nationally registered as paramedics. Offers additional period of clinical exposure for students needing further clinical time to develop and enhance paramedic knowledge, psychomotor skills, and attitudes. Students are required to take the theoretical knowledge from the classroom, the laboratory simulations on manikins, and appropriate attitudes learned in the classroom, the hospital-clinical experience on live patients and combine these components to function as an intern responding on a 911 ambulance to ill and injured patients while being instructed and evaluated by a field preceptor. The student has the daunting task of initiating, providing, and directing entire emergency patient care while in a sometimes chaotic, uncontrolled environment. [Transferability: CSU]

**EMTP 65E**      **MOBILE INTENSIVE CARE  
PARAMEDIC PROGRAM:  
CONTINUING EDUCATION-  
REFRESHER AMBULANCE  
FIELD EXPERIENCE**      **2.5 Units**

**Prerequisite:** Paramedic licensure or certification and/or national registry status.

**May be taken 4 times for credit.**

**10 hours clinic.**

Continuing education and refresher of the ambulance field experience for students who are licensed and/or nationally registered as paramedics. Offers additional period of clinical exposure for students needing further clinical time to develop and enhance paramedic knowledge, psychomotor skills, and attitudes. Students are required to take the theoretical knowledge from the classroom, the laboratory simulations on manikins, and appropriate attitudes learned in the classroom, the hospital-clinical experience on live patients and combine these components to function as an intern responding on a 911 ambulance to ill and injured patients while being instructed and evaluated by a field preceptor. The student has the daunting task of initiating, providing, and directing entire emergency patient care while in a sometimes chaotic, uncontrolled environment. [Transferability: CSU]

**EMTP 65F**      **MOBILE INTENSIVE CARE  
PARAMEDIC PROGRAM:  
CONTINUING EDUCATION-  
REFRESHER AMBULANCE  
FIELD EXPERIENCE**      **3 Units**

**Prerequisite:** Paramedic licensure or certification and/or national registry status.

**May be taken 4 times for credit.**

**12 hours clinic.**

Continuing education and refresher of the ambulance field experience for students who are licensed and/or nationally registered as paramedics. Offers additional period of clinical exposure for students needing further clinical time to develop and enhance paramedic knowledge, psychomotor skills, and attitudes. Students are required to take the theoretical knowledge from the classroom, the laboratory simulations on manikins, and appropriate attitudes learned in the classroom, the hospital-clinical experience on live patients and combine these components to function as an intern responding on a 911 ambulance to ill and injured patients while being instructed and evaluated by a field preceptor. The student has the daunting task of initiating, providing, and directing entire emergency patient care while in a sometimes chaotic, uncontrolled environment. [Transferability: CSU]

**EMTP 65G MOBILE INTENSIVE CARE PARAMEDIC PROGRAM: CONTINUING EDUCATION-REFRESHER AMBULANCE FIELD EXPERIENCE** 3.5 Units

**Prerequisite:** Paramedic licensure or certification and/or national registry status.  
**May be taken 4 times for credit.**  
 14 hours clinic.

Continuing education and refresher of the ambulance field experience for students who are licensed and/or nationally registered as paramedics. Offers additional period of clinical exposure for students needing further clinical time to develop and enhance paramedic knowledge, psychomotor skills, and attitudes. Students are required to take the theoretical knowledge from the classroom, the laboratory simulations on manikins, and appropriate attitudes learned in the classroom, the hospital-clinical experience on live patients and combine these components to function as an intern responding on a 911 ambulance to ill and injured patients while being instructed and evaluated by a field preceptor. The student has the daunting task of initiating, providing, and directing entire emergency patient care while in a sometimes chaotic, uncontrolled environment. [Transferability: CSU]

**EMTP 65H MOBILE INTENSIVE CARE PARAMEDIC PROGRAM: CONTINUING EDUCATION-REFRESHER AMBULANCE FIELD EXPERIENCE** 4 Units

**Prerequisite:** Paramedic licensure or certification and/or national registry status.  
**May be taken 4 times for credit.**  
 16 hours of clinic.

Continuing education and refresher of the ambulance field experience for students who are licensed and/or nationally registered as paramedics. Offers additional period of clinical exposure for students needing further clinical time to develop and enhance paramedic knowledge, psychomotor skills, and attitudes. Students are required to take the theoretical knowledge from the classroom, the laboratory simulations on manikins, and appropriate attitudes learned in the classroom, the hospital-clinical experience on live patients and combine these components to function as an intern responding on a 911 ambulance to ill and injured patients while being instructed and evaluated by a field preceptor. The student has the daunting task of initiating, providing, and directing entire emergency patient care while in a sometimes chaotic, uncontrolled environment. [Transferability: CSU]

**EMTP 190 DIRECTED STUDY** .5 Unit  
**EMTP 190X** 1 Unit  
**EMTP 190Y** 1.5 Units  
**EMTP 190Z** 2 Units

**Advisory:** Pass/No Pass.  
 Any combination of EMTP 190–190Z may be taken 6 times for credit, however, no single course may be taken more than 6 times for credit. 3.5 hours laboratory, .5 hour lecture for each unit of credit.  
 For students who desire or require additional help in attaining comprehension and competency in learning skills.

## ENGINEERING

**Physical Sciences, Mathematics & Engineering (650) 949-7259**  
[www.foothill.edu/psme/](http://www.foothill.edu/psme/)

**ENGR 10 INTRODUCTION TO ENGINEERING** 4 Units  
*Formerly: ENGR 20*

**Prerequisite:** MATH 220, high school Trigonometry and Physics  
**Advisory:** ENGL 110 or ESLL 25 .  
 3 hours lecture, 3 hours laboratory.

An introduction to engineering and the engineering professions to include exposure to engineering project development, the use of computer tools, experimentation, data analysis, and presentation. [Transferability: UC/CSU]

**ENGR 34H HONORS INSTITUTE SEMINAR IN ENGINEERING** 1 Unit

**Prerequisite:** Honors Institute participant.  
 1 hour lecture.

A seminar in directed readings, discussions and projects in engineering. Specific topics to be determined by the instructor. [Transferability: CSU; UC credit may be granted after transfer and upon portfolio review.]

**ENGR 35 STATICS** 5 Units

**Prerequisite:** MATH 1B and PHYS 4A.

**Advisory:** ENGR 27.  
 5 hours lecture.

Principles of statics as applied to particles and rigid bodies in two and three dimensions under concentrated and distributed force systems. Equilibrium conditions in structures, machines, beams and cables. Determination of centroids and moments of inertia. Dry friction and methods of virtual work. [Transferability: UC/CSU]

**ENGR 36 SPECIAL PROJECTS IN ENGINEERING** 1 Unit  
**ENGR 36X & TECHNOLOGY** 2 Units  
**ENGR 36Y** 3 Units

**Advisory:** Previous experience in engineering recommended.

Any combination of ENGR 36–36Y may be taken 6 times for credit, however, no single course may be taken more than 6 times for credit. 3 hours laboratory for each unit of credit.

For the exceptional student. The student designs, assembles, and evaluates a project appropriate to his major and writes a report covering the theory or background for the project, its design and construction, and its application. The student is encouraged to work with a minimum of direct supervision. [Transferability: CSU]

**ENGR 37 INTRODUCTION TO CIRCUIT ANALYSIS** 5 Units

**Prerequisite:** MATH 1B and PHYS 4B.

5 hours lecture, 2 hours TBA.

The analysis of lumped, linear circuits, natural and forced circuit response. [Transferability: UC/CSU]

**ENGR 37L CIRCUIT ANALYSIS LABORATORY** 2 Units

**Corequisite:** ENGR 37.

1 hour lecture-laboratory, 3 hours laboratory.

Practical verification of theorems and concepts learned in ENGR 37 (Circuit Analysis) through experimentation. Included will be experiments in DC and AC circuits involving the utilization of a variety of instruments such as DC/AC meters, regulated power supplies, signal generators, oscilloscopes and frequency counters. [Transferability: UC/CSU]

**ENGR 45 PROPERTIES OF MATERIALS** 5 Units

**Prerequisite:** CHEM 1B and MATH 1C.

**Corequisite:** Completion of, or concurrent enrollment in PHYS 4B.

4 hours lecture, 1 hour lecture-laboratory, 2 hours laboratory, 2 hours TBA.

Properties of engineering materials related to basic structure; applications to the selection and use of engineering materials. [Transferability: UC/CSU]

**ENGR 49 ENGINEERING PROFESSION** 1 Unit  
 1 hour lecture.

A study of the engineering profession, its requirements, opportunities and responsibilities. A preview of the applications of basic science to engineering problems. Review of engineering case studies. [Transferability: UC/CSU]

## ENGLISH

### Language Arts

(650) 949-7250  
www.foothill.edu/la/

#### ENGL 1A COMPOSITION & READING 5 Units

**Prerequisite:** Eligibility based on appropriate assessment information or successful completion of assigned courses in basic reading and writing skills.

**Advisory:** Not open to students with credit in ENGL 1AH.  
5 hours lecture.

The techniques and practice of expository and argumentative writing based on critical reading and thinking about texts. Reading focused primarily on works of non-fiction prose, chosen to represent a broad spectrum of opinions and ideas, writing styles, and cultural experiences. Fulfills the Foothill College reading and composition requirement for the AA/AS degree and the university-transfer general education requirement in English reading and written composition. Open laboratory can be access to Academic Skills courses, English Writing Center, on-line resources, or, if assigned by instructor, individual/collaborative activities related to course. [Foothill GE: English; Transferability: UC/CSU]

#### ENGL 1AH HONORS COMPOSITION & READING 5 Units

**Prerequisite:** Eligibility based on appropriate assessment information; Honors Institute participant.

**Advisory:** Not open to students with credit in ENGL 1A.  
5 hours lecture.

The techniques and practice of expository and argumentative writing based on critical reading and thinking about texts. Reading focused primarily on works of non-fiction prose, chosen to represent a broad spectrum of opinions and ideas, writing styles, and cultural experiences. Fulfills the Foothill College reading and composition requirement for the AA/AS degree and the university-transfer general education requirement in English reading and written composition. Open laboratory can be access to Academic Skills courses, English Writing Center, on-line resources, or, if assigned by instructor, individual/collaborative activities. Honors section offers rigorous preparation in analytic reading and writing skills for students intending to transfer to a four-year college or university. Course provides opportunity to engage contemporary social and ethical issues through small group discussion, a structured sequence of papers requiring higher-level thinking tasks, and collaborative projects. Emphasis is placed on multiple drafts and substantive revision to produce articulate writing appropriate to academic disciplines. Research paper is required. [Foothill GE: English; Transferability: UC/CSU]

#### ENGL 1B COMPOSITION, CRITICAL READING & THINKING 5 Units

**Prerequisite:** ENGL 1A or ESLL 26.

**Advisory:** Not open to students with credit in ENGL 1BH.  
5 hours lecture.

Further development in the technique and practice of expository and argumentative writing, critical reading and thinking. Readings chosen to represent a broad spectrum of opinions and ideas, writing styles, and cultural experiences. Formal instruction in composition and critical thinking. Open laboratory can be access to Academic Skills courses, English Writing Center, on-line resources, or, if assigned by instructor, individual/collaborative activities related to course. [Foothill GE: Communication & Analytical Thinking; Transferability: UC/CSU]

#### ENGL 1BH HONORS COMPOSITION, CRITICAL READING & THINKING 5 Units

**Prerequisite:** ENGL 1A; Honors Institute participant.

**Advisory:** Not open to students with credit in ENGL 1B.  
5 hours lecture.

Further development in the technique and practice of expository and argumentative writing, critical reading and thinking. Readings chosen to represent a broad spectrum of opinions and ideas, writing styles, and cultural experiences. Formal instruction in composition and critical thinking. Open laboratory can be access to Academic Skills courses, English Writing Center, on-line resources, or, if assigned by instructor, individual/collaborative activities. Honors section offers a challenging intellectual environment for students intending to transfer to a four-year college or university. Class discussion and assignments focus on literature as a reflection of multiple perspectives, social constructs, and

cultural values. Course fosters an understanding and appreciation of various literary genres and includes logic and literary theory. Emphasis on rhetorical strategies and stylistic refinements for effective persuasive writing across the disciplines. Enrichment activities include attendance at plays, author readings, public lectures, and independent or collaborative study on a contemporary author. [Foothill GE: Communication & Analytical Thinking; Transferability: UC/CSU]

#### ENGL 1C ADVANCED COMPOSITION 4 Units

**Formerly:** ENGL 2

**Prerequisite:** ENGL 1A or ESLL 26.

**Advisory:** Not open to students with credit in ENGL 1CH or 2.  
4 hours lecture

Advanced study and practice of expository and argumentative writing. Focus is on reading and writing assignments from across the disciplines to further improve and refine reading, grammar, composition, and critical thinking skills. Offered Spring Quarters. [Transferability: UC/CSU]

#### ENGL 1CH HONORS ADVANCED COMPOSITION 4 Units

**Prerequisite:** ENGL 1A; Honors Institute participant.

**Advisory:** Not open to students with credit in ENGL 1C or 2.  
4 hours lecture

Advanced study and practice of expository and argumentative writing. Focus on reading and writing assignments from across the disciplines to refine critical reading, rhetoric, writing style, and critical thinking skills. Offered Spring Quarter. Honors section is intensive in content, involving both writing and meta-analysis of complex texts. Includes collaborative evaluations of the content, evidence, organizing principles and style of a variety of texts. Course encourages students to examine assumptions, implications and unintended consequences of rhetorical and content choices. Includes focus on primary sources and the interpretations of these documents in contemporaneous writing. Course expands and enhances the student's ability to write with fluency, effectiveness, and intellectual rigor. [Transferability: UC/CSU]

#### ENGL 3 TECHNICAL WRITING 5 Units

**Advisory:** Eligibility for ENGL 1A.

5 hours lecture.

Preparation of written texts for proposals, presentations, reports, user manuals, handbooks, newsletters, grants and applications, memos, brochures, email, and Internet Web sites. Emphasis on clear, concise language and visual document design. Logical organization and awareness of audience, purpose and process. Effective integration of text, graphics, charts, photos and illustrations. [Transferability: CSU]

#### ENGL 4 JOURNALISM 4 Units

**Prerequisite:** ENGL 1A or ESLL 26.

4 hours lecture.

Introduction to fundamental techniques of contemporary journalism in the information age. Emphasis on clear, accurate, concise writing. Awareness of purpose, process and audience expectations. Journalistic ethics. Practice in drafting, organizing, editing and revising for publication. [Foothill GE: Communication & Analytical Thinking; Transferability: UC/CSU]

#### ENGL 5 GAY & LESBIAN LITERATURE 4 Units

**Advisory:** Eligibility for ENGL 1A; not open to students with credit in ENGL 5H.

4 hours lecture.

Introduction to the history and development of gay and lesbian literature as a continuous theme in the development of mainstream literary traditions and, more recently, as a separate and distinct literary genre. Readings selected to represent a variety of historical periods and contrasting societal attitudes toward same-sex relationships, ranging from ancient Greek and Roman texts to contemporary American poetry, fiction, drama, and non-fiction prose. Emphasis on the emergence of contemporary gay/lesbian literatures and identities in the United States in the twentieth century within the broader context of on-going class, race, gender, religious, political, and aesthetic debates. Offered Fall Quarters. [Foothill GE: United States Cultures & Communities, Humanities; Transferability: UC/CSU]

**ENGL 5H HONORS GAY & LESBIAN LITERATURE 4 Units**

**Prerequisite:** Honors Institute participant.  
**Advisory:** Eligibility for ENGL 1A; not open to students with credit in ENGL 5.  
**4 hours lecture.**

Introduction to the history and development of gay and lesbian literature as a continuous theme in the development of mainstream literary traditions and, more recently, as a separate and distinct literary genre. Readings selected to represent a variety of historical periods and contrasting societal attitudes towards same-sex relationships, ranging from ancient Greek and Roman texts to contemporary American poetry, fiction, drama, and non-fiction prose. Emphasis on the emergence of contemporary gay-lesbian literatures and identities in the United States in the twentieth century within the broader context of ongoing class, race, gender, religious, political, and aesthetic debates. Honors work challenges students to a greater level of sophisticated scholarship through extensive research and literature reviews, critical essays, and opportunities for scholarly presentation. This honors course offers students an enriching and rigorous environment through learner-centered pedagogy, student-generated discussions, and self-directed projects. Students will also actively engage in in-depth analysis and critical evaluation of literary texts. Offered Fall Quarters. [Transferability: UC/CSU]

**ENGL 7 NATIVE AMERICAN LITERATURE 4 Units**

**Advisory:** Eligibility for ENGL 1A; not open to students with credit in ENGL 7H.  
**4 hours lecture.**

Introduction to the history, development, and diversity of Native American literatures from pre-contact civilizations to present-day tribal cultures. Readings in traditional creation myths, songs, and stories from a variety of tribal cultures; nineteenth and twentieth century autobiographical narratives; and significant works of fiction, poetry, and non-fiction prose by contemporary Native American authors. Emphasis on the specific religious, linguistic, historical, political and cultural context of Native American literary achievements. Offered Winter Quarters (rotated with ENGL 40) [Transferability: UC/CSU]

**ENGL 7H HONORS NATIVE AMERICAN LITERATURE 4 Units**

**Prerequisite:** Honors Institute participant.  
**Advisory:** Eligibility for ENGL 1A; not open to students with credit in ENGL 7.  
**4 hours lecture.**

Introduction to the history, development, and diversity of Native American literatures from pre-contact civilizations to present-day tribal cultures. Readings in traditional creation myths, songs, and stories from a variety of tribal cultures; nineteenth and twentieth century autobiographical narratives; and significant works of fiction, poetry, and non-fiction prose by contemporary Native American authors. Emphasis on the specific religious, linguistic, historical, political and cultural context of Native American literary achievements. Honors work challenges students to be more analytical through expanded assignments including, but not limited to, research-driven literature reviews, research essays, and outside enrichment opportunities. The honors course offers motivated students an enriching and rigorous environment by means of a learner-centered pedagogy, student-generated discussions, self-directed yet supervised projects, and the emphasis and application of analysis, synthesis, and evaluation. Offered Winter Quarters (rotated with ENGL 40) [Transferability: UC/CSU]

**ENGL 8 CHILDREN'S LITERATURE 4 Units**

**Advisory:** Eligibility for ENGL 1A.  
**4 hours lecture.**

A survey of children's literature from many periods and cultures, including classics, picture books, folktales, fairy tales, biography, poetry, fantasy and fiction. Emphasis on the ideas, didactic and sociological, reflecting relationships among cultures in America included in books usually read by children. Special emphasis on books that explore the cross-cultural influences of our shared oral tradition and folklore as well as the issues arising from a diverse mix of cultures in the U.S. Offered Fall and Spring Quarters. [Foothill GE: United States Cultures & Communities, Humanities; Transferability: UC/CSU]

**ENGL 11 INTRODUCTION TO POETRY 4 Units**

**Prerequisite:** Eligibility for ENGL 1A.  
**Advisory:** Not open to students with credit in ENGL 11H.  
**4 hours lecture.**

Analysis and discussion of forms, techniques and meanings of poetry, with emphasis on modern examples in English or translation to develop the student's ability to read, understand, and evaluate a poem. Offered Winter Quarters. [Foothill GE: Humanities; Transferability: UC/CSU]

**ENGL 11H HONORS INTRODUCTION TO POETRY 4 Units**

**Prerequisite:** Eligibility for ENGL 1A; Honors Institute participant.  
**Advisory:** Not open to students with credit in ENGL 11.  
**4 hours lecture.**

Analysis and discussion of forms, techniques and meanings of poetry, with emphasis on modern examples in English or translation to develop the student's ability to read, understand, and evaluate a poem. Honors work challenges students to be more analytical through expanded assignments including, but not limited to, research-driven literature reviews, reflection papers, and outside enrichment opportunities. The honors course offers accelerated students an enriching and demanding environment by means of a learner-centered pedagogy, student-generated and student led discussions, self-directed, yet supervised, creative projects, and the emphasis and application of higher-level thinking skills: analysis, synthesis and evaluation. [Transferability: UC/CSU]

**ENGL 12 AFRICAN AMERICAN LITERATURE 4 Units**

**Advisory:** Eligibility for ENGL 1A.  
**4 hours lecture.**

Literature by African Americans beginning in slavery and continuing on into the 20<sup>th</sup> and 21<sup>st</sup> centuries. Discovery of many of the current stereotypes in American cultural mythology about African Americans. Study of the complex and varying forms of resistance and creation African Americans have developed. Definition of issues and strategies in writings from the 19<sup>th</sup>, 20<sup>th</sup> and 21<sup>st</sup> centuries, including audience, identity (self), gender, family, culture, politics, spirituality and language. Offered Winter Quarters. [Foothill GE: United States Cultures & Communities, Humanities; Transferability: UC/CSU]

**ENGL 14 INTRODUCTION TO CONTEMPORARY FICTION 4 Units**

**Advisory:** Eligibility for ENGL 1A.  
**4 hours lecture.**

Selected fiction written between 1950 and the present, with emphasis on English, Canadian, and international works in translation. Students are introduced to various thematic and stylistic trends in contemporary fiction; use of current scientific discoveries, historical theories, religious and cultural developments. Offered Fall Quarters. [Foothill GE: Humanities; Transferability: UC/CSU]

**ENGL 17 INTRODUCTION TO SHAKESPEARE 4 Units**

**Prerequisite:** Eligibility for ENGL 1A.  
**4 hours lecture.**

Detailed analysis of representative sonnets, and history, tragedy, comedy, and romance dramas through lecture and discussion. Consideration of the Elizabethan world. Offered Spring Quarters. [Foothill GE: Humanities; Transferability: UC/CSU]

**ENGL 22 WOMEN WRITERS 4 Units**

**Advisory:** Eligibility for ENGL 1A.  
**4 hours lecture.**

An examination of the works of 19<sup>th</sup> and 20<sup>th</sup> Century multicultural women poets, novelists, dramatists, and essayists and their contribution to English and American literature. Includes independent research and the creation of a major project on author, genre, work or theme. Offered Spring Quarters. [Foothill GE: Humanities; Transferability: UC/CSU]

<p><b>ENGL 23</b>      <b>MODERN ENGLISH: FUNCTION &amp; GRAMMAR</b>      <b>4 Units</b></p> <p><b>Prerequisite:</b> Eligibility for ENGL 1A. <b>Advisory:</b> Not open to students with credit in LING 23. <b>4 hours lecture.</b></p> <p>Introduction to basic linguistic concepts in describing the functions and grammar of present-day English. Focus on grammatical features of standard American English, Black English, and other English varieties as they function in the diverse types of communication between Americans, as well as in global interaction. Analysis of modern English relevant for those interested in refining their English, students of ESL and foreign languages, and prospective writers and language teachers. Offered Winter Quarters. [Foothill GE: Humanities; Transferability: UC/CSU]</p>	<p><b>ENGL 35</b>      <b>SEMINARS IN ENGLISH</b>      <b>1 Unit</b></p> <p><b>ENGL 35X</b>      <b>2 Units</b></p> <p><b>ENGL 35Y</b>      <b>3 Units</b></p> <p><b>ENGL 35Z</b>      <b>4 Units</b></p> <p><b>Prerequisite:</b> ENGL 1A or ESLL 26. <b>Any combination of ENGL 35–35Z may be taken 6 times for credit, however, no single course may be taken more than 6 times for credit.</b> <b>1 hour lecture for each unit of credit.</b> <b>1 hour lecture for each unit of credit.</b></p> <p>A small group seminar of advanced literary research and critical techniques. Discussions and individual writing projects under instructor supervision. Specific topics will vary. Cannot be substituted for any department requirements. [Transferability: CSU]</p>
<p><b>ENGL 25</b>      <b>INTRODUCTION TO DESCRIPTIVE &amp; HISTORICAL LINGUISTICS</b>      <b>4 Units</b></p> <p><b>Prerequisite:</b> Eligibility for ENGL 1A. <b>Advisory:</b> Not open to students with credit in ENGL 25H, LING 25 or 25H. <b>4 hours lecture.</b></p> <p>Introduction to linguistic concepts in the study of structure, pattern, meaning, and change in language, with emphasis on British and American English. Introduction to historical linguistic theory and methods as applied to investigation of origin and development of spoken and written language, with focus on British, Standard American, and Black American English. Offered Fall Quarters. [Foothill GE: Humanities; Transferability: UC/CSU]</p>	<p><b>ENGL 36</b>      <b>INDIVIDUAL PROJECTS IN ENGLISH</b>      <b>1 Unit</b></p> <p><b>ENGL 36X</b>      <b>2 Units</b></p> <p><b>ENGL 36Y</b>      <b>3 Units</b></p> <p><b>ENGL 36Z</b>      <b>4 Units</b></p> <p><b>Advisory:</b> Eligibility for ENGL 1A. <b>Any combination of ENGL 36–36Z may be taken 6 times for credit, however, no single course may be taken more than 6 times for credit.</b> <b>1 hour lecture for each unit of credit.</b></p> <p>Individual research on advanced subject area in English. Conferences and individual readings, writing assignments, and/or projects under instructor supervision. Specific topics will vary. Cannot be substituted for any department requirements. [Transferability: CSU]</p>
<p><b>ENGL 25H</b>      <b>HONORS INTRODUCTION TO DESCRIPTIVE &amp; HISTORICAL LINGUISTICS</b>      <b>4 Units</b></p> <p><b>Prerequisite:</b> Eligibility for ENGL 1A; Honors Institute participant. <b>Advisory:</b> Not open to students with credit in ENGL 25, LING 25, or 25H. <b>4 hours lecture.</b></p> <p>Introduction to linguistic concepts in the study of structure, pattern, meaning, and change in language, with emphasis on British and American English. Introduction to historical linguistic theory and methods as applied to investigation of origin and development of spoken and written language. Honors section offers rigorous preparation in linguistic studies for students intending to transfer to a four-year college or university. Two research or fieldwork projects are required. [Foothill GE: Humanities; Transferability: UC/CSU]</p>	<p><b>ENGL 40</b>      <b>ASIAN AMERICAN LITERATURE</b>      <b>4 Units</b></p> <p><b>Advisory:</b> Eligibility for ENGL 1A. <b>4 hours lecture.</b></p> <p>Introduction to Asian American literature. Readings in 20<sup>th</sup> Century works, with an emphasis on three relevant themes: problems of identity as they relate to class, gender, mixed heritages, and sexuality; politics and the history of Asian American activism and resistance; and diversity of cultures within the Asian American community. Offered Winter Quarters (rotated with ENGL 7). [Transferability: UC/CSU]</p>
<p><b>ENGL 26</b>      <b>LANGUAGE, MIND &amp; SOCIETY</b>      <b>4 Units</b></p> <p><b>Prerequisite:</b> Eligibility for ENGL 1A. <b>Advisory:</b> Not open to students with credit in LING 26. <b>4 hours lecture.</b></p> <p>Introduction to methods of linguistic analysis and basic concepts in psycholinguistics and sociolinguistics. Topics include function of the brain in language acquisition and language loss by mono/bilingual children and adults; role of language in society; language variability in diverse ethnic groups of speakers and diverse social uses; education and language planning. Offered Spring Quarters. [Foothill GE: Humanities; Transferability: UC/CSU]</p>	<p><b>ENGL 41</b>      <b>LITERATURE OF MULTICULTURAL AMERICA</b>      <b>4 Units</b></p> <p><b>Prerequisite:</b> Eligibility for ENGL 1A. <b>4 hours lecture.</b></p> <p>An exploration of American identity, focusing on ethnic, cultural, and national affiliations. Analysis of literary works by Native American, European American, African American, Chicano/Latino, and Asian American writers. Readings selected represent a variety of historical periods and literary genres. Emphasis on issues of assimilation, acculturation, and cultural pluralism as expressed through diverse voices. Offered Spring Quarters (rotated with ENGL 31). [Foothill GE: United States Cultures &amp; Communities; Transferability: UC/CSU]</p>
<p><b>ENGL 31</b>      <b>LATINO/A LITERATURE</b>      <b>4 Units</b></p> <p><b>Advisory:</b> Eligibility for ENGL 1A. <b>4 hours lecture.</b></p> <p>Reading and discussion of Latino/a literature and its relationship to social issues and identity politics of Latinos/as. Critical examination of fiction, poetry, essays, and drama by and about the Latino/a communities, including those of Mexican, Puerto Rican, Cuban, Caribbean, and South and Central American descent. Offered Spring Quarters (rotated with ENGL 41). [Foothill GE: United States Cultures &amp; Communities, Humanities; Transferability: UC/CSU]</p>	<p><b>ENGL 42A</b>      <b>INTRODUCTION TO DRAMATIC LITERATURE</b>      <b>4 Units</b></p> <p><b>Prerequisite:</b> Eligibility for ENGL 1A. <b>Advisory:</b> Not open to students with credit in DRAM 2A or THTR 2A. <b>4 hours lecture.</b></p> <p>Analysis of representative masterpieces of dramatic literature from Aeschylus through the Renaissance Period and including Asian Theatre. [Foothill GE: Humanities; Transferability: UC/CSU]</p>
<p><b>ENGL 34H</b>      <b>HONORS INSTITUTE SEMINAR IN ENGLISH</b>      <b>1 Unit</b></p> <p><b>Formerly:</b> ENGL 34 <b>Prerequisite:</b> Honors Institute participant. <b>May be taken 3 times for credit.</b> <b>1 hour lecture.</b></p> <p>A seminar in directed readings, discussions, and projects in English. Specific topics to be determined by the instructor. [Transferability: CSU; UC credit may be granted after transfer and upon portfolio review.]</p>	<p><b>ENGL 42B</b>      <b>INTRODUCTION TO DRAMATIC LITERATURE</b>      <b>4 Units</b></p> <p><b>Prerequisite:</b> Eligibility for ENGL 1A. <b>Advisory:</b> Not open to students with credit in DRAM 2B or THTR 2B. <b>4 hours lecture.</b></p> <p>Analysis of representative masterpieces of dramatic literature from the Elizabethan Period to the end of the 19<sup>th</sup> Century. [Foothill GE: Humanities; Transferability: UC/CSU]</p>

<b>ENGL 42C</b>	<b>INTRODUCTION TO DRAMATIC LITERATURE</b>	<b>4 Units</b>	Hurston; the radically experimental fiction of Hemingway, Fitzgerald, and Faulkner; the rise of modernist poets such as Eliot, Stevens, and Williams; Beat Generation authors such as Kerouac and Ginsberg; Native American authors such as Momaday and Erdrich; feminist poets such as Plath and Rich; and Asian American writers such as Bulosan and Hong Kingston. Special emphasis on the role of these diverse writers in continuously redefining the nature of American literature in the 20 <sup>th</sup> Century, and thereby reshaping American national identity as the United States becomes a global superpower. Offered Spring Quarters. [Foothill GE: Humanities; Transferability: UC/CSU]
<b>Prerequisite:</b> Eligibility for ENGL 1A. <b>Advisory:</b> Not open to students with credit in DRAM 2C or THTR 2C. <b>4 hours lecture.</b>			
Analysis of representative masterpieces of dramatic literature from the beginning of the 20 <sup>th</sup> Century to the present. [Foothill GE: Humanities; Transferability: UC/CSU]			
<b>ENGL 46A</b>	<b>SURVEY OF ENGLISH LITERATURE</b>	<b>4 Units</b>	
<b>Prerequisite:</b> ENGL 1A or ESLL 26. <b>4 hours lecture.</b>			
Reading and critical analysis of representative works, emphasizing social and cultural backgrounds from Beowulf through Shakespeare, the Metaphysical Poets, and Milton. Offered Fall Quarters. [Foothill GE: Humanities; Transferability: UC/CSU]			
<b>ENGL 46B</b>	<b>SURVEY OF ENGLISH LITERATURE</b>	<b>4 Units</b>	
<b>Prerequisite:</b> ENGL 1A or ESLL 26. <b>4 hours lecture.</b>			
Reading and critical analysis of representative works, emphasizing social and cultural backgrounds, from the Restoration through the 18 <sup>th</sup> Century and Romantic Period. Offered Winter Quarters. [Foothill GE: Humanities; Transferability: UC/CSU]			
<b>ENGL 46C</b>	<b>SURVEY OF ENGLISH LITERATURE</b>	<b>4 Units</b>	
<b>Prerequisite:</b> ENGL 1A or ESLL 26. <b>4 hours lecture.</b>			
Reading and critical analysis of representative works, emphasizing social and cultural backgrounds, from the Victorian to the Modern Period. Offered Spring Quarters. [Foothill GE: Humanities; Transferability: UC/CSU]			
<b>ENGL 48A</b>	<b>SURVEY OF EARLY AMERICAN LITERATURE: 1492–1864</b>	<b>4 Units</b>	
<b>Prerequisite:</b> ENGL 1A or ESLL 26. <b>4 hours lecture.</b>			
Representative works of American literature from Columbus's first voyage in 1492 through the Civil War, focusing on the development of entirely new literary forms, voices, and perspectives which make American literature unique. Selections from Native American myths, legends, and autobiographies; reports of early Spanish explorers; English colonial histories and Puritan poetry; African American slave narratives and poems; Revolutionary War political texts; frontier tall tales; transcendentalist philosophy; gothic short stories; and romantic fiction. Special emphasis on the contributions of diverse cultures in forging American literature and identity. Offered Fall Quarters. [Foothill GE: United States Cultures & Communities, Humanities; Transferability: UC/CSU]			
<b>ENGL 48B</b>	<b>AMERICAN LITERATURE IN THE GILDED AGE: 1865–1914</b>	<b>4 Units</b>	
<b>Prerequisite:</b> ENGL 1A or ESLL 26. <b>4 hours lecture.</b>			
Introduction to representative works of multicultural American Literature in the wake of the Civil War (1865–1914) including satirical works by Mark Twain; the experimental poetry of Walt Whitman and Emily Dickinson; autobiographical and political texts by African American leaders Booker T. Washington and W.E.B. Dubois; Mexican vaquero fiction; early Asian American texts; and Native American autobiographies. Emphasis on the radical innovations in literary forms, themes, language, and philosophy which shaped America's new identity as an emerging world power within a period of fierce conflicts within American society over race, class, and gender roles. Offered Winter Quarters. [Foothill GE: United States Cultures & Communities, Humanities; Transferability: UC/CSU]			
<b>ENGL 48C</b>	<b>MODERN AMERICAN LITERATURE: 1914–PRESENT</b>	<b>4 Units</b>	
<b>Prerequisite:</b> ENGL 1A or ESLL 26. <b>4 hours lecture.</b>			
Introduction to multicultural American Literature in the Modern Age (1914–present) with emphasis on the courageous contributions and literary innovations of diverse authors of Asian American, African American, Anglo American, Latino American, and Native American heritage, including Harlem Renaissance authors such as Hughes and			
<b>ENGL 50</b>	<b>SPECIAL TOPICS IN ENGLISH</b>	<b>4 Units</b>	
<b>Formerly:</b> ENGL 30 <b>Advisory:</b> Eligibility for ENGL 1A. <b>May be taken 2 times for credit.</b> <b>4 hours lecture.</b>			
Intensive study of selected special topics in language and literature. Subjects vary from quarter to quarter. Consult current schedule for exact title. [Transferability: CSU]			
<b>ENGL 54</b>	<b>PROFESSIONAL WRITING SKILLS</b>	<b>4 Units</b>	
<b>Prerequisite:</b> Eligibility for ENGL 1A. <b>4 hours lecture.</b>			
Instruction in professional writing skills, small group and/or individualized internet course; covers eight complex sentence patterns, along with grammatical background and punctuation rules; conciseness in writing; and style and voice for professional writers. Skills applied to writing projects for both college courses and the workplace. Offered Winter Quarters. [Transferability: CSU]			
<b>ENGL 56</b>	<b>WRITING COLLEGE TRANSFER ESSAYS</b>	<b>1 Unit</b>	
<b>Formerly:</b> ENGL 156 <b>Advisory:</b> Eligibility for ENGL 1A. <b>May be taken 3 times for credit.</b> <b>1 hour lecture.</b>			
A course designed for college-level writers to help them complete a satisfactory college transfer essay. Emphasis on projecting a personal voice and writing for a specific audience. [Transferability: CSU]			
<b>ENGL 80</b>	<b>INTRODUCTION TO TRAVEL WRITING</b>	<b>4 Units</b>	
<b>Advisory:</b> Eligibility for ENGL 1A. <b>4 hours lecture.</b>			
Techniques and practice of advanced expository writing techniques with a focus on travel writing including narrative structures, reportage and ethnography. Formal instruction in critical thinking and focused reflection on travel experiences. Includes discussion on a broad spectrum of ideas and cultural experiences including publication markets. [Transferability: CSU]			
<b>ENGL 85A</b>	<b>LITERATURE ON LOCATION</b>	<b>1 Unit</b>	
<b>Formerly:</b> ENGL 180A <b>Advisory:</b> Eligibility for ENGL 1A. <b>May be taken 3 times for credit.</b> <b>1 hour lecture.</b>			
Lecture and discussion of selected short stories, novellas, novels, plays, poems, or memoirs. Course may focus on particular theme(s), contemporary social issues, cultural communities, authors, time periods, literary genres, forms, aesthetics. [Transferability: CSU]			
<b>ENGL 85B</b>	<b>LITERATURE ON LOCATION</b>	<b>1 Unit</b>	
<b>Formerly:</b> ENGL 180B <b>Advisory:</b> Eligibility for ENGL 1A. <b>May be taken 3 times for credit.</b> <b>1 hour lecture.</b>			
Lecture and discussion of selected short stories, novellas, novels, plays, poems, or memoirs. Course may focus on particular theme(s), contemporary social issues, cultural communities, authors, time periods, literary genres, forms, aesthetics. [Transferability: CSU]			

**ENGL 85C LITERATURE ON LOCATION 1 Unit**  
**Formerly: ENGL 180C**  
**Advisory: Eligibility for ENGL 1A.**  
**May be taken 3 times for credit.**  
**1 hour lecture.**  
 Lecture and discussion of selected short stories, novellas, novels, plays, poems, or memoirs. Course may focus on particular theme(s), contemporary social issues, cultural communities, authors, time periods, literary genres, forms, aesthetics. [Transferability: CSU]

**ENGL 85D LITERATURE ON LOCATION 1 Unit**  
**Formerly: ENGL 180D**  
**Advisory: Eligibility for ENGL 1A.**  
**May be taken 3 times for credit.**  
**1 hour lecture.**  
 Lecture and discussion of selected short stories, novellas, novels, plays, poems, or memoirs. Course may focus on particular theme(s), contemporary social issues, cultural communities, authors, time periods, literary genres, forms, aesthetics. [Transferability: CSU]

**ENGL 100 INTRODUCTION TO COLLEGE READING 5 Units**  
**Non-degree applicable credit course.**  
**Advisory: Not open to students with credit in ENGL 108.**  
**5 hours lecture.**  
 Techniques of critical analysis for reading-college level prose, focusing primarily on expository/argumentative essays and textbook materials. Students learn to comprehend text holistically, identifying and expressing critical elements of comprehension. Practice and testing to be done on authentic text of one or more page length and with written responses. Lecture, discussion, group work, and individualized instruction. Students who do not meet all of the expected outcomes of this course may be assigned a grade and units of credit in ENGL 205 and should repeat ENGL 100. Open laboratory can be access to Academic Skills courses, English Writing Center, on-line resources, or, if assigned by instructor, individual/collaborative activities related to course.

**ENGL 104A NARRATIVE READING & WRITING: PUENTE 5 Units**  
**Advisory: Not open to students with credit in ENGL 108 or 100.**  
**5 hours lecture.**  
 Introduction to short narrative forms of college-level reading and writing: (auto)biography, narrative reporting, story-telling, interviews, summary, testimonials. Materials used to be theme-based from Latino/Mexican American authors. Narrative structure used to teach the fundamentals of analytical reading and writing. Lecture, discussion, group work, and individualized instruction. Students who do not meet all of the expected outcomes of this course may be assigned a grade and units of credit in ENGL 205 and should repeat ENGL 104A or ENGL 100/110 sequence.

**ENGL 104B ANALYTICAL READING & WRITING: PUENTE 5 Units**  
**Prerequisite: ENGL 104A.**  
**Advisory: Not open to students with credit in ENGL 108 or 110.**  
**5 hours lecture.**  
 Introduction to short analytical forms of college-level reading and writing: essays, critiques, editorials, reports, summary, commentary. Materials used to be theme-based from Latino/Mexican American authors. Lecture, discussion, group work, and individualized instruction. Students who do not meet all of the expected outcomes of this course may be assigned a grade and units of credit in ENGL 215 and should repeat ENGL 104B or ENGL 100/110 sequence.

**ENGL 108 READING & WRITING ON SPECIAL TOPICS 10 Units**  
**Non-degree applicable credit course.**  
**Prerequisite: Must be eligible for both ENGL 100 and 110 based on assessment information.**  
**Advisory: Not open to students who have completed ENGL 100 and/or 110.**  
**10 hours lecture.**  
 Course offers a team-taught collaborative approach to introduce students to college-level reading and writing skills. Class time is equally divided between critical reading applied to a themed collection of prose, e.g.

textbook material, fiction, and expository/persuasive articles; and the creation of college-level essays and papers which use the themed readings as source material. Vocabulary and grammar skills are covered within the context of the readings and writing projects. Class format can include lecture, discussion, group projects, and individualized instruction. Students not meeting expected outcomes may be assigned an alternate credit grade.

**ENGL 110 INTRODUCTION TO COLLEGE WRITING 5 Units**  
**Prerequisite: Eligibility based on assessment or successful completion of ENGL 100.**  
**Advisory: Not open to students with credit in ENGL 108.**  
**5 hours lecture.**  
 Explicit instruction and practice in writing expository essays, emphasizing clear sentence structure and logical development. Assignments include summary and synthesis of texts, critical analysis, as well as personal writing. Instruction includes rules of and practice on punctuation skills. Lecture, discussion, collaborative, and individualized instruction. Students not meeting all expected outcomes may be assigned a grade and units of credit in ENGL 215 and should repeat ENGL 110. Open laboratory can be access to Academic Skills courses, English Writing Center, on-line resources, or, if assigned by instructor, individual/collaborative activities related to course.

**ENGL 114 PRODUCING A STUDENT NEWSPAPER 2 Units**  
**Prerequisite: Eligibility for ENGL 1A.**  
**May be taken 6 times for credit.**  
**2 hours lecture, 1 hour laboratory.**  
 Conception, writing, editing, and publication of articles for a college student newspaper; learning of key concepts regarding journalism procedures, laws, and ethics; performance of auxiliary duties such as advertising, sales, and distribution.

**ENGL 190 DIRECTED STUDY .5 Unit**  
**ENGL 190X 1 Unit**  
**Non-degree applicable credit course.**  
**Advisory: Pass/No Pass.**  
 Any combination of ENGL 190 & 190X may be taken 6 times for credit, however, no single course may be taken more than 6 times for credit.  
**1 hour lecture-laboratory for each. 5 unit of credit.**  
 For students who desire or require additional help in attaining comprehension and competency in learning skills; non-transferable course.

**ENGL 205 ALTERNATE CREDIT READING SKILLS 5 Units**  
**Non-degree applicable credit course.**  
**Corequisite: ENGL 100 or 108.**  
**May be taken 2 times for credit.**  
**5 hours lecture.**  
 Designed to allow students enrolled in ENGL 100 or 108 to receive credit for mastery of some but not all of the outcomes of ENGL 100 (or the reading portion of 108). Students are required to attend the ENGL 100 or 108 course, turn in all work, and participate in the other tasks of the class. Does not meet the Foothill College reading requirement.

**ENGL 215 ALTERNATE CREDIT WRITING SKILLS 5 Units**  
**Non-degree applicable credit course.**  
**Corequisite: ENGL 110 or 108.**  
**May be taken 2 times for credit.**  
**5 hours lecture.**  
 Designed to allow students enrolled in ENGL 110 or 108 to receive credit for mastery of some but not all of the outcomes of ENGL 110 (or the writing portion of ENGL 108). Students are required to attend the ENGL 110 or 108 course, turn in all work, and participate in the other tasks of the class. Does not meet the Foothill College writing requirement.

## ENGLISH FOR SECOND LANGUAGE LEARNERS

Language Arts

(650) 949-7250  
www.foothill.edu/la/

### ESLL 25 COMPOSITION & READING 5 Units

**Formerly: ESL 257**

**Prerequisite:** Appropriate placement test score or a grade of "C" or better in ESLL 236 and ESLL 237; designed for students whose native language is not English.

**Advisory:** Completion of, or concurrent enrollment in ESLL 235 strongly recommended; concurrent enrollment in ESLL 246 and/or 247 strongly recommended; not open to students with credit in ESL 257.  
5 hours lecture.

Development of critical reading skills using selected readings which present a range of cultural experiences and perspectives. Practice in writing expository essays based on personal experience, observations, and class readings with a review of acceptable English sentence structure. Open laboratory for feedback on essays and individualized assistance with specific writing problems. Does not fulfill the composition requirements for the A.A. degree. [Transferability: UC/CSU]

### ESLL 26 ADVANCED COMPOSITION & READING 5 Units

**Formerly: ESL 26**

**Prerequisite:** Appropriate placement test score or a grade of "C" or better in ESLL 25; designed for students whose native language is not English.

**Advisory:** Concurrent enrollment in ESLL 246 and/or 247 strongly recommended; not open to students with credit in ESL 26.

**Corequisite:** Completion of, or concurrent enrollment in ESLL 235.  
5 hours lecture.

The techniques and practice of expository and argumentative writing based on critical reading and thinking. Reading focused on essays and articles, chosen to represent a broad spectrum of opinions and ideas, writing styles, and cultural experiences and perspectives. Research paper synthesizing information from a range of current sources to form a persuasive argument. Open laboratory for feedback on essays and individualized assistance with specific writing problems. Fulfills the composition requirement for the A.A. degree. [Foothill GE: English; Transferability: UC/CSU]

### ESLL 200A FOUNDATIONS IN ENGLISH AS A SECOND LANGUAGE I 8 Units

**Formerly: ESL 200A**

Non-degree applicable basic skills course.

**Advisory:** Not open to students with credit in ESL 200A.  
8 hours lecture.

This is Part One of an integrated skills, foundation course for learners of English as an additional language. The focus of this course is on developing a basic level of grammar and vocabulary through listening, speaking, reading and writing so that learners can communicate with other English speakers in and outside of the classroom.

### ESLL 200B FOUNDATIONS IN ENGLISH AS A SECOND LANGUAGE II 8 Units

**Formerly: ESL 200B**

Non-degree applicable basic skills course.

**Prerequisite:** ESLL 200A.

**Advisory:** Not open to students with credit in ESL 200B.  
8 hours lecture.

This is Part Two of an integrated skills, foundation course for learners of English as an additional language. The focus of this course is on continuing to develop a basic level of grammar and vocabulary through listening, speaking, reading and writing so that learners can communicate with other English speakers in and outside of the classroom.

### ESLL 210A FOUNDATIONS IN ENGLISH AS A SECOND LANGUAGE III 8 Units

**Formerly: ESL 210A**

Non-degree applicable basic skills course.

**Prerequisite:** Appropriate placement test score or a grade of "C" or better in ESLL 200B.

**Advisory:** Not open to students with credit in ESL 210A.  
8 hours lecture.

This class is the first half of Level Two of an integrated skills, foundation course for learners of English as an additional language who already have a basic level of speaking, listening, reading and writing. The focus of this course is help learners advance in their development of grammar and vocabulary through listening, speaking, reading and writing.

### ESLL 210B FOUNDATIONS IN ENGLISH AS A SECOND LANGUAGE IV 8 Units

**Formerly: ESL 210B**

**Prerequisite:** ESLL 210A.

**Advisory:** Not open to students with credit in ESL 210B.  
8 hours lecture.

This is the second half of Level Two of an integrated skills, foundation course for learners of English as an additional language who already have a basic level of speaking, listening, reading and writing. The focus of this course is help learners advance in their development of grammar and vocabulary through listening, speaking, reading and writing.

### ESLL 225 DEVELOPING LISTENING/ SPEAKING SKILLS 5 Units

**Formerly: ESL 155**

Non-degree applicable credit course.

**Prerequisite:** Appropriate placement score or successful completion of ESLL 210B.

**Advisory:** Not open to students with credit in ESL 155.  
5 hours lecture.

Development of ability to listen to everyday English and to participate in everyday conversations. Introduction to academic listening and classroom interactional skills, discussion skills and the language of group work dynamics. Pronunciation work to develop clear speech and comprehension of naturally spoken English. Reading and writing tasks related to listening and speaking.

### ESLL 226 HIGH-INTERMEDIATE GRAMMAR 5 Units

**Formerly: ESL 156**

Non-degree applicable credit course.

**Prerequisite:** Appropriate placement test score or successful completion of ESLL 210A.

**Advisory:** Concurrent enrollment in ESLL 227; not open to students with credit in ESL 156.

5 hours lecture.

Continuation of ESLL 210B. A high-intermediate English course for non-native speakers focusing on comprehension, communication, and grammatical accuracy. Emphasis on understanding and communication of new information, conjectures, and logical relationships in spoken and written contexts. Computer or workbook activities to reinforce knowledge of structures.

### ESLL 227 HIGH-INTERMEDIATE READING SKILLS 5 Units

**Formerly: ESL 157**

Non-degree applicable credit course.

**Prerequisite:** Appropriate placement test score or successful completion of ESLL 210B.

**Advisory:** Concurrent enrollment in ESLL 226; designed for students whose native language is not English; not open to students with credit in ESL 157.

5 hours lecture.

Continuation of ESLL 210B. An upper intermediate-level reading course focusing on higher level comprehension skills and strategies for dealing with pre-college-level reading. Computer and/or workbook activities to reinforce knowledge of material and skills.

**ESLL 228 DEVELOPING LANGUAGE SKILLS FOR INTERNATIONAL STUDENTS 10 Units**

**Formerly: ESL 158**

Non-degree applicable basic skills course.

**Prerequisite:** TOEFL score of 475 to 499; restricted to international students whose native language is not English.

**Advisory:** Not open to students with credit in ESL 158.

10 hours lecture.

A high intermediate/low-advanced course in grammar, writing, reading, and speaking for international students who are about to enter a college academic program. Designed to improve students language skills.

**ESLL 235 LISTENING/SPEAKING FOR ACADEMIC PURPOSES 5 Units**

**Formerly: ESL 165**

Non-degree applicable credit course.

**Prerequisite:** Appropriate placement test score or successful completion of ESLL 225.

**Advisory:** Successful completion of ESLL 226 and 227 strongly recommended; designed for students whose native language is not English; not open to students with credit in ESL 165.

5 hours lecture.

A listening/speaking course focusing on preparing students for listening to authentic lectures and classroom discussions. Practice with classroom interactional, discussion and presentation skills. Pronunciation work to develop intelligible speech and ability to comprehend naturally spoken English in academic contexts. Level appropriate reading and writing tasks in connection with these activities.

**ESLL 236 ADVANCED GRAMMAR 5 Units**

**Formerly: ESL 166**

Non-degree applicable credit course.

**Prerequisite:** Appropriate placement test score or successful completion of ESLL 226 and 227, or ESL 154.

**Advisory:** Concurrent enrollment in ESLL 237; designed for students whose native language is not English. Not open to students with credit in ESL 166.

5 hours lecture.

Continuation of ESLL 225. An advanced English course for non-native speakers focusing on comprehension, communication and grammatical accuracy. Emphasis on understanding and communication of abstract ideas as well as concrete new information in spoken and written contexts. Computer or workbook activities to reinforce knowledge of structures.

**ESLL 237 BASIC COMPOSITION SKILLS 5 Units**

**Formerly: ESL 167**

Non-degree applicable credit course.

**Prerequisite:** Appropriate placement test score or a grade of "C" or better in ESLL 226 and 227 or ESL 154.

**Advisory:** Designed for students whose native language is not English; not open to students with credit in ESL 167.

**Corequisite:** Concurrent enrollment in or a grade of "C" or better in ESLL 236.

5 hours lecture.

A basic course for non-native speakers focusing on techniques of college writing, emphasizing clear prose. Lecture, discussion, and individualized instruction. Emphasis on the production of short compositions containing well-developed paragraphs and a variety of standard English sentences. Open laboratory for feedback on essays and individualized assistance with specific writing problems. Does not meet the graduation requirement in composition.

**ESLL 246 APPLIED GRAMMAR & EDITING SKILLS 3 Units**

**Formerly: ESL 176**

Non-degree applicable credit course.

**Prerequisite:** Completion of ESLL 236 or an appropriate score on the ESL placement test.

**Corequisites:** ESLL 25, 26, ENGL 110, 1A or 1B.

May be taken 3 times for credit.

3 hours lecture.

Identify and edit for patterns of grammatical errors in original writing. Develop individual error profile. Address pertinent grammar issues through review of grammatical rules, various grammar exercises, and editing of sample papers and original work.

**ESLL 247 ADVANCED VOCABULARY DEVELOPMENT FOR READING & WRITING 3 Units**

**Formerly: ESL 177**

Non-degree applicable credit course.

**Prerequisite:** Appropriate placement test score or successful completion of ESLL 236 and 237.

**Advisory:** Designed for students whose native language is not English.

May be taken 3 times for credit.

3 hours lecture.

Expansion of academic vocabulary to meet the specific vocabulary needs for students in an academic setting. Multiple exposures to target words in meaningful contexts and rich information about each word. May be repeated one time as course content changes.

**ESLL 248 ADVANCED GRAMMAR REVIEW 3 Units**

**Formerly: ESL 186**

Non-degree applicable credit course.

**Prerequisite:** ESLL 236 or an appropriate score on the ESL Placement Test.

May be taken 3 times for credit.

3 hours lecture.

A review of essential grammar and greater in-depth examination of grammatical and lexical structures used in academic and professional writing designed for nonnative speakers of English. This course is delivered entirely online.

**ESLL 261A ALTERNATE CREDIT: FOUNDATIONS IN ENGLISH AS A SECOND LANGUAGE I 8 Units**

**Formerly: ESL 261A**

Non-degree applicable credit course.

May be taken 2 times for credit.

8 hours lecture.

This course is designed to allow students enrolled in ESLL 200A to receive credit for mastery of some but not all of the outcomes of ESLL 200A. Students are required to attend ESLL 200A, turn in all work, and participate in the other tasks of the class.

**ESLL 262A ALTERNATE CREDIT: FOUNDATIONS IN ENGLISH AS A SECOND LANGUAGE III 8 Units**

**Formerly: ESL 262A**

Non-degree applicable credit course.

May be taken 2 times for credit.

8 hours lecture.

This course is designed to allow students enrolled in ESLL 210A to receive credit for mastery of some but not all of the outcomes of ESLL 210A. Students are required to attend ESLL 210A, turn in all work, and participate in the other tasks of the class.

<p><b>ESLL 265</b>      <b>ALTERNATIVE CREDIT: DEVELOPING LISTENING/SPEAKING SKILLS</b>      <b>5 Units</b></p> <p><i>Formerly: ESL 255</i>  Non-degree applicable basic skills course.  Advisory: Pass/No Pass.  May be taken 2 times for credit.  5 hours lecture.  Course is designed to allow students enrolled in ESLL 225 to receive credit for mastery of some but not all of the outcomes of ESLL 225. Students are required to attend the ESLL 225 course, turn in all work, and participate in the other tasks of the class.</p>	<p><b>ESLL 286</b>      <b>ALTERNATIVE CREDIT: APPLIED GRAMMAR &amp; EDITING SKILLS</b>      <b>3 Units</b></p> <p><i>Formerly: ESL 276</i>  Non-degree applicable basic skills course.  Advisory: Pass/No Pass.  May be taken 2 times for credit.  3 hours lecture.  Course is designed to allow students enrolled in ESLL 246 to receive credit for mastery of some but not all of the outcomes of ESLL 246. Students are required to attend the ESLL 246 course, turn in all work, and participate in the other tasks of the class.</p>
<p><b>ESLL 266</b>      <b>ALTERNATE CREDIT: HIGH-INTERMEDIATE GRAMMAR</b>      <b>5 Units</b></p> <p><i>Formerly: ESL 256</i>  Non-degree applicable basic skills course.  Advisory: Pass/No Pass.  May be taken 2 times for credit.  5 hours lecture.  Course is designed to allow students enrolled in ESLL 226 to receive credit for mastery of some but not all of the outcomes of ESLL 226. Students are required to attend the ESLL 226 course, turn in all work, and participate in the other tasks of the class.</p>	<p><b>ESLL 287</b>      <b>ALTERNATE CREDIT: ADVANCED VOCABULARY DEVELOPMENT FOR READING/WRITING</b>      <b>3 Units</b></p> <p><i>Formerly: ESL 277</i>  Non-degree applicable basic skills course.  Advisory: Pass/No Pass.  May be taken 2 times for credit.  3 hours lecture.  Course is designed to allow students enrolled in ESLL 247 to receive credit for mastery of some but not all of the outcomes of ESLL 247. Students are required to attend the ESLL 247 course, turn in all work, and participate in the other tasks of the class.</p>
<p><b>ESLL 267</b>      <b>ALTERNATE CREDIT: HIGH-INTERMEDIATE READING SKILLS</b>      <b>5 Units</b></p> <p><i>Formerly: ESL 257</i>  Non-degree applicable basic skills course.  Advisory: Pass/No Pass.  May be taken 2 times for credit.  5 hours lecture.  Course is designed to allow students enrolled in ESLL 227 to receive credit for mastery of some but not all of the outcomes of ESLL 227. Students are required to attend the ESLL 227 course, turn in all work, and participate in the other tasks of the class. Library and lab work for extensive reading and vocabulary development.</p>	<p><b>ESLL 288</b>      <b>ALTERNATE CREDIT: ADVANCED GRAMMAR REVIEW</b>      <b>3 Units</b></p> <p><i>Formerly: ESL 286</i>  Non-degree applicable basic skills course.  Prerequisite: ESLL 236 or an appropriate score on the ESL Placement Test.  Advisory: Pass/No Pass.  May be taken 2 times for credit.  3 hours lecture.  Course is designed to allow students enrolled in ESLL 248 to receive credit for mastery of some but not all of the outcomes of ESLL 248. Students are required to attend the ESLL 248 course, turn in all work, and participate in the other tasks of the class.</p>
<p><b>ESLL 275</b>      <b>ALTERNATIVE CREDIT: LISTENING/SPEAKING FOR ACADEMIC PURPOSES</b>      <b>5 Units</b></p> <p><i>Formerly: ESL 265</i>  Non-degree applicable basic skills course.  Advisory: Pass/No Pass.  May be taken 2 times for credit.  5 hours lecture.  Course is designed to allow students enrolled in ESLL 235 to receive credit for mastery of some but not all of the outcomes of ESLL 235. Students are required to attend the ESLL 235 course, turn in all work, and participate in the other tasks of the class.</p>	<p><b>ESLL 295</b>      <b>ALTERNATE CREDIT: COMPOSITION &amp; READING</b>      <b>5 Units</b></p> <p><i>Formerly: ESL 225</i>  Non-degree applicable basic skills course.  Advisory: Pass/No Pass  May be taken 2 times for credit.  5 hours lecture.  Course is designed to allow students enrolled in ESLL 25 to receive credit for mastery of some but not all of the outcomes of ESLL 25. Students are required to attend the ESLL 25 course, turn in all work, and participate in the other tasks of the class. Open laboratory for feedback on essays and individualized assistance with specific writing problems. Does not meet the Foothill College composition requirements for the A.A. degree.</p>
<p><b>ESLL 276</b>      <b>ALTERNATIVE CREDIT: ADVANCED GRAMMAR</b>      <b>5 Units</b></p> <p><i>Formerly: ESL 266</i>  Non-degree applicable basic skills course.  Advisory: Pass/No Pass.  May be taken 2 times for credit.  5 hours lecture.  Course is designed to allow students enrolled in ESLL 236 to receive credit for mastery of some but not all of the outcomes of ESLL 236. Students are required to attend the ESLL 236 course, turn in all work, and participate in the other tasks of the class.</p>	<p><b>ESLL 296</b>      <b>ALTERNATE CREDIT: ADVANCED COMPOSITION &amp; READING</b>      <b>5 Units</b></p> <p><i>Formerly: ESL 226</i>  Non-degree applicable basic skills course.  Advisory: Pass/No Pass  May be taken 2 times for credit.  5 hours lecture.  Course is designed to allow students enrolled in ESLL 26 to receive credit for mastery of some but not all of the outcomes of ESLL 26. Students are required to attend the ESLL 26 course, turn in all work, and participate in the other tasks of the class. Open laboratory for feedback on essays and individualized assistance with specific writing problems.</p>
<p><b>ESLL 277</b>      <b>ALTERNATIVE CREDIT: BASIC COMPOSITION SKILLS</b>      <b>5 Units</b></p> <p><i>Formerly: ESL 267</i>  Non-degree applicable basic skills course.  Advisory: Pass/No Pass.  May be taken 2 times for credit.  5 hours lecture.  Course is designed to allow students enrolled in ESLL 237 to receive credit for mastery of some but not all of the outcomes of ESLL 237. Students are required to attend the ESLL 237 course, turn in all work, and participate in the other tasks of the class. Open laboratory for feedback on essays and individualized assistance with specific writing problems.</p>	

## ENVIRONMENTAL HORTICULTURE & DESIGN

Biological & Health Sciences (650) 949-7249  
www.foothill.edu/bio/programs/hort/

### HORT 10 ENVIRONMENTAL HORTICULTURE & THE URBAN LANDSCAPE 5 Units

4 hours lecture, 3 hours laboratory.

Environmental horticulture encompasses the planning, design, construction, and management of the urban landscape. Relevant topics include ecosystem restoration and management, landscape ecology, sustainable landscape management, sustainable use of natural resources, urban horticulture, and urban landscape design. [Foothill GE: Natural Sciences; Transferability: UC/CSU]

### HORT 50A ORIENTATION TO ENVIRONMENTAL HORTICULTURE 4 Units

3.5 hours lecture, 1.5 hours laboratory.

Survey of the many facets and component sciences of environmental horticulture. Exploration of the multitude of career options available in the green industry. An introduction to the vocabulary of the environmental sciences including the terminology used in the identification of plants. Foundations of plant science such as plant structure, plant growth, and the environmental needs of plants. [Transferability: UC/CSU]

### HORT 51A PLANT MATERIALS I 3 Units

Advisory: Completion of, or concurrent enrollment in HORT 50A strongly recommended.

2 hours lecture, 3 hours laboratory.

Identification, taxonomy, habits of growth, cultural and environmental requirements of woody plants grown in California. Emphasis on the use and maintenance of evergreen broadleaf trees in the landscape. Plants are observed in lab, on campus, and at off-site locations. [Transferability: UC/CSU]

### HORT 51B PLANT MATERIALS II 3 Units

Advisory: Completion of, or concurrent enrollment in HORT 50A strongly recommended.

2 hours lecture, 3 hours laboratory.

Identification, taxonomy, habits of growth, cultural and environmental requirements of woody plants grown in California. Emphasis on the use and maintenance of evergreen and deciduous shrubs in the landscape. Plants are observed in lab, on campus, and at off-site locations. [Transferability: UC/CSU]

### HORT 51C PLANT MATERIALS: ANNUALS 2 Units

Advisory: Completion of, or concurrent enrollment in HORT 50A strongly recommended.

1 hour lecture, 3 hours laboratory.

Identification, taxonomy, habits of growth, cultural and environmental requirements of herbaceous plants grown in California. Emphasis on the use and maintenance of herbaceous annual plants with significant features such as flower and foliage displays. Plants are observed in lab, on campus, and at off-site locations. [Transferability: UC/CSU]

### HORT 51D PLANT MATERIALS: CALIFORNIA NATIVE PLANTS 2 Units

Advisory: Completion of, or concurrent enrollment in HORT 50A strongly recommended.

1 hour lecture, 3 hours laboratory.

Identification, taxonomy, habits of growth, cultural and environmental requirements of plants native to California landscapes. Emphasis on a wide variety of native species including trees, shrubs, ground covers, and herbaceous plants. Plants are observed in lab, on campus, and at off-site locations. [Transferability: CSU]

### HORT 51E PLANT MATERIALS: GROUND COVERS & VINES 2 Units

Advisory: Completion of, or concurrent enrollment in HORT 50A strongly recommended.

1 hour lecture, 3 hours laboratory.

Identification, taxonomy, habits of growth, cultural and environmental requirements of woody and herbaceous ground covers and vines grown in California. Emphasis on the use and maintenance of evergreen and

deciduous plants used as ground covers, vines, or espaliers in ornamental landscapes. Plants are observed in lab, on campus, and at off-site locations. [Transferability: CSU]

### HORT 51F PLANT MATERIALS: BAMBOOS & PALMS 2 Units

Advisory: Completion of, or concurrent enrollment in HORT 50A strongly recommended.

1 hour lecture, 3 hours laboratory.

Identification, taxonomy, habits of growth, cultural and environmental requirements of bamboos and palms grown in California. Emphasis on the use and maintenance of these two categories of monocots, each with markedly different forms. Plants are observed in lab, on campus, and at off-site locations. [Transferability: CSU]

### HORT 51G PLANT MATERIALS: INTERIOR & TROPICAL PLANTS 2 Units

Advisory: Completion of, or concurrent enrollment in HORT 50A strongly recommended.

1 hour lecture, 3 hours laboratory.

Identification, taxonomy, habits of growth, cultural and environmental requirements of interior and tropical plants. Emphasis on the use and maintenance of interior and tropical plants grown in greenhouses or used in indoor residential or commercial settings. Plants are observed in lab, on campus, and at off-site locations. [Transferability: CSU]

### HORT 51H PLANT MATERIALS: PERENNIALS & ANNUALS 2 Units

Advisory: Completion of, or concurrent enrollment in HORT 50A strongly recommended.

1 hour lecture, 3 hours laboratory.

Identification, taxonomy, habits of growth, cultural and environmental requirements of herbaceous plants grown in California. Emphasis on the use and maintenance of significant perennial and annual species with significant features such as flower and foliage displays. Plants are observed in lab, on campus, and at off-site locations. [Transferability: CSU]

### HORT 51J PLANT MATERIALS: CACTI & SUCCULENTS 2 Units

Advisory: Completion of, or concurrent enrollment in HORT 50A strongly recommended.

1 hour lecture, 3 hours laboratory.

Identification, taxonomy, habits of growth, cultural and environmental requirements of plants grown in California. Emphasis on the use and maintenance of cacti and succulents with significant design features and landscape uses. Plants are observed in lab, on campus, and at off-site locations. [Transferability: CSU]

### HORT 52A HORTICULTURAL PRACTICES: SOILS 3 Units

Advisory: Completion of, or concurrent enrollment in HORT 50A.

2 hours lecture, 3 hours laboratory.

Fundamentals of soil science including examination of soil formation, physical and chemical properties of soil, relationships between soil, water and plants, and biological factors of soil. Examination of soil samples and interpretation of soil reports and surveys. Basics of plant fertility requirements and soil related topics such as composting, environmental issues, and soils in construction. [Transferability: UC/CSU]

### HORT 52B HORTICULTURAL PRACTICES: PLANT PROPAGATION 3 Units

Advisory: Completion of, or concurrent enrollment in HORT 50A strongly recommended.

2 hours lecture, 3 hours laboratory.

Principles of plant propagation with an emphasis on techniques that are used in the nursery and greenhouse industries. Seeds, cuttings, grafting techniques, and the separation and division of specialized structures. [Transferability: CSU]

<p><b>HORT 52C</b>      <b>HORTICULTURE PRACTICES: PLANT INSTALLATION &amp; MAINTENANCE</b>      <b>3 Units</b></p> <p><b>Advisory:</b> HORT 50A strongly recommended.  <b>2 hours lecture, 3 hours laboratory.</b>  Horticultural principles and practices for management of plants and gardens. Proper selection and maintenance of trees, shrubs, and ground covers. Fine gardening techniques used by landscape gardeners. Transplanting and planting containerized and boxed plant material. Preparation of planting areas and post-planting care of landscape plants. Techniques for pruning of various species. Operation of equipment and tools used in gardening. [Transferability: CSU]</p>	<p><b>HORT 54C</b>      <b>LANDSCAPE CONSTRUCTION: IRRIGATION PRACTICES</b>      <b>3 Units</b></p> <p><b>2.5 hours lecture, 1.5 hours laboratory.</b>  Methods and materials used in the irrigation of ornamental landscapes. Selection of materials and operational theory of irrigation equipment. Installation techniques for sprinkler and drip irrigation systems. Water conservation features and maintenance of irrigation systems. [Transferability: CSU]</p>
<p><b>HORT 52E</b>      <b>HORTICULTURAL PRACTICES: GREENHOUSE &amp; NURSERY MANAGEMENT</b>      <b>3 Units</b></p> <p><b>Advisory:</b> Completion of, or concurrent enrollment in HORT 50A strongly recommended.  <b>2 hours lecture, 3 hours laboratory.</b>  Commercial greenhouse and nursery management practices as related to the production and sale of plants in California. Emphasis on greenhouse and container nursery operations. Class will focus on organization, management, and production practices used in large and small-scale commercial plant production. Design of facilities and use of technology will be emphasized through use of on-campus facilities and observation of off-site operations. [Transferability: CSU]</p>	<p><b>HORT 54D</b>      <b>LANDSCAPE CONSTRUCTION: APPLIED PRACTICES</b>      <b>2 Units</b></p> <p><b>Advisory:</b> HORT 54A strongly recommended.  <b>May be taken 3 times for credit.</b>  <b>1 hour lecture, 3 hours laboratory.</b>  The practical application of landscape construction practices to actual projects. Emphasis on field work which may include the design and construction of screens, fences, gates, benches, planter boxes, overheads, gazebos, decks, ponds or other specialized projects. Training on motorized equipment, such as tractors and backhoes used in landscape construction. [Transferability: CSU]</p>
<p><b>HORT 52F</b>      <b>HORTICULTURAL PRACTICES: INTERIORSCAPING</b>      <b>3 Units</b></p> <p><b>Advisory:</b> Completion of, or concurrent enrollment in HORT 50A strongly recommended.  <b>2 hours lecture, 3 hours laboratory.</b>  Design, installation, and maintenance practices utilized in interior landscapes. Includes the identification, selection, culture, and care of plants suitable for interior use and special events. Identification of approximately 50 tropical plants. Analysis of environmental factors which affect plant health, appearance, and longevity. Container and growing media selection. [Transferability: CSU]</p>	<p><b>HORT 55A</b>      <b>GREEN INDUSTRY MANAGEMENT: BUSINESS PRACTICES</b>      <b>3 Units</b></p> <p><b>3 hours lecture.</b>  Introductory survey of green industry management and business practices. Geared to people in such fields as landscape construction, nursery management, and landscape design, this course focuses on helping individuals successfully organize, manage, and/or market their agency or small business. The class utilizes both a theoretical and hands-on approach to the application of common business principles. [Transferability: CSU]</p>
<p><b>HORT 52G</b>      <b>HORTICULTURAL PRACTICES: TURFGRASS MANAGEMENT</b>      <b>3 Units</b></p> <p><b>2 hours lecture, 3 hours laboratory.</b>  Turf identification and planting techniques. Turf maintenance and management practices for golf courses, athletic fields, parks, and areas surrounding commercial buildings and private residences. Examination of soils, irrigation, weeds, diseases and pests as they pertain to turfgrass. [Transferability: CSU]</p>	<p><b>HORT 55B</b>      <b>GREEN INDUSTRY MANAGEMENT: EMPLOYEE PRACTICES</b>      <b>3 Units</b></p> <p><b>3 hours lecture.</b>  Employee management practices including the recruitment, motivation, and development of new employees. Also covered are effective customer service techniques, workplace diversity, the use of employee manuals, identifying and training new and potential managers, development of leadership skills, scheduling, and the role of the supervisor. [Transferability: CSU]</p>
<p><b>HORT 52H</b>      <b>HORTICULTURE PRACTICES: INTEGRATED PEST MANAGEMENT</b>      <b>3 Units</b></p> <p><b>Advisory:</b> Completion of, or concurrent enrollment in HORT 50A strongly recommended.  <b>2 hours lecture, 3 hours laboratory.</b>  Problems of and control solutions for diseases, insects, and weeds in landscapes and gardens. Ecologically based Integrated Pest Management (IPM) practices for handling plant pathogens, insect infestations, and unwanted vegetation. Emphasis on identification, life cycles, and symptoms of diseases, insects, and weeds. [Transferability: CSU]</p>	<p><b>HORT 60A</b>      <b>LANDSCAPE DESIGN: GRAPHIC COMMUNICATION</b>      <b>4 Units</b></p> <p><b>3 hours lecture, 3 hours laboratory.</b>  An introductory survey of the basic principles of design communication, landscape graphics, and design process. Graphic mediums and tools, graphic vocabulary, graphic skills, reprographic techniques, plan reading, and presentation skill development. The application of lines, symbols, and lettering to create typical landscape drawings. [Transferability: UC/CSU]</p>
<p><b>HORT 54A</b>      <b>LANDSCAPE CONSTRUCTION: GENERAL PRACTICES</b>      <b>4 Units</b></p> <p><b>3 hours lecture, 3 hours laboratory.</b>  General practices of construction as applied to landscape projects. Basic tools and equipment, building materials and hardware, and installation techniques utilized in landscape construction. Focus is on landscape applications including paving, walls, decks, and fences. Review of safety practices, careers in landscape construction, and contractor licensing. [Transferability: CSU]</p>	<p><b>HORT 60B</b>      <b>LANDSCAPE DESIGN: THEORY</b>      <b>3 Units</b></p> <p><b>Advisory:</b> HORT 60A and/or drafting skills strongly recommended.  <b>2 hours lecture, 3 hours laboratory.</b>  Principles of landscape design theory. Intermediate studies in and applications of graphic communication, creative problem solving, design theory, and presentation skills. Residential site analysis and landscape design case studies. [Transferability: CSU]</p>
<p><b>HORT 54B</b>      <b>LANDSCAPE CONSTRUCTION: TECHNICAL PRACTICES</b>      <b>3 Units</b></p> <p><b>2.5 hours lecture, 1.5 hours laboratory.</b>  Technical aspects of landscape construction projects. Landscape surveying and grading techniques, surface and subsurface hydraulics, landscape drainage systems, erosion control and soil conservation, low</p>	<p><b>HORT 60C</b>      <b>LANDSCAPE DESIGN: IRRIGATION</b>      <b>3 Units</b></p> <p><b>Advisory:</b> HORT 54C strongly recommended.  <b>2.5 hours lecture, 1.5 hours laboratory.</b>  Principles of irrigation design for ornamental landscapes. Includes history of irrigation, advanced site analysis, irrigation design theory, equipment selection and layout, controller scheduling, long-term maintenance, and water conservation issues. Process of producing irrigation plans, details, and specifications. [Transferability: CSU]</p>

<b>HORT 60D</b>	<b>LANDSCAPE DESIGN: PLANTING</b>	<b>3 Units</b>	<b>HORT 90E</b>	<b>HORTICULTURAL &amp; LANDSCAPE PHOTOGRAPHY</b>	<b>1 Unit</b>
<p>Advisory: HORT 60A &amp; 60B, or equivalent strongly recommended; HORT 51A, 51B, &amp; 51H strongly advised. 2 hours lecture, 3 hours laboratory. The use of ornamental and native plant materials to express basic design principles in the landscape. Planting design theory as it applies to the aesthetic, cultural, ecological, and functional use of plant materials in the landscape. Graphics used for presenting planting designs. Special focus on the use of plants in garden designs. [Transferability: CSU]</p>			<p>May be taken 5 times for credit. .75 hour lecture, .5 hour laboratory. Introduction to basic photographic equipment and techniques utilized in photographing landscapes and horticulturally related elements. Emphasis on assisting green industry professionals in photographing ornamental plants, landscape construction or business-related projects, and landscape designs. [Transferability: CSU]</p>		
<b>HORT 60E</b>	<b>LANDSCAPE DESIGN: COMPUTER APPLICATIONS</b>	<b>3 Units</b>	<b>HORT 90F</b>	<b>LANDSCAPE DESIGN: BASIC PRINCIPLES</b>	<b>1 Unit</b>
<p>Advisory: HORT 60A and a basic understanding of the operation of computers is strongly recommended. 2 hours lecture, 3 hours laboratory. Introduction to the use of computer applications in landscape design. Overview of software for computer aided design and drafting (CADD), landscape visualization, plant selection, irrigation design, estimating, and green industry management. Focus on development of basic command skills utilized in landscape design software applications. Vectorworks software is utilized in this course. [Transferability: CSU]</p>			<p>May be taken 5 times for credit. .75 hour lecture, .5 hour laboratory. An overview of the basic principles of landscape design. Presents basic graphic communication concepts. Also explores the concept of master planning residential landscapes, and designing with plant material and related landscape elements. [Transferability: CSU]</p>		
<b>HORT 60F</b>	<b>LANDSCAPE DESIGN: PROCESS</b>	<b>3 Units</b>	<b>HORT 90G</b>	<b>LANDSCAPE DESIGN FORUM</b>	<b>1 Unit</b>
<p>Advisory: HORT 60A &amp; 60B. 2 hours lecture, 3 hours laboratory. Principles of landscape design process. Application of residential site analysis, program development, and landscape design theory to one or more residential scale projects. Project planning and budgeting. Landscape designer, client, and green industry professional interactions. [Transferability: CSU]</p>			<p>May be taken 5 times for credit. .75 hour lecture, .5 hour laboratory. Design topics for residential landscapes. Covers current concepts and trends in the landscape design industry through topical presentations, guest speakers, and discussion groups. Explores methods for evaluating successful landscape designs and their implementation. [Transferability: CSU]</p>		
<b>HORT 60G</b>	<b>LANDSCAPE DESIGN: INTERMEDIATE COMPUTER APPLICATIONS</b>	<b>3 Units</b>	<b>HORT 90H</b>	<b>LANDSCAPE LIGHTING</b>	<b>1 Unit</b>
<p>Advisory: HORT 60A and 60E strongly advised; knowledge of computer operation strongly advised. 2 hours lecture, 3 hours laboratory. Advanced use of Vectorworks as a landscape design and drafting tool. Topics covered include structuring of drawings using layers, improving drawing skills using tool commands such as walls, doors, stippling, and review of shortcuts used to improve drawing efficiency. Also covered will be customizing tool bars, expanding plant database, and importing/exporting/printing drawings. Introduction to three-dimensional drawing using Vectorworks and related programs. [Transferability: CSU]</p>			<p>May be taken 5 times for credit. .75 hour lecture, .5 hour laboratory. Basic theory, design, and installation techniques for lighting residential landscapes. The effective use of conventional and low-voltage lighting for improving landscape aesthetics and the functional use of outdoor spaces. [Transferability: CSU]</p>		
<b>HORT 80</b>	<b>ENVIRONMENTAL HORTICULTURE SKILLS</b>	<b>2 Units</b>	<b>HORT 90I</b>	<b>LANDSCAPE SUSTAINABILITY PRACTICES</b>	<b>1 Unit</b>
<p>May be taken 4 times for credit. 6 hours laboratory. An extension of classroom instruction offering students the opportunity through a combination of practical field experience, independent research, student internship, and industry related educational opportunities to explore problems and required skills in the green industry. Introduction to the extensive number of career options available. [Transferability: CSU]</p>			<p>May be taken 5 times for credit. .75 hour lecture, .5 hour laboratory. Principles and practices utilized in the design, implementation, and maintenance of sustainable landscapes and gardens. Reviews ecological principles of sustainability for efficient energy use in the environment. [Transferability: CSU]</p>		
<b>HORT 90A</b>	<b>CONTAINER PLANTINGS IN THE LANDSCAPE</b>	<b>1 Unit</b>	<b>HORT 90K</b>	<b>LANDSCAPING WITH EDIBLES</b>	<b>1 Unit</b>
<p>May be taken 5 times for credit. .75 hour lecture, .5 hour laboratory. Utilization of container plantings in both interior environments and exterior landscapes. Design theory, selection of containers, plant selection, and planting methods. Soil preparation and irrigation techniques. [Transferability: CSU]</p>			<p>May be taken 5 times for credit. .75 hour lecture, .5 hour laboratory. The use of edible plants in residential landscapes. Practice and feasibility of integrating edible plants into landscape designs. Identification of ornamental plant materials which produce edible fruit, foliage, flowers or other edible parts. [Transferability: CSU]</p>		
<b>HORT 90C</b>	<b>GARDEN PONDS &amp; WATER FEATURES</b>	<b>1 Unit</b>	<b>HORT 90L</b>	<b>PLANT PROPAGATION: BASIC SKILLS</b>	<b>1 Unit</b>
<p>May be taken 5 times for credit. .75 hour lecture, .5 hour laboratory. Introduction to the aesthetics of garden water features and the techniques used in their design, construction, and maintenance. Use of fish, plants, and other natural systems in garden ponds and pools. [Transferability: CSU]</p>			<p>May be taken 5 times for credit. .75 hour lecture, .5 hour laboratory. Introduction to propagation of plants by sexual and asexual methods. Seeding, cutting, grafting, division of specialized structures, and micro-propagation discussed and demonstrated. Discussions include growing media, fertilizers, hormones, and other plant supplements. [Transferability: CSU]</p>		
			<b>HORT 90M</b>	<b>PLANT NUTRITION &amp; FERTILIZATION</b>	<b>1 Unit</b>
			<p>May be taken 5 times for credit. .75 hour lecture, .5 hour laboratory. Introduction to plant nutrient requirements and methods for providing proper plant nutrition. Topics include review of basic nutrient requirements, forms of nutrients used by plants, nutrient deficiency identification, methods for delivering nutrients to plants, manufacture of fertilizers, fertilizer formulations, fertilizer delivery methods, and organic nutrient sources. [Transferability: CSU]</p>		

**HORT 90N PLANT MATERIALS: FALL COLOR** 1 Unit  
 May be taken 5 times for credit.  
 .75 hour lecture, .5 hour laboratory.  
 Identification, taxonomy, habits of growth, cultural and environmental requirements of plants which exhibit noticeable fall color. Color characteristics includes stems, foliage, flowers, and fruit. Plants are observed in lab, on campus, and at off-site locations. [Transferability: CSU]

**HORT 90P PRUNING: BASIC SKILLS** 1 Unit  
 May be taken 5 times for credit.  
 .75 hour lecture, .5 hour laboratory.  
 Methods of pruning deciduous and evergreen plant materials. Emphasis on pruning common landscape plants, fruit trees, and roses. Selection of suitable pruning tools, techniques for pruning safely, and use and maintenance of tools and equipment. [Transferability: CSU]

**HORT 90Q RESIDENTIAL IRRIGATION SYSTEMS** 1 Unit  
 May be taken 5 times for credit.  
 .75 hour lecture, .5 hour laboratory.  
 Basic design and installation techniques for residential landscapes. Course takes a hands-on approach to understanding the materials and techniques used in installing both drip and spray irrigation systems. Examines methods for evaluating performance of existing irrigation systems. [Transferability: CSU]

**HORT 90R SEASONAL FLORAL DESIGN** 1 Unit  
 May be taken 5 times for credit.  
 .75 hour lecture, .5 hour laboratory.  
 Floral design geared to the preparation of seasonal and holiday floral arrangements using commercially grown fresh and dried materials and other ornamentation. Concentrates on seasonal-specific floral designs and emphasizes the techniques and mechanics used in retail florist shop design. [Transferability: CSU]

**HORT 90S SUSTAINABLE INTEGRATED PEST MANAGEMENT (IMP)** 1 Unit  
 May be taken 5 times for credit.  
 .75 hour lecture, .5 hour laboratory.  
 Advanced topics in sustainability build on core IPM practices. Class provides additional techniques for managing specific insects, diseases, and weeds using a multi-faceted approach to pest management. Theoretical and practical aspects of sustainability are presented within the framework of specific landscape situations. [Transferability: CSU]

**HORT 90U LANDSCAPE DESIGN: PERSPECTIVE SKETCHING** 1 Unit  
 May be taken 5 times for credit.  
 .75 hour lecture, .5 hour laboratory.  
 Basic perspective sketching for landscape design presentations. Setup and rendering of one-point and two-point perspectives, including location of horizon lines and vanishing points, height determination, positioning of objects, and rendering techniques for plants, people, structures, and hardscape. [Transferability: CSU]

**HORT 90V SUSTAINABLE ORGANIC GARDENING** 1 Unit  
 May be taken 5 times for credit  
 .75 hour lecture, .5 hour laboratory.  
 Principles and practices utilized in the design, implementation, and maintenance of sustainable organic gardens. Sustainable gardening practices that produce successful, environmentally responsible produce and crops. [Transferability: CSU]

**HORT 90X XERISCAPING: CREATING WATER-CONSERVING LANDSCAPES** 1 Unit  
 May be taken 5 times for credit.  
 .75 hour lecture, .5 hour laboratory.  
 Xeriscaping is the process of creating water-conserving landscapes. Landscape designs which incorporate xeriscape principles strive to limit the need for water and strike a balance between softscape and hardscape elements. [Transferability: CSU]

**HORT 90Y CACTI & SUCCULENTS** 1 Unit  
 May be taken 5 times for credit  
 .75 hour lecture, .5 hour laboratory.  
 Identification, taxonomy, habits of growth, cultural and environmental requirements of plants grown in California. Emphasis on the use and maintenance of cacti and succulents with significant design features and landscape uses. Plants are observed in lab, on campus, and at off-site locations. [Transferability: CSU]

**HORT 90Z ORNAMENTAL GRASSES** 1 Unit  
 May be taken 5 times for credit.  
 .75 hour lecture, .5 hour laboratory.  
 Identification, taxonomy, habits of growth, cultural and environmental requirements of ornamental grasses grown in California. Emphasis on the use and maintenance of these monocots. Plants are observed in lab, on campus, and at off-site locations. [Transferability: CSU]

## FASHION MERCHANDISING

**Business & Social Sciences** (650) 949-7322  
[www.foothill.edu/bss/](http://www.foothill.edu/bss/)

**FASH 50 INTRODUCTION TO FASHION MERCHANDISING** 4 Units  
 4 hours lecture.  
 Introduction to world of fashion with emphasis on history of fashion, including contemporary trends of fashion, basic concepts of design and fashion merchandising. Distribution and promotion of fashion merchandise, dynamics of fashion merchandising, fashion shows and modeling. [Transferability: CSU]

## FINE ARTS

**Fine Arts & Communication** (650) 949-7262  
[www.foothill.edu/fa/](http://www.foothill.edu/fa/)

**F A 1 INTRODUCTION TO POPULAR CULTURE** 4 Units  
 4 hours lecture, 1 hour laboratory.  
 Overview history and critical analysis—of popular culture as a window for understanding American society. Theories and methods of analyzing artifacts of popular culture. Overarching themes: 1) history/social theories of popular culture; 2) popular culture as a product of American multiculturalism; 3) the relationship between a commodity culture and intellect/artistry; 4) philosophical/ethical issues surrounding popular culture. [Foothill GE: Humanities; Transferability: UC/CSU]

**F A 2 POPULAR CULTURE & U.S. HISTORY** 4 Units  
 4 hours lecture, 1 hours laboratory.  
 Interdisciplinary overview of popular culture as a window for understanding American history and society. Theories and methods of analyzing the artifacts of popular culture. Overarching themes: 1) interaction between American historical events and trends, and popular culture; 2) the interpretation of American history via popular culture media. [Foothill GE: United States Cultures & Communities; Transferability: UC/CSU]

**F A 30 FINE ARTS TOPICS** 1 Unit  
**F A 30X** 2 Units  
**F A 30Y** 3 Units  
**F A 30Z** 4 Units  
 Any combination of F A 30–30Z may be taken 6 times for credit, however, no single course may be taken more than 6 times for credit. 1 hour lecture for each unit of credit.  
 A topical introductory course in any fine arts academic discipline or related field. Specific courses and subject matter vary from quarter to quarter. Taught by a faculty member with minimum qualifications in a specific Fine Arts discipline. [Transferability: CSU]

F A 150 FINE ARTS LABORATORY .5 Unit  
 F A 150X 1 Unit  
 F A 150Y 1.5 Units  
 F A 150Z 2 Units  
 Any combination of F A 150–150Z may be taken 6 times for credit, however, no single course may be taken more than 6 times for credit. 1.5 hours laboratory for each .5 unit of credit.  
 Supervised activities in fine arts, for students who desire or require additional help in attaining comprehension and competency in learning skills in a fine arts subject. Supervised by the division dean or designee.

## GEOGRAPHY

Business & Social Sciences

(650) 949-7322  
 www.foothill.edu/bss/

**GEOG 1 PHYSICAL GEOGRAPHY 5 Units**  
**Advisory:** Eligibility for ENGL 1A or ESLL 26; MATH 220.  
**4 hours lecture, 1 hour lecture-laboratory, 2 hours laboratory.**  
 Study of the Earth's surface, including the earth's dimensions and systems; atmospheric processes; patterns of climate, vegetation and soils; and features, processes and interactions of land, water and various energy sources. Use of maps for interpretation. [Foothill GE: Natural Sciences, Social & Behavioral Sciences; Transferability: UC/CSU]

**GEOG 2 HUMAN GEOGRAPHY 4 Units**  
**Advisory:** Eligibility for ENGL 1A or ESLL 26.  
**4 hours lecture.**  
 The cultural geographic landscape. Study of the human population from origins to the present with an emphasis on the future. Examination of population densities, migrations and settlements; races, languages and religions; patterns of land use and major environmental perceptions and problems. Analysis of energy, mineral, and food resources and how cultures utilize them. [Foothill GE: Social & Behavioral Sciences; Transferability: UC/CSU]

**GEOG 5 INTRODUCTION TO ECONOMIC GEOGRAPHY 4 Units**  
**4 hours lecture.**  
 Introduction to the geography of economic activity; the world wide distribution and characteristics of agriculture, forestry, fishing, mining, manufacturing, transportation, high technology and international trade. [Foothill GE: Social & Behavioral Sciences; Transferability: UC/CSU]

**GEOG 9 CALIFORNIA GEOGRAPHY 4 Units**  
**4 hours lecture.**  
 Study of extreme regional variations within California. Factors contributing to landscape change. Examination of exploration, settlement, economic development, and urban-industrial-transportation patterns. Extensive use of maps, GIS, Internet and current events. [Foothill GE: Social & Behavioral Sciences; Transferability: UC/CSU]

**GEOG 10 WORLD REGIONAL GEOGRAPHY 4 Units**  
**4 hours lecture.**  
 Survey of the world's major culture regions and major nations. Physical, cultural, economic features. Emphasis on historical influences on population growth, transportation networks, natural environment, potential and problems. Location, importance and impact of the foremost features of countries, states, major cities, rivers and landform regions. [Foothill GE: Social & Behavioral Sciences; Transferability: UC/CSU]

**GEOG 12 INTRODUCTION TO GEOGRAPHIC INFORMATION SYSTEMS (GIS) 4 Units**  
**3 hours lecture, 3 hours laboratory.**  
 Study of Geographic Information Systems (GIS) science and its applications to spatial data management. Assessment of vector and raster systems, scale, resolution, map projection, coordinate systems, Georeferencing and Global Positioning Systems (GPS). Discussion and analysis of uncertainty propagation with a GIS. Modeling with GIS. [Transferability: UC/CSU]

**GEOG 34H HONORS INSTITUTE SEMINAR IN GEOGRAPHY 1 Unit**  
**Formerly: GEOG 34**  
**Prerequisite:** Honors Institute participant.  
**Advisory:** Not open to students with credit in GEOG 34.  
**1 hour lecture.**  
 A seminar in directed readings, discussions and projects in geography. Specific topics to be determined by the instructor. [Transferability: CSU; UC credit may be granted after transfer and upon portfolio review.]

**GEOG 35 DEPARTMENT HONORS PROJECTS IN GEOGRAPHY 1 Unit**  
**May be taken 6 times for credit.**  
**1 hour lecture.**  
 Seminar in readings, research, critical techniques and practice. Specific topics vary. [Transferability: CSU]

**GEOG 36 SPECIAL PROJECTS IN GEOGRAPHY 1 Unit**  
**GEOG 36X 2 Units**  
**GEOG 36Y 3 Units**  
**GEOG 36Z 4 Units**  
**Any combination of GEOG 36–36Z may be taken 6 times for credit, however, no single course may be taken more than 6 times for credit. 1 hour lecture for each unit of credit.**  
 Advanced readings, research, and/or project in geography. Specific topics determined in consultation with instructor. [Transferability: CSU]

**GEOG 52 ADVANCED GEOGRAPHIC INFORMATION SYSTEMS (GIS) 4 Units**  
**3 hours lecture, 3 hours laboratory.**  
 Study of Geographic Information Systems (GIS) science and its applications to spatial data management. Data acquisition using GPS, digitizing and scanning techniques. Data management. Editing and verifying. Raster data manipulation and importing. Database management. Advanced queries and database manipulation. [Transferability: CSU]

**GEOG 54A SEMINAR IN SPECIALIZED APPLICATIONS OF GEOGRAPHIC INFORMATION SYSTEMS I 2 Units**  
**May be taken 2 times for credit.**  
**2 hours lecture.**  
 Seminar on the diverse applications of Geographic Information Systems (GIS). Weekly presentations by guest speakers. [Transferability: CSU]

**GEOG 54B SEMINAR IN SPECIALIZED APPLICATIONS OF GEOGRAPHIC INFORMATION SYSTEMS II 2 Units**  
**Formerly: GEOG 54**  
**Corequisite:** Completion of or concurrent enrollment in GEOG 54A.  
**6 hours laboratory.**  
 Students undertake an original GIS project of their choosing under guidance of the instructor. [Transferability: CSU]

**GEOG 58 REMOTE SENSING & DIGITAL IMAGE PROCESSING 3 Units**  
**2 hours lecture, 3 hours laboratory.**  
 Physical basis of remote sensing. Aerial photography and high resolution multi-band imaging. Satellite multi-band optical remote sensing. Other forms of remote sensing (RADAR, SAR, LIDAR). Applications of remote sensing. [Transferability: CSU]

**GEOG 59 CARTOGRAPHY, MAP PRESENTATION & DESIGN 2 Units**  
**1 hour lecture, 3 hours laboratory.**  
 Map projections, geodes, coordinate systems. Map composition. Selection of colors and symbols. [Transferability: CSU]

**GEOG 73 DYNAMIC & INTERACTIVE MAPPING 4.5 Units**  
**Prerequisite:** GEOG 12 and 52 or equivalent.  
**2.5 hours lecture, 6 hours laboratory.**  
 Design and implementation of dynamic presentations for visualizing geographic information. Lab projects creating animated and multimedia presentations, and designing user-interfaces for interactive mapping systems. [Transferability: CSU]

**GEOG 78 GEOGRAPHIC INFORMATION SCIENCE PROJECTS 4.5 Units**  
**Prerequisite:** GEOG 73.  
**2.5 hours lecture, 6 hours laboratory.**  
 Implementation of geographic information science projects in a group environment for targeted applications. Design and application of interactive mapping systems and dynamic animation in a GIS environment. Example project areas include (but are not limited to) Web mapping and Web GIS; advanced spatial databases; integrating remote sensing and geographic information systems; and geographic Web services. Projects may involve client organizations. [Transferability: CSU]

**GEOG 90A INTRODUCTION TO GIS FOR K–12 TEACHERS I: FUNDAMENTALS OF GEOGRAPHIC INFORMATION SYSTEMS SCIENCE 1 Unit**  
**1 hour lecture.**  
 Study of Geographic Information Systems (GIS) science and its applications to spatial data management. Assessment of vector and raster systems, scale, resolution, map projection and coordinate systems. Applications and uses of GIS and data visualization in the classroom and in and out of the classroom. Integration of technology intensive curriculum with the traditional classroom model. [Transferability: CSU]

**GEOG 90B INTRODUCTION TO GIS FOR K–12 TEACHERS II: UTILIZING SPATIAL DATA & DATA ANALYSIS IN THE CLASSROOM 1 Unit**  
**1 hour lecture.**  
 Study of Geographic Information Systems (GIS) science and its applications to spatial data management. Georeferencing and Global Positioning Systems (GPS). Discussion and analysis of uncertainty propagation within a GIS. Applications of quantitative and statistical spatial analytical methods; modeling with GIS in the classroom. Helping students formulate geo-spatial questions. [Transferability: CSU]

**GEOG 90C INTRODUCTION TO GIS FOR K–12 TEACHERS III: DESIGNING & IMPLEMENTING A GIS 1 Unit**  
**1 hour lecture.**  
 Study of Geographic Information Systems (GIS) science and its applications to spatial data management. Designing and creating an original GIS. Database design, fundamentals of data storage, scanning and heads-up digitizing. Finding and accessing free data sources on the Internet. [Transferability: CSU]

**GEOG 100A INTRODUCTION TO ARC VIEW GIS .5 Unit**  
**.5 hour lecture.**  
 Introduction to ESRI's ArcView GIS software. Fundamental GIS concepts. Hands-on experience with basic elements of project file set-up, managing projects and conducting basic queries.

**GEOG 100B INTRODUCTION TO GEO MEDIA & GEO MEDIA PRO .5 Unit**  
**.5 hour lecture**  
 Introduction to Intergraph's GeoMedia and GeoMedia Pro GIS software. Fundamental GIS concepts. Hands-on experience working with GeoWorkspaces, Data Warehouses, and conducting basic queries.

**GEOG 101 A PREFACE TO GIS: AN INTRODUCTION TO COMPUTER-BASED MAPPING & GIS 1 Unit**  
**May be taken 2 times for credit.**  
**1 hour lecture.**

Non-technical introduction to Geographic Information Systems (GIS) with an emphasis on applications and career opportunities. Includes the application of GIS in a range of disciplines, GIS software and data available, how Global Positioning Systems (GPS) integrate with GIS, and career opportunities with GIS. Students will be introduced to a variety of free and low cost software and provided with practical exercises.

## GEOLOGY

Program offered by De Anza College. (408) 864-5678; [www.deanza.edu](http://www.deanza.edu)

## GERMAN

**Language Arts (650) 949-7131**  
[www.foothill.edu/la/](http://www.foothill.edu/la/)

**GERM 1 ELEMENTARY GERMAN 5 Units**  
**5 hours lecture.**  
 Intensive oral practice of basic, every-day language functions. Written practice to further understanding of the underlying grammatical and syntactical structures. Language laboratory practice to reinforce pronunciation, grammar and syntax. [Foothill GE: Humanities; Transferability: UC/CSU]

**GERM 2 ELEMENTARY GERMAN 5 Units**  
**Prerequisite:** GERM 1 or 1 year of high school German.  
**5 hours lecture.**  
 Further development of material presented in GERM 1. Intensive oral practice broadening the functions presented in GERM 1 and adding new ones. Greater emphasis on student generated discussion. Written practice to further understanding of the underlying grammatical and syntactical structures. Language laboratory practice to reinforce pronunciation grammar and syntax. [Foothill GE: Humanities; Transferability: UC/CSU]

**GERM 3 ELEMENTARY GERMAN 5 Units**  
**Prerequisite:** GERM 2 or two years of high school German.  
**5 hours lecture.**  
 Further development of material presented in GERM 1 and 2. Intensive oral practice of basic, every-day language functions. Written practice to further understanding of the underlying grammatical and syntactical structures. Language laboratory practice to reinforce pronunciation, grammar and syntax. [Foothill GE: Humanities; Transferability: UC/CSU]

**GERM 8 POST WORLD WAR II GERMANY 4 Units**  
**Advisory:** Eligibility for ENGL 1A; not open to students with credit in POLI 8.  
**4 hours lecture.**  
 Exploration of historical, political and cultural developments in Germany 1945 to the present. Perspectives on the construction of a German national identity/identities and historical memory through literature and film. Interdisciplinary approach to analyze the existence of the two German states and the development of German unification. [Foothill GE: Social & Behavioral Sciences; Transferability: UC/CSU]

**GERM 36 SPECIAL PROJECTS IN GERMAN 1 Unit**  
**GERM 36X 2 Units**  
**GERM 36Y 3 Units**  
**GERM 36Z 4 Units**

Prerequisite: GERM 6.

Any combination of GERM 36–36Z may be taken 6 times for credit, however, no single course may be taken more than 6 times for credit. 1 hour lecture for each unit of credit.

A study oriented toward spoken and/or written practice in German. Development of research techniques and critical thinking skills for individual writing and/or oral presentation projects. Specific topics vary from quarter to quarter. This course cannot be substituted for departmental requirements. [Transferability: CSU]

**GERM 39 GERMAN LITERATURE IN TRANSLATION 4 Units**

Advisory: Eligibility for ENGL 1A.

4 hours lecture.

Reading and study of selected literature from German-speaking countries. Discussion focus on specific cultural, social and historical aspects as expressed through different literary periods. [Foothill GE: Humanities; Transferability: UC/CSU]

## GRAPHICS & INTERACTIVE DESIGN

Fine Arts & Communication (650) 949-7262  
[www.foothill.edu/graphicdesign/](http://www.foothill.edu/graphicdesign/)

**GID 1 HISTORY OF GRAPHIC DESIGN 4 Units**

Advisory: Not open to students with credit in ART 36 or GRDS 36.

4 hours lecture, 1 hour laboratory.

A study of the development of visual communication in art, graphic design, illustration and popular culture. Emphasis on the role, impact and interpretation of images, symbols, and typography used in informative and persuasive media. [Foothill GE: Humanities; Transferability: UC/CSU]

**GID 20 DIGITAL VIDEO PRODUCTION I 4 Units**

Advisory: Not open to students with credit in GRDS 20 or VART 20.

3 hours lecture, 2.5 hours lecture-laboratory.

Basic instruction in concepts, techniques, and strategies of DV video production. Basic camera, lighting and sound recording will be covered through technical workshops. Emphasis on video story telling and creative problem solving. [Transferability: UC/CSU]

**GID 30 PAPER ARTS I 4 Units**

May be taken 3 times for credit.

2 hours lecture, 2 hours lecture-laboratory, 3 hours laboratory.

Introduction to the skills and techniques of the paper arts. Mold and cast hand-made paper from various cultures. Embedded and surface structural and decorative techniques. Construction of basic paper making tools. Exploration of paper as applied to print arts, book arts and graphic design projects. History of papermaking. Emphasis on materials, processes and techniques while exploring form and content. [Transferability: CSU]

**GID 32 T-SHIRT DESIGN & GARMENT PRINTING 4 Units**

May be taken 3 times for credit.

2 hours lecture, 2 hours lecture-laboratory, 3 hours laboratory.

Basic instruction in design and printing for wearable art. Students learn hand-drawn and digital skills for image creation and preparation of multi-color artwork for screenprinting and relief printing on t-shirts, fabrics and wearable substrates. Development of personal visual style while learning business practices of garment printing. [Transferability: CSU]

**GID 38 PRINTMAKING I 4 Units**

Advisory: ART 4A and 5A; not open to students with credit in GRDS 69. May be taken 3 times for credit.

2 hours lecture, 2 hours lecture-laboratory, 3 hours laboratory.

Introduction to the printmaking processes of relief, intaglio, screenprinting and monoprinting. Theory and practice making limited-edition and one-of-a-kind fine art prints. [Transferability: UC/CSU]

**GID 39 PRINTMAKING II 4 Units**

Prerequisite: GID 38.

May be taken 3 times for credit.

2 hours lecture, 2 hours lecture-laboratory, 3 hours laboratory.

Continuation of Printmaking I. Multi-color printing and photography processes for relief, intaglio, screenprinting and paper plate lithography. Theory and practice making limited-edition and one-of-a-kind fine art prints. [Transferability: UC/CSU]

**GID 40 DIGITAL PRINTMAKING 4 Units**

Advisory: ART 56 or GID 74; not open to students with credit in GRDS 71.

May be taken 3 times for credit.

2 hours lecture, 2 hours lecture-laboratory, 3 hours laboratory.

Introduction to the creative, expressive and experimental possibilities of using digital media to produce fine art prints. Emphasis on image creation, printing technologies and printing techniques. [Transferability: UC/CSU]

**GID 42 BEGINNING ETCHING 3 Units**

Advisory: Not open to students with credit in ART 37A or GRDS 37A.

6 hours lecture-laboratory.

Beginning techniques in printmaking, including embossing, monoprinting, chine colle, drypoint, softground, line etching, handcoloring, printing and the editioning of plates. [Transferability: UC/CSU]

**GID 44 BEGINNING RELIEF PRINTMAKING 3 Units**

Advisory: ART 4A and 5A.

May be taken 6 times for credit.

6 hours lecture-laboratory.

An introduction to relief printing processes, exploring the basic techniques of embossing, linoleum block, wood block and collagraph printing. [Transferability: CSU]

**GID 46 BEGINNING SCREENPRINTING 3 Units**

Advisory: ART 4A or 5A; not open to students with credit in ART 39A or GRDS 39A.

6 hours lecture-laboratory.

An introduction to screen printing processes, exploring the basic techniques for making cut stencil designs and drawn stencil images. [Transferability: UC/CSU]

**GID 48 MONOPRINTING 3 Units**

Advisory: Not open to students with credit in ART 49.

May be taken 3 times for credit.

6 hours lecture-laboratory.

Studio experiences in printmaking methods that create one-of-a-kind fine art prints. Emphasis on artistic growth of imagery while developing technical skills with tools, media and techniques. [Transferability: UC/CSU]

**GID 50 GRAPHIC DESIGN STUDIO I 4 Units**

Advisory: Not open to students with credit in GRDS 53.

2 hours lecture, 2 hours lecture-laboratory, 3 hours laboratory.

Introduction to graphic design and visual communication. Projects include composition, typography, image creation and logo design. Creative ideas are explored in sketches and rough layouts. Students learn fundamental software skills using Adobe Illustrator and Photoshop to complete the graphic design activities in this course. [Transferability: UC/CSU]

**GID 51 GRAPHIC DESIGN STUDIO II 4 Units**

Prerequisite: GID 50.

2 hours lecture, 2 hours lecture-laboratory, 3 hours laboratory.

Continuation of GID 50. Students engage in problem solving with real-world graphic design projects. Focus on creative solutions that effectively use type, image, and layout. Projects include brochure, advertisement, interface, and package design. Creative ideas are explored in sketches, rough layouts, and finished comps. Students learn software skills using Adobe InDesign, Illustrator, and Photoshop to complete the graphic design activities in this course. [Transferability: UC/CSU]

<b>GID 52</b>	<b>GRAPHIC DESIGN STUDIO III</b>	<b>4 Units</b>	<b>GID 64B</b>	<b>GID EXPANDED EXPERIENTIAL INTERNSHIP</b>	<b>6 Units</b>
<p><b>Prerequisite:</b> GID 51.  <b>2 hours lecture, 2 hours lecture-laboratory, 3 hours laboratory.</b>            Continuation of GID 51. Students design and produce a real-world graphic design campaign. Focus on creative solutions that effectively use type, image, and layout. Projects include branding, identity, newsletter, web site, and package design. Creative ideas are explored in sketches, rough layouts, comps, and final presentations. Students learn software skills using Adobe Acrobat, InDesign, Illustrator, Photoshop, and Macromedia Dreamweaver to complete the graphic design activities in this course. [Transferability: UC/CSU]</p>			<p><b>May be taken 2 times for credit.</b>  <b>18 hours laboratory.</b>            Off-campus supervised experiential education of graphic and interactive design students. Opportunity for practical application of knowledge, skills and abilities acquired in graphic and design as well as other related course work. Opportunity for additional hands-on training in all aspects graphic design. Exposure to varied protocols, methodologies and practices in a professional studio/work environment. [Transferability: CSU]</p>		
<b>GID 54</b>	<b>TYPOGRAPHY</b>	<b>4 Units</b>	<b>GID 70</b>	<b>GRAPHIC DESIGN DRAWING</b>	<b>4 Units</b>
<p><b>Advisory:</b> GID 50 and 74 or proficiency using InDesign/Quark software recommended; not open to students with credit in GRDS 62.  <b>2 hours lecture, 2 hours lecture-laboratory, 3 hours laboratory.</b>            Exploration and experimentation with letter forms and page layout for expressive communication. Fundamental typographic principles, font recognition, and analysis of both historical and post modern design theory. Emphasis on content, form, and technique for effective use of typography in ads, posters, newsletters and other visual communications. [Transferability: UC/CSU]</p>			<p><b>Formerly:</b> GRDS 60  <b>May be taken 2 times for credit.</b>  <b>2 hours lecture, 2 hours lecture-laboratory, 3 hours laboratory.</b>            Developing drawing skills for communicating ideas. Learning to simplify complex realistic images to express design concepts rapidly and effectively. [Transferability: CSU]</p>		
<b>GID 56</b>	<b>WEB SITE DESIGN</b>	<b>4 Units</b>	<b>GID 71</b>	<b>STORYBOARDING</b>	<b>4 Units</b>
<p><b>Advisory:</b> GID 50; proficiency using Photoshop or Illustrator software; not open to students with credit in GRDS 94.  <b>2 hours lecture, 2 hours lecture-laboratory, 3 hours laboratory.</b>            Basic instruction using the computer for web site and interface design. Emphasis on interactive media and creative problem solving. [Transferability: CSU]</p>			<p><b>Advisory:</b> GID 70; not open to students with credit in GRDS 76.  <b>May be taken 4 times for credit.</b>  <b>2 hours lecture, 2 hours lecture-laboratory, 3 hours laboratory.</b>            Fundamentals of creating storyboards and flowcharts for media projects. Emphasis on technique, concept development and design of storyboards. Exploration of storyboard applications for new media content. [Transferability: CSU]</p>		
<b>GID 60</b>	<b>CAREERS IN THE VISUAL ARTS</b>	<b>2 Units</b>	<b>GID 72</b>	<b>CARTOONING</b>	<b>4 Units</b>
<p><b>Advisory:</b> Not open to students with credit in GRDS 50 or VART 50.  <b>2 hours lecture.</b>            Exploring the field of visual arts including commercial arts, graphic design, photography, video arts, web site design, and illustration. Survey of career paths including art studios, company art departments, advertising agencies, freelance, and other job opportunities for creative services professionals. [Transferability: CSU]</p>			<p><b>Advisory:</b> Not open to students with credit in GRDS 73A.  <b>May be taken 3 times for credit.</b>  <b>2 hours lecture, 2 hours lecture-laboratory, 3 hours laboratory.</b>            Fundamentals of drawing cartoons for mass communication with a variety of styles and techniques. Emphasis on skills, concepts, humor, and design. Exploration of career opportunities. [Transferability: CSU]</p>		
<b>GID 61</b>	<b>PORTFOLIO</b>	<b>4 Units</b>	<b>GID 74</b>	<b>DIGITAL ART &amp; GRAPHICS</b>	<b>4 Units</b>
<p><b>Formerly:</b> GRDS 77  <b>May be taken 2 times for credit.</b>  <b>2 hours lecture, 2 hours lecture-laboratory, 3 hours laboratory.</b>            Preparation for displaying work samples when seeking employment. Planning ahead for the individual student professional "book" with emphasis on selection, size, arrangement, color coordination, effectiveness and appropriateness. [Transferability: CSU]</p>			<p><b>Advisory:</b> Familiarity with computer operating systems, ART 4A or GID 70; ART 5A; PHOT 1; not open to students with credit in ART 56, GRDS 56 or PHOT 75.  <b>May be taken 3 times for credit.</b>  <b>2 hours lecture, 2 hours lecture-laboratory, 3 hours laboratory.</b>            Basic instruction using the computer for painting, drawing, image processing, photo composites and typography. Emphasis on image making and creative problem solving. [Transferability: UC/CSU]</p>		
<b>GID 62</b>	<b>SERVICE LEARNING PROJECTS</b>	<b>4 Units</b>	<b>GID 75</b>	<b>ILLUSTRATION &amp; DIGITAL IMAGING</b>	<b>4 Units</b>
<p><b>Formerly:</b> GRDS 77  <b>Advisory:</b> Completion of entry level design and software courses.  <b>May be taken 3 times for credit.</b>  <b>2 hours lecture, 2 hours lecture-laboratory, 3 hours laboratory.</b>            Fulfillment of work-related assignments for on-campus and off-campus not-for-profit organizations. Faculty coordinator helps the student apply skills learned in graphic arts courses to community-based projects. Disciplines include graphic design, photography and studio art. [Transferability: CSU]</p>			<p><b>Advisory:</b> ART 4A or GID 70; GID 74 or familiarity with painting and drawing software; not open to students with credit in GRDS 90.  <b>May be taken 3 times for credit.</b>  <b>2 hours lecture, 2 hours lecture-laboratory, 3 hours laboratory.</b>            Creation of images to communicate ideas. Traditional and digital media. Emphasis on concept development and communication effectiveness. Development of personal visual vocabulary while learning art making techniques and media, reproduction processes and illustration business practice. [Transferability: CSU]</p>		
<b>GID 64A</b>	<b>GRAPHIC &amp; INTERACTIVE DESIGN EXPERIENTIAL INTERNSHIP</b>	<b>4 Units</b>	<b>GID 80</b>	<b>DIGITAL SOUND, VIDEO &amp; ANIMATION</b>	<b>4 Units</b>
<p><b>May be taken 6 times for credit.</b>  <b>12 hours laboratory.</b>            Off-campus supervised experiential education of graphic and interactive design students. Opportunity for practical application of knowledge, skills and abilities acquired in graphic and design as well as other related course work. Opportunity for additional hands-on training in all aspects graphic design. Exposure to varied protocols, methodologies and practices in a professional working environment. [Transferability: CSU]</p>			<p><b>Advisory:</b> Not open to students with credit in ART 88, DRAM 86, GRDS 86, MUS 86 or VART 86.  <b>2 hours lecture, 2 hours lecture-laboratory, 3 hours laboratory.</b>            Basic instruction using the computer for emerging media technologies; digital sound, video editing, and animation. Emphasis on time based media and creative problem solving. [Transferability: UC/CSU]</p>		

**GID 84 MOTION GRAPHICS 4 Units**  
**Advisory:** One of the following: ART 88, DRAM 86, GID 80, MUS 86, VART 86; not open to students with credit in GRDS 87 or VART 87.  
**2 hours lecture, 2 hours lecture-laboratory, 3 hours laboratory.**  
 Basic instruction using the computer for motion graphic design and composite digital video production. Emphasis on time based media and its application to creative problem solving and communication solutions. [Transferability: UC/CSU]

**GID 90 BOOK ARTS I 4 Units**  
**Advisory:** Not open to students with credit in GRDS 96.  
**May be taken 3 times for credit.**  
**2 hours lecture, 2 hours lecture-laboratory, 3 hours laboratory.**  
 Introduction to the skills and techniques of the book arts. Students will learn construction and mounting skills for books, boxes and portfolios. Traditional and non-traditional binding formats include stab, accordion, concertina and signature sewing. Emphasis on form building while exploring content and narrative. [Transferability: CSU]

**GID 91 BOOK ARTS II 4 Units**  
**Prerequisite:** GID 90.  
**May be taken 3 times for credit.**  
**2 hours lecture, 2 hours lecture-laboratory, 3 hours laboratory.**  
 Continuation of Book Arts I. Studio experiences in making art that takes book form. Students will learn strategies for content development; design, layout and typography; and narrative structures, pacing and sequencing. Reproduction techniques include traditional and digital media including relief printing, stencil printing, transfer printing and commercial printing. Emphasis on content and narrative while advancing book construction skills. [Transferability: CSU]

**GID 92 LETTERPRESS PRINTING 4 Units**  
**Advisory:** GID 50 and 74; not open to students with credit in GRDS 40.  
**May be taken 3 times for credit.**  
**2 hours lecture, 2 hours lecture-laboratory, 3 hours laboratory.**  
 Studio practice in letterpress printing to create limited-edition prints and books. Introduction to handset type, hand-carved relief plates and photopolymer plates. Emphasis on technical skills with tools and media, visual communication, and aesthetics of print media. [Transferability: CSU]

**GID 93 LETTERPRESS PROJECTS 4 Units**  
**Advisory:** GID 92 or equivalent skill levels.  
**May be taken 3 times for credit.**  
**2 hours lecture, 2 hours lecture-laboratory, 3 hours laboratory.**  
 Application of principles and theories introduced in previously taken letterpress courses to student-motivated projects. Projects address information gathering, idea generation, concept development, production and distribution. [Transferability: CSU]

**GID 94 BOOK ARTS PROFESSIONAL PRACTICES 3 Units**  
**May be taken 6 times for credit.**  
**6 hours lecture-laboratory.**  
 Introduction to the professional practices of the book artist and book arts organizations. Application of strategies to create, critique, exhibit and distribute artist's books. Participation in community based learning through the organization and implementation of book art events and activities. [Transferability: CSU]

**GID 95 GRAPHIC ARTS STUDIO PROJECTS 4 Units**  
**May be taken 6 times for credit.**  
**2 hours lecture, 2 hours lecture-laboratory, 3 hours laboratory.**  
 Application of principles and theories introduced in previously taken graphic arts courses to student-motivated projects. Projects address information gathering, idea generation, concept development, production and distribution. [Transferability: CSU]

**GID 150 BOOK ARTS ACTIVITIES .5 Unit**  
**GID 150X 1 Unit**  
**GID 150Y 2 Units**  
**GID 150Z 4 Units**  
**Any combination of GID 150–150Z may be taken 6 times for credit, however, no single course may be taken more than 6 times for credit.**  
**1 hour lecture-laboratory for each .5 unit of credit.**  
 Activities in the book arts. Specific topics to be determined by the instructor.

**GID 151 PRINTMAKING STUDIO .5 Unit**  
**GID 151X 1 Unit**  
**GID 151Y 2 Units**  
**GID 151Z 4 Units**  
**Any combination of GID 151–151Z may be taken 6 times for credit, however, no single course may be taken more than 6 times for credit.**  
**1 hour lecture-laboratory for each .5 unit of credit.**  
 Supervised studio practice in printmaking projects. Application of skills learned in previously taken graphic arts courses.

## HEALTH

**Biological & Health Sciences (650) 949-7249**  
[www.foothill.edu/bio/programs/](http://www.foothill.edu/bio/programs/)

**HLTH 21 HEALTH EDUCATION 3 Units**  
**3 hours lecture.**  
 Development of understanding and attitudes relative to personal, family, and community health needs. Emphasis placed upon epidemiology of disease, nutritional behavior, communicable disease, disease prevention, mental health and substance abuse. [Foothill GE: Lifelong Understanding; Transferability: UC/CSU]

**HLTH 55 EMERGENCY RESPONSE 5 Units**  
**Formerly: HLTH 5**  
**May be taken 6 times for credit.**  
**4 hours lecture, 3 hours laboratory.**  
 Provides the student with the knowledge and skills necessary in an emergency to help sustain life, reduce pain, and minimize the consequences of injury or sudden illness until more advanced medical help can arrive. Upon successful completion of the course students will receive American Red Cross certificates in Emergency Response; CPR/PR/AED Professional Rescuer update 2006; Oxygen; BBP; Epi Pen; Asthma Inhaler. This course fulfills the 1998 Department of Transportation criteria as a first responder course. [Transferability: CSU]

## HEBREW

Program offered by Foothill-De Anza Community Education IMPACT Program. (408) 864-8817; [www.shortcourses.fhda.edu](http://www.shortcourses.fhda.edu).

## HISTORY

**Business & Social Sciences (650) 949-7322**  
[www.foothill.edu/bss/](http://www.foothill.edu/bss/)

**HIST 4A HISTORY OF WESTERN CIVILIZATION TO 800 AD 4 Units**  
**Advisory:** Eligibility for ENGL 1A or ESLL 26.  
**4 hours lecture.**  
 Survey of the development of Western culture and civilization in the ancient world. From the Neolithic period to the early Middle Ages. [Foothill GE: Humanities, Social & Behavioral Sciences; Transferability: UC/CSU]

- HIST 4B HISTORY OF WESTERN CIVILIZATION II 4 Units**  
**Advisory:** Eligibility for ENGL 1A or ESLL 26.  
**4 hours lecture.**  
 Survey of the development of Western society and culture from the early Middle Ages through the Age of Enlightenment. Emphasis upon the cultural, social, intellectual, and institutional changes that led to the birth of the modern Western culture and its interchange with the peoples of the world's continents. [Foothill GE: Humanities, Social & Behavioral Sciences; Transferability: UC/CSU]
- HIST 4C HISTORY OF WESTERN CIVILIZATION 1789–PRESENT 4 Units**  
**Advisory:** Eligibility for ENGL 1A or ESLL 26. Not open to students with credit in HIST 4CH.  
**4 hours lecture.**  
 Survey of the development of Western society and culture during the nineteenth and twentieth centuries. Emphasis upon the social, intellectual, and institutional changes that have led to the contemporary Western world and its interchange with the peoples and institutions of the world's continents. [Foothill GE: Humanities, Social & Behavioral Sciences; Transferability: UC/CSU]
- HIST 4CH HONORS HISTORY OF WESTERN CIVILIZATION 4 Units**  
**Prerequisite:** Honors Institute participant.  
**Advisory:** Eligibility for ENGL 1A or ESLL 26; not open to students with credit in HIST 4C.  
**4 hours lecture.**  
 Survey of the development of Western society and culture during the nineteenth and twentieth centuries. Emphasis upon the social, intellectual, and institutional changes that have led to the contemporary Western world and its interchange with the peoples and institutions of the world's continents. As an honors course, it is a full thematic seminar with advanced teaching methods focusing on major writing, reading, and research assignments, student class lectures, group discussions and interactions. [Foothill GE: Humanities, Social & Behavioral Sciences; Transferability: UC/CSU]
- HIST 8 HISTORY OF LATIN AMERICA 4 Units**  
**Advisory:** Eligibility for ENGL 1A or ESLL 26.  
**4 hours lecture.**  
 History of Latin America from Pre-Columbian times to the present. Emphasis upon Native and European contributions to present Latin American culture. Special emphasis on governmental systems and social and economic progress. Includes revolutionary movements and their present status. [Foothill GE: Social & Behavioral Sciences; Transferability: UC/CSU]
- HIST 9 HISTORY OF CONTEMPORARY EUROPE 4 Units**  
**Advisory:** Eligibility for ENGL 1A or ESLL 26; not open to students with credit in HIST 9H.  
**4 hours lecture.**  
 Twentieth Century Europe. Political social, and cultural developments in recent European history. World War I and the consequences of Versailles, Bolshevik Revolution and rise of Communism, Italian Fascism and German Nazism. The diplomacy of World War II, Cold War, and current developments in Western and Eastern Europe. Global impacts. [Foothill GE: United States Cultures & Communities, Social & Behavioral Sciences; Transferability: UC/CSU]
- HIST 9H HONORS HISTORY OF CONTEMPORARY EUROPE 4 Units**  
**Prerequisite:** Honors Institute participant.  
**Advisory:** Eligibility for ENGL 1A or ESLL 26; not open to students with credit in HIST 9.  
**4 hours lecture.**  
 Twentieth Century Europe. Political social, and cultural developments in recent European history. World War I and the consequences of Versailles, Bolshevik Revolution and rise of Communism, Italian Fascism and German Nazism. The diplomacy of World War II, Cold War, and current developments in Western and Eastern Europe. Global impacts. As an honors course, it is a full thematic seminar with advanced teaching
- methods focusing on major writing, reading, and research assignments, student class lectures, group discussions and interactions. [Foothill GE: United States Cultures & Communities, Social & Behavioral Sciences; Transferability: UC/CSU]
- HIST 10 HISTORY OF CALIFORNIA: THE MULTICULTURAL STATE 4 Units**  
**Advisory:** Eligibility for ENGL 1A or ESLL 26.  
**4 hours lecture.**  
 Economic, social, intellectual and political development of multicultural California. Survey of Indian, Spanish and Mexican periods. Analysis of role and issues of ethnic/racial minorities during six major historical periods: gold rush, railroad era, Great Depression, World War II, turbulent '60s and present era. [Foothill GE: United States Cultures & Communities, Social & Behavioral Sciences; Transferability: UC/CSU]
- HIST 15 HISTORY OF MEXICO 4 Units**  
**4 hours lecture.**  
 Pre-Columbian civilizations, the Spanish conquest, and development of Mexico since independence; evolution of political, economic and social institutions; relationship with the United States. [Foothill GE: Social & Behavioral Sciences; Transferability: UC/CSU]
- HIST 16 INTRODUCTION TO ANCIENT ROME 4 Units**  
**Advisory:** HIST 4A or equivalent; eligibility for ENGL 1A or ESLL 26; not open to students with credit in HIST 16H.  
**4 hours lecture.**  
 Chronological and topical survey of Roman history from the founding of Rome to the reign of Constantine. Emphasis upon the political, social, economic development in the Late Republic and Empire. Consideration of literature, art, architecture, texts in translation. [Foothill GE: Social & Behavioral Sciences; Transferability: UC/CSU]
- HIST 16H HONORS INTRODUCTION TO ANCIENT ROME 4 Units**  
**Prerequisite:** Honors Institute participant.  
**Advisory:** HIST 4A or equivalent; eligibility for ENGL 1A or ESLL 26; not open to students with credit in HIST 16.  
**4 hours lecture.**  
 Enhanced comprehensive study of Roman history from the founding of Rome to the reign of Constantine. Emphasis upon the political, social, economic development in the Late Republic and Empire. Consideration of literature, art, architecture, texts in translation. As an honors course, it is a full seminar with advanced teaching methods focusing on major writing, reading, and research assignments, student class lectures, group discussions and interactions. [Foothill GE: Social & Behavioral Sciences; Transferability: UC/CSU]
- HIST 17A HISTORY OF THE UNITED STATES TO 1816 4 Units**  
**Advisory:** Eligibility for ENGL 1A or ESLL 26.  
**4 hours lecture.**  
 American civilization through 1816. Survey of United States history. Political, economic and social development. [Foothill GE: Social & Behavioral Sciences; Transferability: UC/CSU]
- HIST 17B HISTORY OF THE UNITED STATES FROM 1812 TO 1914 4 Units**  
**Advisory:** Eligibility for ENGL 1A or ESLL 26.  
**4 hours lecture.**  
 American civilization from 1812 to 1914. Survey of United States history and its political, economic and social development. [Foothill GE: Social & Behavioral Sciences; Transferability: UC/CSU]
- HIST 17C HISTORY OF THE UNITED STATES FROM 1900 TO THE PRESENT 4 Units**  
**Advisory:** Eligibility for ENGL 1A or ESLL 26.  
**4 hours lecture.**  
 American civilization from 1900 to the present. Survey of United States history and its political, economic and social development. [Foothill GE: Social & Behavioral Sciences; Transferability: UC/CSU]

**HIST 18 INTRODUCTION TO MIDDLE EASTERN CIVILIZATION 4 Units**

**Advisory:** Eligibility for ENGL 1A or ESLL 26.  
4 hours lecture.

Civilization of the Middle East. History of the region, concentrating on the 19<sup>th</sup> and 20<sup>th</sup> and 21<sup>st</sup> centuries. European colonization, culture, institutions and religion. Political, economic, and social development of the area. [Foothill GE: Social & Behavioral Sciences; Transferability: UC/CSU]

**HIST 20 HISTORY OF RUSSIA & THE SOVIET UNION 4 Units**

**Advisory:** Eligibility for ENGL 1A or ESLL 26.  
4 hours lecture.

Russian political and social development from the 10<sup>th</sup> Century to present. Emphasis on post-revolutionary Russia and problems of authoritarian modernization, independence, political and economic integration and industrialization. [Foothill GE: Social & Behavioral Sciences; Transferability: UC/CSU]

**HIST 34H HONORS INSTITUTE SEMINAR IN HISTORY 1 Unit**

**Formerly:** HIST 34

**Prerequisite:** Honors Institute participant.  
**Advisory:** Not open to students with credit in HIST 34.  
1 hour lecture.

A seminar in directed readings, discussions and projects in history. Specific topics to be determined by the instructor. [Transferability: CSU; UC credit may be granted after transfer and upon portfolio review.]

**HIST 36 SPECIAL PROJECTS IN HISTORY 1 Unit**  
**HIST 36X 2 Units**  
**HIST 36Y 3 Units**  
**HIST 36Z 4 Units**

Any combination of HIST 36–36Z may be taken 6 times for credit, however, no single course may be taken more than 6 times for credit. 1 hour lecture for each unit of credit.

Advanced readings, research and/or project in history. Specific topics determined in consultation with instructor. [Transferability: CSU]

**HUMANITIES**

**Language Arts (650) 949-7556**  
[www.foothill.edu/la/](http://www.foothill.edu/la/)

**HUMN 1A HUMANITIES & THE MODERN EXPERIENCE I 4 Units**

4 hours lecture, 1 hour laboratory.

An interdisciplinary survey of some of the cultural aspects of major civilizations from the Mesopotamians to the Italian Renaissance, and their influence on modern experiences. Illustrations of the cultural diversity which makes up modern life. Attendance at instructor approved lectures, performing arts events, and/or cultural exhibitions. [Foothill GE: Humanities; Transferability: UC/CSU]

**HUMN 1B HUMANITIES & THE MODERN EXPERIENCE II 4 Units**

4 hours lecture, 1 hour laboratory.

An interdisciplinary survey of the some of the cultural aspects of major civilizations from the Italian Renaissance to the present day, and their influence upon modern experiences. Illustrations of the cultural diversity which makes up modern life. Attendance at instructor approved lectures, performing arts events, and/or cultural exhibitions. [Foothill GE: Humanities; Transferability: UC/CSU]

**HUMN 34H HONORS INSTITUTE SEMINAR IN HUMANITIES 1 Unit**

**Formerly:** HUMN 34

**Prerequisite:** Honors Institute participant.  
**Advisory:** Not open to students with credit in HUMN 34.  
1 hour lecture.

A seminar in directed readings, discussions, and projects in humanities. Specific topics to be determined by the instructor. [Transferability: CSU; UC credit may be granted after transfer and upon portfolio review.]

**HUMN 36 SPECIAL PROJECTS IN HUMANITIES 1 Unit**  
**HUMN 36X 2 Units**  
**HUMN 36Y 3 Units**

Any combination of HUMN 36–36Y may be taken for a total of 8 units, however no single course may be taken more than 6 times. 1 hour lecture for each unit of credit.

Intensive study of selected topics in humanities or interdisciplinary courses in humanities. Subjects may vary from quarter to quarter. [Transferability: CSU]

**ITALIAN**

Program offered by Foothill-De Anza Community Education IMPACT Program. (408) 864-8817; [www.shortcourses.fhda.edu](http://www.shortcourses.fhda.edu).

**JAPANESE**

**Language Arts (650) 949-7043**  
[www.foothill.edu/la/](http://www.foothill.edu/la/)

**JAPN 1 ELEMENTARY JAPANESE I 5 Units**

5 hours lecture.  
Oral and written practice in the minimum competencies in language functions: vocabulary essential to basic communicative situations, grammar necessary for carrying out functions, signals for carrying out communicative tasks, and cultural skills in specific situations. Introduction to Hiragana, Katakana and about 80 Kanji. Language laboratory practice. [Foothill GE: Humanities; Transferability: UC/CSU]

**JAPN 2 ELEMENTARY JAPANESE II 5 Units**

**Prerequisite:** JAPN 1 or 1 year of high school Japanese.  
5 hours lecture.

Further development of material presented in JAPN 1. Oral and written practice in competencies in language functions: vocabulary essential to daily communicative situations, grammar necessary for carrying out functions, signals for carrying out communicative tasks, and cultural skills in specific situations. Distinguishing formal and informal styles. Additional 120 Kanji pronunciation and recognition. Language laboratory practice. [Foothill GE: Humanities; Transferability: UC/CSU]

**JAPN 3 ELEMENTARY JAPANESE III 5 Units**

**Prerequisite:** JAPN 2 or two years of high school Japanese.  
5 hours lecture.

Further development of material presented in JAPN 1 and 2. Oral and written practice in competencies in language functions: vocabulary essential to daily communicative situations, grammar necessary for carrying out various functions, signals for carrying out communicative tasks, and cultural skills in specific situations. Distinguishing formal and informal styles, and using honorifics. Making suppositions. Additional 120 Kanji pronunciation and recognition. Language laboratory practice. [Foothill GE: Humanities; Transferability: UC/CSU]

**JAPN 4 INTERMEDIATE JAPANESE I 5 Units**

**Prerequisite:** JAPN 3 or 3 years of high school Japanese.  
5 hours lecture.

Continuation of JAPN 3. Review of grammar and discussion of grammatical features beyond the elementary level. Introduction to intermediate-level grammar and communicative tasks. Intensive oral and written drills, including additional 110 Kanji, in idiomatic constructions. Composition, conversation and selected readings. Language laboratory practice. [Foothill GE: Humanities; Transferability: UC/CSU]

<b>JAPN 5</b>	<b>INTERMEDIATE JAPANESE II</b>	<b>5 Units</b>	<b>JAPN 14B</b>	<b>ADVANCED CONVERSATION II</b>	<b>4 Units</b>
<p><b>Prerequisite:</b> JAPN 4 or four years of high school Japanese.  <b>5 hours lecture.</b>            Continuation of Japanese 4. Development of intermediate-level grammatical structures and communicative tasks. Further practice in intensive oral and written drills, including additional 150 Kanji, in idiomatic constructions. Composition, conversation and selected readings. Differentiating socio-linguistic features, such as honorifics, feminine and masculine styles. Cultural skills to carry out tasks. Language laboratory practice. [<b>Foothill GE: Humanities; Transferability: UC/CSU</b>]</p>			<p><b>Prerequisite:</b> JAPN 14A.  <b>Advisory:</b> May be taken concurrently with JAPN 6.  <b>May be taken 6 times for credit.</b>  <b>4 hours lecture.</b>            Continuation of JAPN 14A. Development of advanced level of oral/aural fluency in the language, and cultural skills required in socio-linguistic functions. Stating and supporting opinions on complex, abstract topics. Analyzing and hypothesizing. Understanding cultural differences, persuading, negotiating, and giving speech in formal settings. Development of critical thinking skills by comparing different viewpoints and different values of diverse cultures. Development of listening and speaking skills by exploring various forms of authentic materials, such as current news media, debates on various issues, and drama. [<b>Transferability: UC/CSU</b>]</p>		
<b>JAPN 6</b>	<b>INTERMEDIATE JAPANESE III</b>	<b>5 Units</b>	<b>JAPN 23</b>	<b>MODERN JAPANESE SOCIETY, CULTURE &amp; BUSINESS CUSTOMS</b>	<b>3 Units</b>
<p><b>Prerequisite:</b> JAPN 5.  <b>5 hours lecture.</b>            Continuation of JAPN 5. Further development of intermediate-level grammatical structures and communicative tasks. Intensive and extensive oral and written drills, including 230 more Kanji, in idiomatic constructions. Composition, conversation and selected readings. Further competency in correct language usage in different socio-linguistic features of speech. Stating and supporting opinions on both concrete and abstract topics. Cultural skills to carry out tasks. Language laboratory practice. [<b>Foothill GE: Humanities; Transferability: UC/CSU</b>]</p>			<p><b>Prerequisite:</b> JAPN 3 or equivalent.  <b>May be taken 6 times for credit.</b>  <b>3 hours lecture.</b>            Introduction to basic Japanese business conversation, etiquette, and culture. Development of fluency in the oral/aural language and ability to use appropriate language in business social settings, e.g., words related to respect, humbleness, status, gender, formality. Development of critical thinking skills by comparing viewpoints and values of diverse cultures. Understanding of ambiguities and appreciation of their role in business communication. Awareness of culturally appropriate behavior and body language, the practice of gift-giving, and socializing within a business setting. Understanding of decision-making processes in Japanese corporate culture. [<b>Transferability: CSU</b>]</p>		
<b>JAPN 13A</b>	<b>INTERMEDIATE CONVERSATION I</b>	<b>4 Units</b>	<b>JAPN 25A</b>	<b>ADVANCED COMPOSITION &amp; READING</b>	<b>4 Units</b>
<p><b>Prerequisite:</b> JAPN 3.  <b>Advisory:</b> May be taken concurrently with JAPN 4.  <b>May be taken 6 times for credit.</b>  <b>4 hours lecture.</b>            Speaking and listening experience in culturally appropriate ways. Special emphasis on correct perception and speaking, and familiarity with oral idioms and grammar as they differ from more formal written and literary uses. Development of critical thinking skills by comparing different viewpoints and different values of diverse cultures. Development of listening and speaking skills by exploring various forms of authentic materials, such as current news media, formal and informal conversations. Understanding ambiguities, vagaries, and value inherent in the target language. [<b>Foothill GE: Humanities; Transferability: UC/CSU</b>]</p>			<p><b>Prerequisite:</b> JAPN 6.  <b>4 hours lecture.</b>            Introduction to authentic Japanese written materials intended for native Japanese readers, such as magazine articles, editorials, statistics, and literature. Reading and analysis of texts as exponents of the culture and history. Compositions and advanced grammar. Recognizing about 1,300 kanji. Development of critical thinking skills by comparing different viewpoints and different values of diverse cultures. Development of reading and writing skills by exploring various forms of literary and other forms of creative thoughts. Understanding ambiguities, vagaries, and value inherent in the target language. [<b>Foothill GE: Humanities; Transferability: UC/CSU</b>]</p>		
<b>JAPN 13B</b>	<b>INTERMEDIATE CONVERSATION II</b>	<b>4 Units</b>	<b>JAPN 25B</b>	<b>ADVANCED COMPOSITION &amp; READING</b>	<b>4 Units</b>
<p><b>Prerequisite:</b> JAPN 13A.  <b>Advisory:</b> May be taken concurrently with JAPN 5.  <b>May be taken 6 times for credit.</b>  <b>4 hours lecture, 2 hours laboratory.</b>            Continuation of JAPN 13A. Speaking and listening experience in an environment of increasingly challenging language situation in culturally appropriate ways. Special emphasis on rapidity of correct perception and speaking, acquaintance with a variety of native dialects, and familiarity with oral idioms and grammar as they differ from more formal written and literary uses. Development of critical thinking skills by comparing different viewpoints and different values of diverse cultures. Development of listening and speaking skills by exploring various forms of authentic materials, such as current news media, political speech, and debates. Stating and supporting opinions on various topics. Understanding ambiguities, vagaries, and value inherent in the target language. [<b>Foothill GE: Humanities; Transferability: UC/CSU</b>]</p>			<p><b>Prerequisite:</b> JAPN 25A.  <b>4 hours lecture.</b>            Continuation of JAPN 25A. Reading and analysis of authentic Japanese written materials intended for native Japanese readers, as exponents of the culture and history. Development of further skills in reading authentic materials, including magazines, newspaper articles, editorials, literature, and abstract theories. Recognizing more than 1,800 kanji. Practice in writing expository essays. Development of critical thinking skills by comparing different viewpoints and different values of diverse cultures. Development of reading and writing skills by exploring various forms of literary and other forms of creative thoughts. Understanding and appreciating the ambiguities, vagaries, and value inherent in the target language. [<b>Foothill GE: Humanities; Transferability: UC/CSU</b>]</p>		
<b>JAPN 14A</b>	<b>ADVANCED CONVERSATION I</b>	<b>4 Units</b>	<b>JAPN 33</b>	<b>INTRODUCTION TO JAPANESE CULTURE</b>	<b>4 Units</b>
<p><b>Prerequisite:</b> JAPN 13B.  <b>May be taken 6 times for credit.</b>  <b>4 hours lecture.</b>            Development of fluency in the oral/aural language, and cultural skills required in socio-linguistic functions, i.e., honorifics, in-group/out-group, male/female, and formal/informal expressions. Development of critical thinking skills by comparing different viewpoints and different values of diverse cultures. Development of listening and speaking skills by exploring various forms of authentic materials, such as current news media, political speech, debates, and drama. Stating and supporting opinions on various topics, including abstract concepts. Understanding and appreciating ambiguities, vagaries, and value inherent in the target language. [<b>Transferability: UC/CSU</b>]</p>			<p><b>Advisory:</b> Concurrent enrollment in JAPN 1, 2, or 3 recommended.  <b>4 hours lecture.</b>            Introduction to Japanese culture, Zen and Confucian influences on social ethics, behavior and attitudes. Emphasis on practical application of discipline and expression through development of skill in brush writing, and analysis and interpretation of haiku. [<b>Foothill GE: Humanities; Transferability: UC/CSU</b>]</p>		

**JAPN 36 SPECIAL PROJECTS IN JAPANESE 1 Unit**  
**JAPN 36X 2 Units**  
**JAPN 36Y 3 Units**  
**JAPN 36Z 4 Units**

Prerequisite: JAPN 5.

Any combination of JAPN 36–36Z may be taken 6 times for credit, however, no single course may be taken more than 6 times for credit. 1 hour lecture for each unit of credit.

A study oriented toward spoken or written practice or both in Japanese. This may entail research and critical techniques adapted to individual writing and/or oral presentation projects under instructor supervision. Specific topics vary from quarter to quarter. This course cannot be substituted for departmental requirements. [Transferability: CSU]

**JAPN 103 JAPANESE BUSINESS CULTURE & ETIQUETTE 1 Unit**

Non-degree applicable credit course.

May be taken 6 times for credit.

1 hour lecture.

Introduction to basic Japanese business etiquette and culture. Basic business greetings and interactions. Culturally appropriate behavior and body language. The role of gift giving and socializing in a business setting. The decision-making process in Japanese corporate culture.

**JAPN 192 COMMUNITY SERVICE LEARNING FOR JAPANESE 1 Unit**

May be taken 6 times for credit.

1 hour lecture.

For students who desire training and technical support in experiential learning as a community volunteer in Japanese language and culture.

## JOURNEYMEN

**Computers, Technology & Information Systems (650) 949-7142**  
**www.foothill.edu/ctis/**

**JRYM 100 BUILDING TRADES TEACHER DEVELOPMENT 5 Units**

Prerequisite: Completion of an Apprenticeship Program and a minimum of two years of experience as a journeyman/woman. 5 hours lecture.

Study and application of how students learn, performance objectives, lesson plans, instruction methods, training aids, and a performance evaluations.

**JRYM 101A BASIC ELECTRICITY FOR SHEET METAL AIR CONDITIONING SERVICE 4.5 Units**

Prerequisite: Admission to Sheet Metal Apprenticeship Program; current employment in the sheet metal industry. 9 hours lecture-laboratory.

Skill development for sheet metal workers to service air conditioning equipment. Special emphasis on the basics of electricity and refrigeration principles.

**JRYM 101B ADVANCED ELECTRICITY FOR SHEET METAL AIR CONDITIONING SERVICE 4.5 Units**

Prerequisite: Admission to Sheet Metal Apprenticeship Program; current employment in the sheet metal industry. 9 hours lecture-laboratory.

Continued development of skills necessary for sheet metal workers to service air conditioning equipment. Special emphasis on the use of basic electrical testing instruments, principles, transformers, relays, contactors and safety around electrical equipment.

**JRYM 102A BASIC REFRIGERATION FOR SHEET METAL AIR CONDITIONING SERVICE 4.5 Units**

Prerequisite: Admission to Sheet Metal Apprenticeship Program; current employment in the sheet metal industry. 9 hours lecture-laboratory.

Introduction to the use of refrigeration evacuation service equipment, charging refrigeration systems, and to the use of oxy-acetylene brazing equipment.

**JRYM 102B ADVANCED REFRIGERATION FOR SHEET METAL AIR CONDITIONING SERVICE 4.5 Units**

Prerequisite: Admission to Sheet Metal Apprenticeship Program; current employment in the sheet metal industry. 9 hours lecture-laboratory.

Continued development of refrigeration skills with emphasis on the function of compressors, multiphase electric motors and piping systems.

**JRYM 103A PROPERTIES OF AIR DISTRIBUTION FOR SHEET METAL AIR CONDITIONING SERVICE 4.5 Units**

Prerequisite: Admission to Sheet Metal Apprenticeship Program; current employment in the sheet metal industry. 9 hours lecture-laboratory.

Introduction to the different properties of air distribution with air volumes, pressures, humidity and temperature; basic air balance procedures.

**JRYM 103B REFRIGERATION THEORY FOR SHEET METAL AIR CONDITIONING SERVICE 4.5 Units**

Prerequisite: Admission to Sheet Metal Apprenticeship Program; current employment in the sheet metal industry. 9 hours lecture-laboratory.

Continuing refrigeration theory with emphasis on all the major parts of refrigeration systems. The explanation of the principles and function of the heat pump in a residential application.

**JRYM 104 SHEET METAL JOURNEY LEVEL UPGRADE 2.5 Units**

Prerequisite: Admission to Sheet Metal Apprenticeship Program; current employment in the sheet metal industry. 4.5 hours lecture-laboratory.

Introduction to the latest methods and technology required in the sheet metal industry. Topics will include plastics, layout, plasma (fitting input), fiberglass duct and architectural sheet metal.

**JRYM 152A HVAC BASIC SYSTEMS FOR SHEET METAL JOURNEYPersons 4.5 Units**

Prerequisite: Completion of Sheet Metal Apprenticeship Program; current employment in the sheet metal industry. 9 hours lecture-laboratory.

Development of basic skills necessary for sheet metal workers to service HVAC building systems with special emphasis on pneumatic, electronic, and electric controls.

**JRYM 153A AIR BALANCE TEST EQUIPMENT & INSTRUMENTS FOR JOURNEYPersons (FIRST YEAR) 2.5 Units**

Prerequisite: Completion of Sheet Metal Apprenticeship Program; current employment in the sheet metal industry. 4.5 hours lecture-laboratory.

Development of skills necessary to use test and balance instruments and equipment for HVAC systems and automatic control systems. Use of practical mathematics and mathematical equations to measure air velocity and duct outlet, and to solve air and hydronic balancing problems.

**JRYM 153B TEMPERATURE MEASUREMENT INSTRUMENTS & DUCT SYSTEMS FOR JOURNEYPersons (FIRST YEAR) 2.5 Units**

Prerequisite: Completion of Sheet Metal Apprenticeship Program; current employment in the sheet metal industry. 4.5 hours lecture-laboratory.

Continuing study of skills necessary to test and balance instruments and equipment for HVAC systems and automatic control systems. Use of practical mathematics and mathematical equations to measure air velocity and duct outlet, and to solve air and hydronic balancing problems.

**JRYM 154 RECIPROCATING REFRIGERATION 4.5 Units**  
**Prerequisite:** Completion of Sheet Metal Apprenticeship Program; current employment in the sheet metal industry.  
**9 hours lecture-laboratory.**

Fundamentals of reciprocating refrigeration systems including refrigeration system control equipment. Development of basic skills necessary for sheet metal workers to service reciprocating refrigeration systems.

**JRYM 155A BASIC ELECTRICITY FOR SHEET METAL A/C SERVICE 4.5 Units**

**Prerequisite:** Completion of HVAC basic systems; current employment in the sheet metal industry.  
**9 hours lecture-laboratory.**

Development of basic skills in electricity necessary for air conditioning service. Includes basic electrical theory, electrical components and symbols, wiring diagrams, voltage systems, refrigeration systems, and electric motors.

**JRYM 157 HAZARDOUS MATERIALS TRAINING FOR THE TRADES 2 Units**

**Prerequisite:** Two years welding experience verified by employer.  
**3.3 hours lecture-laboratory.**

A short course for the experienced welder. The focus will be certification by the Sheet Metal National Training Fund. All electrical welding processes will be taught.

**JRYM 158 HAZARDOUS MATERIALS RECERTIFICATION FOR THE TRADES .5 Unit**

**Prerequisite:** Current employment in a construction trade; JRYM 157.  
**8 hours lecture-laboratory.**

Updated information on the emergency response to hazardous materials incidents. Course will follow the requirements set forth in Publication 29 CFR 1910. Covers current changes in law and a brief overview of chemical hazards, gas hazards, electrical hazards, personal protective equipment, confined space rescue, monitoring equipment, and laws governing hazardous materials response.

**JRYM 165 PRE-APPRENTICE INTRODUCTION TO SHEET METAL 2.5 Units**

**4.5 hours lecture-laboratory.**

Pre-entry level instruction to the Sheet Metal Apprenticeship Program. Basic instruction on the sheet metal industry, equipment, trade math, drafting, materials and equipment safety.

**JRYM 166A MARINE SHEET METAL TRAINING I FOR NON-APPRENTICES 2.5 Units**

**Prerequisite:** Current employment in the sheet metal industry.  
**4.5 hours lecture-laboratory.**

Working of metals in sheet form. Structural shapes, such as angle bar, channels, flat bar, rod and wire are also extensively used. Metals of varying thicknesses, from a few thousandths of an inch to  $\frac{3}{16}$ ths of an inch, are used. Proper techniques and procedures are demonstrated for the different characteristics of each metal studied. Some of the metals used are copper, brass, bronze, lead, zinc, aluminum, black and galvanized iron, monel and stainless steel.

**JRYM 166B MARINE SHEET METAL TRAINING FOR NON-APPRENTICES II 2.5 Units**

**Prerequisite:** Current employment in the sheet metal industry.  
**4.5 hours lecture-laboratory.**

Continuation of working with metals in sheet form. Structural shapes, such as angle bar, channels, flat bar, rod and wire are also extensively used. Metals of varying thicknesses, from a few thousandths of an inch to  $\frac{3}{16}$ ths of an inch, are used. Proper techniques and procedures are demonstrated for the different characteristics of each metal studied. Some of the metals used are copper, brass, bronze, lead, zinc, aluminum, black and galvanized iron, monel and stainless steel.

**JRYM 168A JOURNEYLEVEL DIGITAL SYSTEMS I 2.5 Units**  
**Prerequisite:** Current employment in the sheet metal industry.  
**4.5 hours lecture-laboratory.**

Provide training in the following domains-fundamentals of measurement; operation of pressure, flow, level and temperature instruments; safety practices; calibration; process control fundamentals; loop checking, troubleshooting, start-up, documentation; maintenance and repair; and using micro-processor-based instruments and controllers.

**JRYM 168B JOURNEYLEVEL DIGITAL SYSTEMS II 2.5 Units**  
**Prerequisite:** Current employment in the sheet metal industry.  
**4.5 hours lecture-laboratory.**

Continued training in the following domains-calibration; process control fundamentals; loop checking, troubleshooting, start-up, documentation; maintenance and repair; and using micro-processor-based instruments and controllers.

**JRYM 169A FIELD MEASUREMENT & LAYOUT FOR SHEET METAL JOURNEYMEN I 2.5 Units**

**Prerequisite:** Current employment in the sheet metal industry.  
**4.5 hours lecture-laboratory.**

Advanced methods of pattern development using the hand-held calculator. Will use the pythagorean theorem, parallel layout and radial line layout with applications, and triangulation. Intended for experienced sheet metal journeypersons who wish to further their knowledge in the latest methods of layout.

**JRYM 170A ADVANCED SHEET METAL SERVICE I 4.5 Units**  
**Prerequisite:** Current employment in the sheet metal industry.  
**9 hours lecture-laboratory.**

In-depth study of HVAC systems, electricity, measurements; testing, adjusting and balancing for sheet metal service persons. Fluid flow, heat transfer, motors, starters and equations commonly used for testing will be covered.

**JRYM 170B ADVANCED SHEET METAL SERVICE II 4.5 Units**  
**Prerequisite:** Current employment in the sheet metal industry.  
**9 hours lecture-laboratory.**

Continued in-depth study of HVAC systems. Air balancing, hydronic systems, pumps, U.S. and metric equivalents and conversions, heat and refrigeration will be covered.

**JRYM 172A ELECTRICAL SYSTEM OPERATION, CONTROLS & DEVICES FOR JOURNEYPersons (SECOND YEAR) 2.5 Units**

**Prerequisite:** JRYM 171A, 171B, 17C or current employment as a detailer in the sheet metal industry.  
**4.5 hours lecture-laboratory.**

Study of individual electrical components and devices of control systems, and understanding their operation and relationship to each other. Identify and use instruments in measuring air movement. Learn how to interpret, use and understand drawings relating to the construction of a building.

**JRYM 172B HVAC TESTING & BALANCING PROCEDURES FOR JOURNEYPersons (SECOND YEAR) 2.5 Units**

**Prerequisite:** Completion of Sheet Metal Apprenticeship Program; current employment in the sheet metal industry.  
**4.5 hours lecture-laboratory.**

Utilize skills and knowledge previously learned to apply methods of balancing HVAC systems. Balancing of systems will include both air and hydronic. Information gathered during the balancing will be used in completing reports required by the building engineer and owner.

**JRYM 173A AIR DISTRIBUTION & MANUFACTURING SYSTEMS FOR JOURNEYPERSONS (THIRD YEAR) 2.5 Units**

**Prerequisite:** Completion of Sheet Metal Apprenticeship Program; current employment in the sheet metal industry.  
4.5 hours lecture-laboratory.

The difference, advantages and disadvantages of pneumatic and direct digital control systems will be compared to electrical systems. Students will use laptop computers to access a control system from a remote location; take readings and make minor adjustments to the system. Clean room operation and protocol will be examined.

**JRYM 173B SYSTEMS INSTALLATION & TROUBLESHOOTING FOR JOURNEYPERSONS (THIRD YEAR) 2.5 Units**

**Prerequisite:** Completion of Sheet Metal Apprenticeship Program; current employment in the sheet metal industry.  
4.5 hours lecture-laboratory.

Proper layout and installation procedures on various control systems. This will include system programming, adjustment, testing, maintenance and repair of the installed system.

## LANGUAGE ARTS

Language Arts

(650) 949-7250  
www.foothill.edu/la/

**L A 36 SPECIAL PROJECTS IN 1 Unit**  
**L A 36X LANGUAGE ARTS 2 Units**  
**L A 36Y 3 Units**  
**L A 36Z 4 Units**

Any combination of L A 36–36Z may be taken 6 times for credit, however, no single course may be taken more than 6 times for credit.  
1 hour lecture for each unit of credit.

A seminar emphasizing research, criticism, individual study, and field work. Discussions in individual projects under instructor's supervision. Specific topics will vary from quarter to quarter. This course cannot be substituted for departmental requirements. Enrollment for this course is available in the Language Arts Division Office. [Transferability: CSU]

**L A 80 INTRODUCTION TO TUTOR TRAINING 1 Unit**

**Advisory:** Eligibility for ENGL 1A.  
May be taken 6 times for credit.  
2 hours lecture-laboratory.

Introduction to theories and methods of effective tutoring, including role of a tutor, relationship of tutor to learner, assessment of learner, and creating a lesson plan, utilizing different methods. [Transferability: CSU]

**L A 111 PASS THE TORCH TEAM LEADER TRAINING 1 Unit**

**Prerequisite:** An earned "A" or "B+" grade with instructor recommendation in one of the following courses: ESLL 25, 26; ENGL 100, 110, 1A, 1B; student must currently be a team leader for a Pass the Torch study team.  
May be taken 3 times for credit.

1 hour lecture.  
Training in team leading skills necessary for assisting a member in the Pass the Torch Program, including study skills, college policies, professionalism, ethics and role modeling of successful student behavior. Techniques of subject-specific tutoring skills, with attention given to diverse learning styles. Practice of these skills through sample student works and, when applicable, content-specific suggestions from the member's instructor.

**L A 180X SPECIAL STUDIES IN EFFECTIVE INSTRUCTIONAL PRACTICES 1 Unit**

Non-degree applicable credit course.  
May be taken 6 times for credit.  
1 hour lecture.

Lecture on and discussion of effective instructional practices. Exploration of best practices in instructional design and assessment theory and research. Practice in developing curriculum in a variety of disciplines. Collaborative design of pedagogies that deepen learning of skills.

**L A 189 SPECIAL STUDIES LABORATORY .5 Unit**  
**L A 189X 1 Unit**  
**L A 189Y 1.5 Units**  
**L A 189Z 2 Units**

Non-degree applicable credit course.

**Advisory:** Pass/No Pass.

Any combination of L A 189–189Z may be taken 6 times for credit, however, no single course may be taken more than 6 times for credit.  
.5 hour lecture for each .5 unit.

For students who desire or require additional help in attaining comprehension and competency in learning skills.

**L A 190 DIRECTED STUDY .5 Unit**  
**L A 190X 1 Unit**  
**L A 190Y 1.5 Units**  
**L A 190Z 2 Units**

Non-degree applicable credit course.

**Advisory:** Pass/No Pass.

Any combination of L A 190–190Z may be taken 6 times for credit, however, no single course may be taken more than 6 times for credit.  
.5 hour lecture for each .5 unit of credit.

For students who desire or require additional help in attaining comprehension and competency in learning skills.

**L A 192 COMMUNITY SERVICE LEARNING ACROSS THE CURRICULUM FOR LANGUAGE ARTS 1 Unit**

Non-degree applicable credit course.

**Advisory:** Pass/No Pass.

May be taken 6 times for credit.  
1 hour lecture, 3 hours laboratory.

For students who desire training and technical support in experiential learning as a community volunteer in specific language arts disciplines.

## LEARNING IN NEW MEDIA CLASSROOMS

**Computers, Technology & Information Systems (650) 949-7498**  
www.foothill.edu/kci/linc/

**LINC 50 TECHNOLOGY IN THE K–12 CLASSROOM I 1 Unit**

**Formerly:** LINC 255

**Advisory:** Familiarity with PC or Mac.

May be taken 6 times for credit.  
1 hour lecture.

Using a variety of software applications, the student moves beyond the world of traditional multimedia authoring to construct computer based simulation to express his/her understanding of virtually any academic topic. [Transferability: CSU]

**LINC 50A TECHNOLOGY IN THE K–12 CLASSROOM II .5 Unit**

**Formerly:** LINC 255S

**Advisory:** Familiarity with PC or Mac.

May be taken 6 times for credit.  
.5 hour lecture.

Using a variety of software applications, the student moves beyond the world of traditional multimedia authoring to construct computer based simulation to express his/her understanding of virtually any academic topic. [Transferability: CSU]

**LINC 50B TECHNOLOGY IN THE K–12 CLASSROOM III .5 Unit**

**Formerly:** LINC 255T

**Advisory:** Familiarity with PC or Mac.

May be taken 6 times for credit.  
.5 hour lecture.

Using a variety of software applications, the student moves beyond the world of traditional multimedia authoring to construct computer based simulation to express his/her understanding of virtually any academic topic. [Transferability: CSU]

<p><b>LINC 50F</b>      <b>INTEGRATING TECHNOLOGY INTO A STANDARDS-BASED CURRICULUM I</b>      <b>2 Units</b></p> <p><i>Formerly: LINC 225</i>  <b>Advisory:</b> Familiarity with PC or Mac; basic internet skills.  <b>May be taken 6 times for credit.</b>  <b>2 hours lecture.</b>            How to integrate a student-centered technology project based on the California Content Standards, ISTE Technology Standards, and new California Technology Standards for teacher certification into classroom curriculum. Techniques in creating a student project as well as assessment and integration of technology into projects will be taught. [Transferability: CSU]</p>	<p><b>LINC 52</b>      <b>INTEGRATING TECHNOLOGY INTO SCIENCE</b>      <b>1 Unit</b></p> <p><i>Formerly: LINC 262</i>  <b>Advisory:</b> Familiarity with PC or Mac; familiarity with basic Internet skills.  <b>May be taken 6 times for credit.</b>  <b>1 hour lecture, 1 hour terminal time.</b>            How to integrate a student-centered technology project based on the California Language Arts Content Standards, State approved language arts text books, ISTE Technology Standards, and new California Technology Standards for teacher certification into classroom curriculum. Techniques in creating technology rich student assignments project that support the content standards and No Child Left Behind Act as well as assessment and integration of technology into projects will be taught. [Transferability: CSU]</p>
<p><b>LINC 50G</b>      <b>INTEGRATING TECHNOLOGY INTO A STANDARDS-BASED CURRICULUM I (BTSA)</b>      <b>1 Unit</b></p> <p><i>Formerly: LINC 225S</i>  <b>Advisory:</b> Familiarity with PC or Mac; basic internet skills.  <b>May be taken 6 times for credit.</b>  <b>1 hour lecture, 1 hour terminal time.</b>            How to integrate a student-centered technology project based on the California Content Standards, ISTE Technology Standards, and new California Technology Standards for teacher certification into classroom curriculum. Techniques in creating a student project as well as assessment and integration of technology into projects will be taught. [Transferability: CSU]</p>	<p><b>LINC 52A</b>      <b>INTEGRATING TECHNOLOGY INTO SCIENCE K–5</b>      <b>.5 Unit</b></p> <p><i>Formerly: LINC 262S</i>  <b>Advisory:</b> Familiarity with PC or Mac; familiarity with basic internet skills.  <b>May be taken 6 times for credit.</b>  <b>.5 hour lecture, .5 hour terminal time.</b>            How to integrate a student-centered technology project based on the California Language Arts Content Standards, State approved language arts text books, ISTE Technology Standards, and new California Technology Standards for teacher certification into classroom curriculum. Techniques in creating technology rich student assignments project that support the content standards and No Child Left Behind Act as well as assessment and integration of technology into projects will be taught. [Transferability: CSU]</p>
<p><b>LINC 51</b>      <b>INTEGRATING TECHNOLOGY INTO LANGUAGE ARTS</b>      <b>1 Unit</b></p> <p><i>Formerly: LINC 261</i>  <b>Advisory:</b> Familiarity with PC or Mac; familiarity with basic internet skills.  <b>May be taken 6 times for credit.</b>  <b>1 hour lecture, 1 hour terminal time.</b>            How to integrate a student-centered technology project based on the California Language Arts Content Standards, State approved language arts text books, ISTE Technology Standards, and new California Technology Standards for teacher certification into classroom curriculum. Techniques in creating technology rich student assignments project that support the content standards and No Child Left Behind Act as well as assessment and integration of technology into projects will be taught. [Transferability: CSU]</p>	<p><b>LINC 52B</b>      <b>INTEGRATING TECHNOLOGY INTO SCIENCE 6–8</b>      <b>.5 Unit</b></p> <p><i>Formerly: LINC 262T</i>  <b>Advisory:</b> Proficiency in Mac or Windows operating system, software conventions, and internet technologies.  <b>May be taken 4 times for credit.</b>  <b>.5 hour lecture.</b>            Designed for middle-school science educators to create student-centered projects using educational technology. Develop an inquiry-based science curriculum integration plan based on the California Science Content Standards for a project. [Transferability: CSU]</p>
<p><b>LINC 51A</b>      <b>INTEGRATING TECHNOLOGY INTO LANGUAGE ARTS K–5</b>      <b>.5 Unit</b></p> <p><i>Formerly: LINC 261S</i>  <b>Advisory:</b> Familiarity with PC or Mac; familiarity with basic internet skills.  <b>May be taken 6 times for credit.</b>  <b>.5 hour lecture, .5 hour terminal time.</b>            How to integrate a student-centered technology project based on the California Language Arts Content Standards, State approved language arts text books, ISTE Technology Standards, and new California Technology Standards for teacher certification into classroom curriculum. Techniques in creating technology rich student assignments project that support the content standards and No Child Left Behind Act as well as assessment and integration of technology into projects will be taught. [Transferability: CSU]</p>	<p><b>LINC 52D</b>      <b>TEACHING SCIENCE USING BAY AREA MUSEUMS</b>      <b>2 Units</b></p> <p><i>Formerly: LINC 267</i>  <b>May be taken 6 times for credit.</b>  <b>2 hours lecture.</b>            This course addresses the growing need for K–8 teachers to change the way they teach science and improve student science literacy/achievement. This course helps teachers to develop their own science content best practice knowledge while learning to use online resources for curriculum alignment with the CA science standards and many different Bay Area science, technology, and children’s museums, zoos, aquariums, nature centers, observatories/planetariums, and other informal science institutions. [Transferability: CSU]</p>
<p><b>LINC 51B</b>      <b>INTEGRATING TECHNOLOGY INTO LANGUAGE ARTS 6–8</b>      <b>.5 Unit</b></p> <p><i>Formerly: LINC 261T</i>  <b>Advisory:</b> Familiarity with PC or Mac; familiarity with basic internet skills.  <b>May be taken 6 times for credit.</b>  <b>.5 hour lecture, .5 hour terminal time.</b>            How to integrate a student-centered technology project based on the California Language Arts Content Standards, State approved language arts text books, ISTE Technology Standards, and new California Technology Standards for teacher certification into classroom curriculum. Techniques in creating technology rich student assignments project that support the content standards and No Child Left Behind Act as well as assessment and integration of technology into projects will be taught. [Transferability: CSU]</p>	<p><b>LINC 53</b>      <b>INTEGRATING TECHNOLOGY INTO MATHEMATICS</b>      <b>1 Unit</b></p> <p><i>Formerly: LINC 263</i>  <b>Advisory:</b> Familiarity with PC or Mac; familiarity with basic internet skills.  <b>May be taken 6 times for credit.</b>  <b>1 hour lecture, 1 hour terminal time.</b>            How to integrate a student-centered technology project based on the California Mathematics Content Standards, State approved Mathematics text books, ISTE Technology Standards, and new California Technology Standards for teacher certification into classroom curriculum. Techniques in creating technology rich student assignments project that support the content standards and No Child Left Behind Act as well as assessment and integration of technology into projects will be taught. [Transferability: CSU]</p>

**LINC 53A INTEGRATING TECHNOLOGY INTO MATHEMATICS K-5 .5 Unit**

*Formerly: LINC 263S*

**Advisory:** Familiarity with PC or Mac; familiarity with basic internet skills. May be taken 6 times for credit.

.5 hour lecture, .5 hour terminal time.

How to integrate a student-centered technology project based on the California Mathematics Content Standards, State approved Mathematics text books, ISTE Technology Standards, and new California Technology Standards for teacher certification into classroom curriculum. Techniques in creating technology rich student assignments project that support the content standards and No Child Left Behind Act as well as assessment and integration of technology into projects will be taught. [Transferability: CSU]

**LINC 53B INTEGRATING TECHNOLOGY INTO MATHEMATICS 6-8 .5 Unit**

*Formerly: LINC 263T*

**Advisory:** Familiarity with PC or Mac; familiarity with basic internet skills. May be taken 6 times for credit.

.5 hour lecture, .5 hour terminal time.

How to integrate a student-centered technology project based on the California Mathematics Content Standards, State approved Mathematics text books, ISTE Technology Standards, and new California Technology Standards for teacher certification into classroom curriculum. Techniques in creating technology rich student assignments project that support the content standards and No Child Left Behind Act as well as assessment and integration of technology into projects will be taught. [Transferability: CSU]

**LINC 54 INTEGRATING TECHNOLOGY INTO SOCIAL STUDIES 1 Unit**

*Formerly: LINC 264*

**Advisory:** Proficiency in a computer operating system (Mac or Windows), software conventions, and internet technologies.

May be taken 6 times for credit.

1 hour lecture.

Integrate a student-centered technology project based on the California Social Studies Content Standards into classroom curriculum. Develop techniques for creating technology rich student assignments, projects, and assessments. [Transferability: CSU]

**LINC 54A INTEGRATING TECHNOLOGY INTO SOCIAL STUDIES K-12 .5 Unit**

*Formerly: LINC 264S*

**Advisory:** Proficiency in a computer operating system (Mac or Windows), software conventions, and internet technologies.

May be taken 4 times for credit.

.5 hour lecture.

Introductory course for integrating a student-centered technology project based on the California Social Studies Content Standards into classroom curriculum. Develop techniques for implementing educational technology. [Transferability: CSU]

**LINC 54B INTEGRATING TECHNOLOGY INTO SOCIAL STUDIES 6-8 .5 Unit**

*Formerly: LINC 264T*

**Advisory:** Familiarity with PC or Mac; familiarity with basic internet skills. May be taken 6 times for credit.

.5 hour lecture, .5 hour terminal time.

How to integrate a student-centered technology project based on the California Social Studies Content Standards, State approved Social Studies text books, ISTE Technology Standards, and new California Technology Standards for teacher certification into classroom curriculum. Techniques in creating technology rich student assignments project that support the content standards and No Child Left Behind Act as well as assessment and integration of technology into projects will be taught. [Transferability: CSU]

**LINC 55 LEARNING A FOREIGN LANGUAGE USING TECHNOLOGY I 3 Units**

*Formerly: LINC 266*

May be taken 6 times for credit.

3 hours lecture, 1 hour terminal time.

Introduction to various methods of foreign language acquisition. Hands-on experience using the target foreign language search engines and developing multimedia projects and presentations. [Transferability: CSU]

**LINC 55A LEARNING A FOREIGN LANGUAGE USING TECHNOLOGY II 2 Units**

*Formerly: LINC 288*

May be taken 6 times for credit.

2 hours lecture, 1 hour terminal time.

This course introduces Flash to the students in the context of them using it in a classroom setting. There will be a collaborative project wherein each student will display their results to other members of the class. [Transferability: CSU]

**LINC 55B TEACHING MATH & SCIENCE WITH TECHNOLOGY 3 Units**

*Formerly: LINC 274*

May be taken 6 times for credit.

3 hour lecture, 3 hours lecture-laboratory.

This course is intended for math and science teachers who wish to use technology more effectively to enhance teaching and learning. A major part of this class will be examining the processes of mathematical and scientific investigation and problem solving such as observing, predicting, inferring, hypothesizing, evaluating and model building. This will be a hands-on class where participants will create presentations, concept maps, WebQuests and lessons using technology. [Transferability: CSU]

**LINC 58 GLOBAL PROJECT-BASED LEARNING 2 Units**

*Formerly: LINC 224*

**Advisory:** Familiarity with PC or Mac; basic internet skills.

May be taken 6 times for credit.

2 hours lecture, 2 hours terminal time.

How to create project-based standards and curriculum that maximizes the power of the Internet to connect students to email pen pals, virtual fieldtrips, webquests, and other resources. Teachers will be able to connect with others all over the world in order to plan and implement projects. During the class participants will create a project that will engage students in learning curricular content. [Transferability: CSU]

**LINC 58A E-PORTFOLIOS 1 Unit**

*Formerly: LINC 223*

May be taken 6 times for credit.

1 hour lecture, 1 hour terminal time.

This course is a how-to on e-portfolios as authentic assessment. Electronic portfolios can be used for student work as well as for teacher professional development. Reflective practice that deepens learning will be presented. Student e-portfolios will be examined and analyzed. Computer tools that enable students to create powerful e-portfolios will be examined. [Transferability: CSU]

**LINC 58B CHOOSING THE BEST MEDIA FOR PROJECTS 2 Units**

*Formerly: LINC 222*

May be taken 6 times for credit.

2 hours lecture, 2 hours terminal time.

This course is an overview of the pros and cons of several software applications that are used as tools for student projects. An analysis of the tools that deepen student learning of academic content will be discussed. Participants will try creating mini projects using various software and analyzing their own learning. Applications such as Inspiration, Photoshop MovieWorks, HyperStudio, PowerPoint, Creator, and MicroWorlds Pro will be explored. [Transferability: CSU]

<p><b>LINC 60</b>            <b>INTRODUCTION TO COMPUTER BASICS</b>            <b>1 Unit</b></p> <p><i>Formerly: LINC 293</i>  <b>May be taken 3 times for credit.</b>  <b>1 hour lecture, 1 hour terminal time.</b>  Hands-on introduction to the computer: Hardware Components; Basic Interface, File Organization; Operating System; Introduction to Word Processing, Spreadsheets, &amp; Graphics. [Transferability: CSU]</p>	<p><b>LINC 61C</b>            <b>IWORK I</b>            <b>.5 Unit</b></p> <p><i>Formerly: LINC 250S</i>  <b>Advisory: Basic understanding of a Mac.</b>  <b>May be taken 6 times for credit.</b>  <b>.5 hour lecture, .5 hour terminal time.</b>  AppleWorks allows you to create word processed documents, draw, paint, create spreadsheets with charts and graphs and create a basic data base. In this course you will get an overview of how to use the various components of Appleworks. [Transferability: CSU]</p>
<p><b>LINC 60A</b>            <b>INTRODUCTION TO THE MACINTOSH</b>            <b>1 Unit</b></p> <p><i>Formerly: LINC 295</i>  <b>Advisory: Familiarity with Mac.</b>  <b>May be taken 6 times for credit.</b>  <b>1 hour lecture, 1 hour terminal time.</b>  Provides hands on experience with a Macintosh computer. Hardware components and capabilities will be explored, along with basic troubleshooting skills. [Transferability: CSU]</p>	<p><b>LINC 61D</b>            <b>IWORK II</b>            <b>.5 Unit</b></p> <p><i>Formerly: LINC 250T</i>  <b>Advisory: Basic understanding of a Mac.</b>  <b>May be taken 6 times for credit.</b>  <b>.5 hour lecture, .5 hour terminal time.</b>  AppleWorks allows you to create word processed documents, draw, paint, create spreadsheets with charts and graphs and create a basic data base. In this course you will get an overview of how to use the various components of AppleWorks. [Transferability: CSU]</p>
<p><b>LINC 60B</b>            <b>INTRODUCTION TO THE PC</b>            <b>1 Unit</b></p> <p><i>Formerly: LINC 296</i>  <b>Advisory: Familiarity with PC.</b>  <b>May be taken 6 times for credit.</b>  <b>1 hour lecture, 1 hour terminal time.</b>  Provides hands on experience with a Windows environment on a PC. Hardware components and capabilities will be explored, along with basic troubleshooting skills. [Transferability: CSU]</p>	<p><b>LINC 62</b>            <b>MICROSOFT WORD I</b>            <b>1 Unit</b></p> <p><i>Formerly: LINC 270</i>  <b>Advisory: Familiarity with PC or Mac.</b>  <b>May be taken 6 times for credit.</b>  <b>1 hour lecture, 1 hour terminal time.</b>  Provides Hands-on experience including formatting, editing, saving, and printing letters, memos, and other short documents, inserting text boxes and graphics, composing tables, headers and footers, and editing and merging documents. [Transferability: CSU]</p>
<p><b>LINC 60J</b>            <b>PROGRAMMING</b>            <b>1 Unit</b></p> <p><i>Formerly: LINC 299</i>  <b>May be taken 6 times for credit.</b>  <b>1 hour lecture.</b>  Programming with Alice will teach you to program a computer, but uses a completely different and more enjoyable approach which allows students to drag-and-drop words in a direct manipulation interface rather than having to correctly type commands according to obscure rules of syntax. In addition, Alice defines object-based programming by providing animated, on-screen 3D virtual objects. [Transferability: CSU]</p>	<p><b>LINC 62A</b>            <b>MICROSOFT WORD II</b>            <b>.5 Unit</b></p> <p><i>Formerly: LINC 270S</i>  <b>Advisory: Familiarity with PC or Mac.</b>  <b>May be taken 6 times for credit.</b>  <b>.5 hour lecture, .5 hour terminal time.</b>  Provides Hands-on experience including formatting, editing, saving, and printing letters, memos, and other short documents, inserting text boxes and graphics, composing tables, headers and footers, and editing and merging documents. [Transferability: CSU]</p>
<p><b>LINC 60K</b>            <b>GAME-BASED LEARNING</b>            <b>1 Unit</b></p> <p><i>Formerly: LINC 243</i>  <b>Advisory: Familiarity with PC or Mac.</b>  <b>May be taken 6 times for credit.</b>  <b>1 hour lecture.</b>  Using the software application, STAGECAST CREATOR, the student moves beyond the world of traditional multimedia authoring to construct computer based simulation to express his/her understanding of virtually any academic topic. [Transferability: CSU]</p>	<p><b>LINC 62B</b>            <b>MICROSOFT WORD III</b>            <b>.5 Unit</b></p> <p><i>Formerly: LINC 270T</i>  <b>Advisory: Familiarity with PC or Mac.</b>  <b>May be taken 6 times for credit.</b>  <b>.5 hour lecture, .5 hour terminal time.</b>  Provides Hands-on experience including formatting, editing, saving, and printing letters, memos, and other short documents, inserting text boxes and graphics, composing tables, headers and footers, and editing and merging documents. [Transferability: CSU]</p>
<p><b>LINC 61A</b>            <b>MICROSOFT OFFICE</b>            <b>1 Unit</b></p> <p><i>Formerly: LINC 272</i>  <b>Advisory: Familiarity with PC or Mac; basic internet skills.</b>  <b>May be taken 6 times for credit.</b>  <b>1 hour lecture, 1 hour terminal time.</b>  Provides students with an overview of Microsoft Office. Hands on experience of Word, Power Point and Excel will give students a basic knowledge of the classroom uses of the Office Suite. [Transferability: CSU]</p>	<p><b>LINC 63</b>            <b>MICROSOFT EXCEL OVERVIEW</b>            <b>1 Unit</b></p> <p><i>Formerly: LINC 269</i>  <b>Advisory: Proficiency in a computer operating system (Mac or Windows), software conventions, and internet technologies.</b>  <b>May be taken 5 times for credit.</b>  <b>1 hour lecture.</b>  Microsoft Excel is a powerful spreadsheet application that can support educators in a myriad of tasks that include analyzing student performance data, tracking expenditures, budget development, meeting planning, and parent communication. [Transferability: CSU]</p>
<p><b>LINC 61B</b>            <b>IWORK: PAGES, KEYNOTE &amp; NUMBERS</b>            <b>1 Unit</b></p> <p><i>Formerly: LINC 250</i>  <b>Advisory: Basic understanding of a Mac.</b>  <b>May be taken 6 times for credit.</b>  <b>1 hour lecture, 1 hour terminal time.</b>  AppleWorks allows you to create word processed documents, draw, paint, create spreadsheets with charts and graphs and create a basic data base. In this course you will get an overview of how to use the various components of AppleWorks. [Transferability: CSU]</p>	<p><b>LINC 63A</b>            <b>MICROSOFT EXCEL I</b>            <b>.5 Unit</b></p> <p><i>Formerly: LINC 271</i>  <b>Advisory: Proficiency in a computer operating system (Mac or Windows), software conventions, and internet technologies.</b>  <b>May be taken 4 times for credit.</b>  <b>.5 hour lecture.</b>  This introductory course introduces the basic ways to use the Excel software application, including the use of formulas for student and teacher projects. Creating and modifying Excel spreadsheets, databases, charts and graphs will be included. [Transferability: CSU]</p>

**LINC 63B      MICROSOFT EXCEL II      .5 Unit**  
**Formerly: LINC 2715**  
**Advisory: Proficiency in a computer operating system (Mac or Windows), software conventions, and internet technologies.**  
**May be taken 4 times for credit.**  
**.5 hour lecture.**

In this second level course, learn to use the Excel software application, including the use of formulas for student and teacher projects, typical organizational needs, and personal projects. Create and modify spreadsheets, formulas, databases, charts and graphs, and perform data merge. [Transferability: CSU]

**LINC 64      MICROSOFT POWERPOINT      1 Unit**  
**Formerly: LINC 246**  
**Advisory: Familiarity with PC or Mac; basic internet skills.**  
**May be taken 6 times for credit.**  
**1 hour lecture, 1 hour terminal time.**

Provides students with skills necessary to create projects using Microsoft PowerPoint. Projects are standards based and appropriate for classroom use. Students will learn to include text, sound, and animation in their PowerPoint presentation. [Transferability: CSU]

**LINC 65A      MICROSOFT ACCESS      1 Unit**  
**Formerly: LINC 273**  
**Advisory: Familiarity with PC or Mac.**  
**May be taken 2 times for credit.**  
**1 hour lecture, 2 hours terminal time.**

Introduction to Access, a relational database tool; hands-on experience. Intended for Continuing Education. [Transferability: CSU]

**LINC 65B      FILEMAKER PRO      1 Unit**  
**Formerly: LINC 275**  
**Advisory: Basic computer skills, use of a keyboard and mouse; a basic understanding menus.**  
**May be taken 6 times for credit.**  
**1 hour lecture, 1 hour terminal time.**

Introduction to Filemaker Pro, a relational database tool; hands-on experience. Intended for Continuing Education. [Transferability: CSU]

**LINC 66      INTRODUCTION TO THE INTERNET      1 Unit**  
**Formerly: LINC 206**  
**Advisory: Familiarity with PC or Mac; basic internet skills.**  
**May be taken 6 times for credit.**  
**1 hour lecture, 1 hour terminal time.**

This is a comprehensive course to learn to use email and the Internet. Participants will learn how to understand the vocabulary and anatomy of email and web addresses, distinguish between the different types of email accounts, and learn appropriate netiquette, and ethical and legal issues related using the Internet in the classroom. An array of online educational resources to enhance the curriculum will be given. Participants will explore online projects, lesson plans, and resources from around the world. Netscape Communicator and Microsoft Internet Explorer will be the tools used. The course includes: How to use the Internet from home or school, hands-on experience with E-Mail, File Transfer Protocol (FTP), and Listservs, Basics of the Browser, Bookmarks, Search Engines, and Basic Searching Strategies. It is intended for continuing education. [Transferability: CSU]

**LINC 66A      INTRODUCTION TO THE INTERNET I      .5 Unit**  
**Formerly: LINC 206S**  
**Advisory: Familiarity with PC or Mac; basic internet skills.**  
**May be taken 6 times for credit.**  
**.5 hour lecture, .5 hour terminal time.**

This is a comprehensive course to learn to use email and the Internet. Participants will learn how to understand the vocabulary and anatomy of email and web addresses, distinguish between the different types of email accounts, and learn appropriate netiquette, and ethical and legal issues related using the Internet in the classroom. An array of online educational resources to enhance the curriculum will be given. Participants will explore online projects, lesson plans, and resources from around the world. Netscape Communicator and Microsoft Internet Explorer will be the tools used. The course includes: How to use the Internet from home or school, hands-on experience with E-Mail, File Transfer Protocol

(FTP), and Listservs, Basics of the Browser, Bookmarks, Search Engines, and Basic Searching Strategies. It is intended for continuing education. [Transferability: CSU]

**LINC 66B      INTRODUCTION TO THE INTERNET II      .5 Unit**  
**Formerly: LINC 206T**  
**Advisory: Familiarity with PC or Mac; basic internet skills.**  
**May be taken 6 times for credit.**  
**.5 hour lecture, .5 hour terminal time.**

This is a comprehensive course to learn to use email and the Internet. Participants will learn how to understand the vocabulary and anatomy of email and web addresses, distinguish between the different types of email accounts, and learn appropriate netiquette, and ethical and legal issues related using the Internet in the classroom. An array of online educational resources to enhance the curriculum will be given. Participants will explore online projects, lesson plans, and resources from around the world. Netscape Communicator and Microsoft Internet Explorer will be the tools used. The course includes: How to use the Internet from home or school, hands-on experience with E-Mail, File Transfer Protocol (FTP), and Listservs, Basics of the Browser, Bookmarks, Search Engines, and Basic Searching Strategies. It is intended for continuing education. [Transferability: CSU]

**LINC 66C      SEARCHING & RESEARCHING THE INTERNET FOR EDUCATORS      2 Units**  
**Formerly: LINC 208**  
**Advisory: Familiarity with PC or Mac; basic internet and email skills.**  
**May be taken 6 times for credit.**  
**2 hours lecture.**

This is an intermediate to advanced course for teachers and administrators who currently use the Internet for personal research and in their classrooms. Methods to better integrate the Internet into the curriculum will be addressed. The course emphasizes using advanced search techniques that incorporate critical thinking, essential questions, and inquiry-based learning to narrow searches, explore search engines, evaluate web sites, and understand copyright and citation documentation. Participants will create an Internet treasure hunt or WebQuest to use with students. [Transferability: CSU]

**LINC 66D      PODCASTING      1 Unit**  
**Formerly: LINC 283**  
**Advisory: Proficiency in a computer operating system (Mac or Windows), software conventions, and internet technologies.**  
**May be taken 3 times for credit.**  
**1 hour lecture.**

This class will explain, demonstrate and provide hands-on experience creating a podcast using commonly available audio software and upload it to the web (iPod not necessary). [Transferability: CSU]

**LINC 66E      INTRODUCTION TO BLOGS & WIKIS      .5 Unit**  
**Formerly: LINC 283S**  
**Advisory: Proficiency in a computer operating system (Mac or Windows), software conventions, and internet technologies.**  
**May be taken 4 times for credit.**  
**.5 hour lecture.**

This introductory, hands-on class will compare the relative advantages and disadvantages of blogs and wikis. Create a blog and wiki for education, business, or personal application. [Transferability: CSU]

**LINC 70      WEB PAGE DESIGN OVERVIEW      1 Unit**  
**Formerly: LINC 200**  
**Advisory: Familiarity with PC or Mac; basic internet skills.**  
**May be taken 6 times for credit.**  
**1 hour lecture.**

Design and creation of World Wide Web pages using Adobe GoLive. Hands-on experience creating Web pages. Intended for Continuing Education. [Transferability: CSU]

<p><b>LINC 70A</b>      <b>WEB PAGE DESIGN I</b>      <b>.5 Unit</b>  <b>Formerly: LINC 200S</b>  <b>Advisory:</b> Familiarity with PC or Mac; basic internet skills.  <b>May be taken 6 times for credit.</b>  .5 hour lecture, 1 hour terminal time.  Design and creation of World Wide Web pages using Adobe GoLive. Hands-on experience creating Web pages. Intended for Continuing Education. [Transferability: CSU]</p>	<p><b>LINC 73</b>      <b>ADOBE PHOTOSHOP OVERVIEW</b>      <b>1 Unit</b>  <b>Formerly: LINC 230</b>  <b>Advisory:</b> Proficiency in a Mac or Windows operating system, software conventions, and internet technologies.  <b>May be taken 5 times for credit.</b>  <b>1 hour lecture.</b>  In this hands-on Photoshop overview course, you will learn the introductory level tools and techniques while completing a project. Topics covered include, using the drawing tools, importing and manipulating images, and managing layers. [Transferability: CSU]</p>
<p><b>LINC 70B</b>      <b>WEB PAGE DESIGN II</b>      <b>1 Unit</b>  <b>Formerly: LINC 211</b>  <b>Advisory:</b> Familiarity with PC or Mac; basic internet and email skills.  <b>May be taken 2 times for credit.</b>  <b>1 hour lecture.</b>  Design and creation of World Wide Web pages. Hands-on experience creating Web pages. Intended for Continuing Education. [Transferability: CSU]</p>	<p><b>LINC 73A</b>      <b>ADOBE PHOTOSHOP I</b>      <b>.5 Unit</b>  <b>Formerly: LINC 230S</b>  <b>Advisory:</b> Familiarity with PC or Mac; basic internet skills.  <b>May be taken 6 times for credit.</b>  <b>.5 hour lecture, .5 hour terminal time.</b>  Provides hands-on experience with the basic elements and tools of Photoshop to set up files, manage documents, and perform basic image processing. Includes advanced concepts and methods of developing images and creating special effects and problem solving. [Transferability: CSU]</p>
<p><b>LINC 72A</b>      <b>ADOBE ACROBAT I</b>      <b>1 Unit</b>  <b>Formerly: LINC 232</b>  <b>Advisory:</b> Familiarity with PC or Mac.  <b>May be taken 6 times for credit.</b>  <b>1 hour lecture, 1 hour terminal time.</b>  Provides hands on experience using Adobe Acrobat. The student will learn how to publish teacher and student on the Internet, retaining their original format. [Transferability: CSU]</p>	<p><b>LINC 73B</b>      <b>ADOBE PHOTOSHOP II</b>      <b>.5 Unit</b>  <b>Formerly: LINC 230T</b>  <b>Advisory:</b> Familiarity with PC or Mac; basic internet skills.  <b>May be taken 6 times for credit.</b>  <b>.5 hour lecture, .5 hour terminal time.</b>  Provides hands-on experience with the basic elements and tools of Photoshop to set up files, manage documents, and perform basic image processing. Includes advanced concepts and methods of developing images and creating special effects and problem solving. [Transferability: CSU]</p>
<p><b>LINC 72B</b>      <b>INDESIGN OVERVIEW</b>      <b>1 Unit</b>  <b>Formerly: LINC 234</b>  <b>Advisory:</b> Familiarity with PC or Mac; any word processing software.  <b>May be taken 6 times for credit.</b>  <b>1 hour lecture, 1 hour terminal time.</b>  InDesign is an application for the creation flyers, newsletters, yearbooks, trifolds and other desktop published items. InDesign features page layout tools that fully integrate with Photoshop, Illustrator, Acrobat, and other Adobe products. Its features are intuitive, allowing the user to be creative. This course provides the basics of page layout using Adobe InDesign. Students will create a publication by placing text and graphics. [Transferability: CSU]</p>	<p><b>LINC 73D</b>      <b>ADOBE PHOTOSHOP ELEMENTS OVERVIEW</b>      <b>1 Unit</b>  <b>Formerly: LINC 231</b>  <b>Advisory:</b> Proficiency in a Mac or Windows operating system, software conventions, and internet technologies.  <b>May be taken 5 times for credit.</b>  <b>1 hour lecture.</b>  In this digital imaging, production overview course, perform basic and easy edits to digital images through hands-on projects. Topics include: color and contrast adjustment, selections and layers, touch-up tools, and text. [Transferability: CSU]</p>
<p><b>LINC 72C</b>      <b>ADOBE INDESIGN I</b>      <b>.5 Unit</b>  <b>Formerly: LINC 234S</b>  <b>Advisory:</b> Familiarity with PC or Mac; any word processing software.  <b>May be taken 6 times for credit.</b>  <b>.5 hour lecture, .5 hour terminal time.</b>  InDesign is an application for the creation flyers, newsletters, yearbooks, trifolds and other desktop published items. InDesign features page layout tools that fully integrate with Photoshop, Illustrator, Acrobat, and other Adobe products. Its features are intuitive, allowing the user to be creative. This course provides the basics of page layout using Adobe InDesign. Students will create a publication by placing text and graphics. [Transferability: CSU]</p>	<p><b>LINC 73E</b>      <b>ADOBE PHOTOSHOP ELEMENTS I</b>      <b>.5 Unit</b>  <b>Formerly: LINC 231S</b>  <b>Advisory:</b> Familiarity with PC or Mac; basic internet skills.  <b>May be taken 3 times for credit.</b>  <b>.5 hour lecture, .5 hour terminal time.</b>  Provides hands-on experience with the basic elements and tools of Photoshop to set up files, manage documents, and perform basic image processing. Includes advanced concepts and methods of developing images and creating special effects and problem solving. [Transferability: CSU]</p>
<p><b>LINC 72D</b>      <b>ADOBE INDESIGN II</b>      <b>.5 Unit</b>  <b>Formerly: LINC 234T</b>  <b>Advisory:</b> Familiarity with PC or Mac; any word processing software.  <b>May be taken 6 times for credit.</b>  <b>.5 hour lecture, .5 hour terminal time.</b>  InDesign is an application for the creation flyers, newsletters, yearbooks, trifolds and other desktop published items. InDesign features page layout tools that fully integrate with Photoshop, Illustrator, Acrobat, and other Adobe products. Its features are intuitive, allowing the user to be creative. This course provides the basics of page layout using Adobe InDesign. Students will create a publication by placing text and graphics. [Transferability: CSU]</p>	<p><b>LINC 73F</b>      <b>ADOBE PHOTOSHOP ELEMENTS II</b>      <b>.5 Unit</b>  <b>Formerly: LINC 231T</b>  <b>Advisory:</b> Familiarity with PC or Mac; basic internet skills.  <b>May be taken 3 times for credit.</b>  <b>.5 hour lecture, .5 hour terminal time.</b>  Provides hands-on experience with the basic elements and tools of Photoshop to set up files, manage documents, and perform basic image processing. Includes advanced concepts and methods of developing images and creating special effects and problem solving. [Transferability: CSU]</p>

**LINC 73H ADOBE ILLUSTRATOR OVERVIEW 1 Unit**  
**Formerly: LINC 233**  
**Advisory:** Proficiency in a Mac or Windows operating system, software conventions, and internet technologies.  
**May be taken 5 times for credit.**  
**1 hour lecture.**

Adobe Illustrator creates drawings, illustrations, and images for print or Web. Use vector graphics; draw objects, stroke outlines and pattern fills; work with brushes, gradients, color blends; design type; and develop graphs. [Transferability: CSU]

**LINC 73I ADOBE ILLUSTRATOR I .5 Unit**  
**Formerly: LINC 233S**  
**Advisory:** Familiarity with PC or Mac.  
**May be taken 6 times for credit.**  
**.5 hour lecture, .5 hour terminal time.**

Adobe Illustrator is a software drawing tool. This class will provide hands-on experience with the basic elements and tools of Adobe Illustrator to produce one-page illustrations. [Transferability: CSU]

**LINC 73J ADOBE ILLUSTRATOR II .5 Unit**  
**Formerly: LINC 233T**  
**Advisory:** Familiarity with PC or Mac.  
**May be taken 6 times for credit.**  
**.5 hour lecture, .5 hour terminal time.**

Adobe Illustrator is a software drawing tool. This class will provide hands-on experience with the basic elements and tools of Adobe Illustrator to produce one-page illustrations. [Transferability: CSU]

**LINC 74 ADOBE DREAMWEAVER OVERVIEW 1 Unit**  
**Formerly: LINC 209**  
**Advisory:** Proficiency in a Mac or Windows operating system, software conventions, and internet technologies.  
**May be taken 5 times for credit.**  
**1 hour lecture.**

Adobe Dreamweaver provides quick, elegant tools for Web site design and maintenance. In this hands-on overview course, plan the Web site set-up, develop layouts, build tables, format styles, layers, interactivity, and templates. [Transferability: CSU]

**LINC 74A ADOBE DREAMWEAVER I .5 Unit**  
**Formerly: LINC 209S**  
**Advisory:** Familiarity with PC or Mac; basic internet and email skills.  
**May be taken 6 times for credit.**  
**.5 hour lecture, 1 hour terminal time.**

Design and creation of World Wide Web pages using Macromedia Dreamweaver. Hands-on experience creating Web pages. Intended for Continuing Education. [Transferability: CSU]

**LINC 74B ADOBE DREAMWEAVER II .5 Unit**  
**Formerly: LINC 209T**  
**Advisory:** Familiarity with PC or Mac; basic internet and email skills.  
**May be taken 6 times for credit.**  
**.5 hour lecture, 1 hour terminal time.**

Design and creation of World Wide Web pages using Macromedia Dreamweaver. Hands-on experience creating Web pages. Intended for Continuing Education. [Transferability: CSU]

**LINC 76 CREATING EDUCATIONAL WEB SITES 2 Units**  
**Formerly: LINC 210**  
**May be taken 6 times for credit.**  
**2 hours lecture, 2 hours terminal time.**

This course explores the tools that make a web site stand out and hold the viewer's attention. Participants will be instructed on how to add graphics, QuickTime movies, and sound to web sites. Elements of design and ideas for effective web sites will be discussed. [Transferability: CSU]

**LINC 76A CREATING EDUCATIONAL WEB SITES I 1 Unit**  
**Formerly: LINC 210S**  
**May be taken 6 times for credit.**  
**1 hour lecture, 1 hour terminal time.**

This course explores the tools that make a web site stand out and hold the viewer's attention. Participants will be instructed on how to add graphics, QuickTime movies, and sound to web sites. Elements of design and ideas for effective web sites will be discussed. [Transferability: CSU]

**LINC 76B CREATING EDUCATIONAL WEB SITES II 1 Unit**  
**Formerly: LINC 210T**  
**May be taken 6 times for credit.**  
**1 hour lecture, 1 hour terminal time.**

This course explores the tools that make a web site stand out and hold the viewer's attention. Participants will be instructed on how to add graphics, QuickTime movies, and sound to web sites. Elements of design and ideas for effective web sites will be discussed. [Transferability: CSU]

**LINC 76C CREATING WEB QUESTS 2 Units**  
**Formerly: LINC 202**  
**Advisory:** Familiarity with PC or Mac; basic internet skills.  
**May be taken 6 times for credit.**  
**2 hours lecture, 2 hours terminal time.**

Provides a goal and focus for web searching which requires students to transform information into a new form. WebQuests are web-based, curriculum-based challenges with student resources and activities. Existing WebQuests will be explored as well as a step-by-step approach to creating one's own. [Transferability: CSU]

**LINC 80 MULTIMEDIA OVERVIEW 1 Unit**  
**Formerly: LINC 251**  
**May be taken 6 times for credit.**  
**1 hour lecture, 1 hour terminal time.**

Introduction to various multimedia software and tools and the multimedia production process. Hands-on experience various software to integrate text, graphics, animation, sound, and digital movies into multimedia projects and presentations. [Transferability: CSU]

**LINC 80A MULTIMEDIA IN THE CLASSROOM 1 Unit**  
**Formerly: LINC 252**  
**May be taken 6 times for credit.**  
**1 hour lecture, 1 hour terminal time.**

Introduction to how to integrate various multimedia software and tools along with the production process, into the classroom. Hands-on experience various software to integrate text, graphics, animation, sound, and movies. [Transferability: CSU]

**LINC 80B MULTIMEDIA IN THE CLASSROOM I .5 Unit**  
**Formerly: LINC 252S**  
**May be taken 6 times for credit.**  
**.5 hour lecture, .5 hour terminal time.**

Introduction to how to integrate various multimedia software and tools along with the production process, into the classroom. Hands-on experience various software to integrate text, graphics, animation, sound, and movies. [Transferability: CSU]

**LINC 81 USING DIGITAL IMAGES 1 Unit**  
**Formerly: LINC 257**  
**Advisory:** Not open to students with credit in COIN 211A.  
**May be taken 3 times for credit.**  
**1 hour lecture.**

Use your digital images for fun and profit! Learn how to create hard or soft cover books, calendars, note cards and more to make great gifts or remembrances. Create collateral materials for use in projects or presentations. Easy quick and fun! [Transferability: CSU]

<p><b>LINC 81A USING DIGITAL IMAGES I .5 Unit</b>  <b>Formerly: LINC 2575</b>  <b>Advisory: Not open to students with credit in COIN 211A.</b>  <b>May be taken 3 times for credit.</b>  <b>.5 hour lecture.</b>            Use your digital images for fun and profit! Learn how to create hard or soft cover books, calendars, note cards and more to make great gifts or remembrances. Create collateral materials for use in projects or presentations. Easy quick and fun! [Transferability: CSU]</p>	<p><b>LINC 83E IMOVIE II .5 Unit</b>  <b>Formerly: LINC 241T</b>  <b>Advisory: Familiarity with Mac.</b>  <b>May be taken 6 times for credit.</b>  <b>.5 hour lecture, .5 hour terminal time.</b>            Using the software application, iMovie, to produce movies on the computer with video clips captured from a video format camcorder with background audio, voice-over narrations, sound effects, transitions and titles. [Transferability: CSU]</p>
<p><b>LINC 81B ADOBE FIREWORKS OVERVIEW 1 Unit</b>  <b>Formerly: LINC 237</b>  <b>Advisory: Proficiency in a computer operating system (Mac or Windows), software conventions, and internet technologies.</b>  <b>May be taken 5 times for credit.</b>  <b>1 hour lecture.</b>            In this hands-on overview course, create animated Web sites with Adobe Fireworks; build interactive buttons; resize, crop, and optimize images; add design effects with filters and collage techniques. [Transferability: CSU]</p>	<p><b>LINC 83F MOVIEWORKS 1 Unit</b>  <b>Formerly: LINC 244</b>  <b>Advisory: Familiarity with PC or Mac; basic internet skills.</b>  <b>May be taken 6 times for credit.</b>  <b>1 hour lecture, 1 hour terminal time.</b>            Provides students with skills necessary to create digital movies using MovieWorks. Projects are standards based and appropriate for classroom use. Students will learn to include text, sound, and animation in their movies. [Transferability: CSU]</p>
<p><b>LINC 81C MACROMEDIA FIREWORKS II 1 Unit</b>  <b>Formerly: LINC 286</b>  <b>Advisory: Familiarity with Fireworks and DreamWeaver.</b>  <b>May be taken 6 times for credit.</b>  <b>1 hour lecture, 1 hour terminal time.</b>            Provides hands-on experience with the some of the more advanced elements and tools of Macromedia Fireworks, a digital photo editing software, to set up files, manage documents, and perform basic image processing. Includes intermediate and advanced concepts and methods of developing images and creating special effects and problem solving. [Transferability: CSU]</p>	<p><b>LINC 85A ADOBE FLASH I .5 Unit</b>  <b>Formerly: LINC 238S</b>  <b>Advisory: Proficiency in a Mac or Windows operating system, software conventions, and internet technologies; familiarity with Fireworks or similar photo editing software; DreamWeaver or similar Web page authoring software.</b>  <b>May be taken 4 times for credit.</b>  <b>.5 hour lecture.</b>            Create dynamic content and animations for Web, multimedia, and presentations. Develop interactive animations of illustrations, photos, and type. In this introductory, hands-on course, learn basic Flash drawing tools, animation basics, tweening, and export options. [Transferability: CSU]</p>
<p><b>LINC 81D ADOBE FIREWORKS II .5 Unit</b>  <b>Formerly: LINC 81CS</b>  <b>Advisory: Proficiency in a Mac or Windows operating system, software conventions, and internet technologies.</b>  <b>May be taken 4 times for credit.</b>  <b>.5 hour lecture</b>            In this continuing course, create animated Web sites with Adobe Fireworks; edit images; build different layouts and templates; manage the site. [Transferability: CSU]</p>	<p><b>LINC 85B ADOBE FLASH II .5 Unit</b>  <b>Formerly: LINC 238T</b>  <b>Advisory: LINC 85A; Familiarity with Fireworks or similar photo editing software; Dreamweaver or similar Web page authoring software; proficiency in a Mac or Windows operating system, software conventions, and internet technologies.</b>  <b>May be taken 4 times for credit.</b>  <b>.5 hour lecture.</b>            Create sophisticated dynamic content and animations for Web, multimedia, and presentations. This intermediate skills course develops interactive animations of illustrations, photos, and type using Flash drawing tools, animation basics, and button scripting. [Transferability: CSU]</p>
<p><b>LINC 83A ADOBE PREMIER 1 Unit</b>  <b>Formerly: LINC 236</b>  <b>Advisory: Familiarity with PC or Mac; scanning photos; using a digital still and digital video camera.</b>  <b>May be taken 6 times for credit.</b>  <b>1 hour lecture, 1 hour terminal time.</b>            Adobe Premiere provides students with skills necessary to create digital movies. Projects are standards based and appropriate for classroom use. Students will learn to include text, sound, and the 'Ken Burns Effect' as well as other special effects in their movies. [Transferability: CSU]</p>	<p><b>LINC 85C MACROMEDIA FLASH III 1 Unit</b>  <b>Formerly: LINC 287</b>  <b>Advisory: Familiarity with Flash, Fireworks and DreamWeaver.</b>  <b>May be taken 6 times for credit.</b>  <b>1 hour lecture, 1 hour terminal time.</b>            Macromedia Flash is an animation and authoring tool for interactive multimedia applications. Create, combine, and synchronize animation, graphics, and text, with audio and video for your Web site with navigation controls animated features and long-form animations with synchronized sound. Export Flash to HTML Intended for Continuing Education. [Transferability: CSU]</p>
<p><b>LINC 83C IMOVIE 1 Unit</b>  <b>Formerly: LINC 241</b>  <b>Advisory: Familiarity with Mac.</b>  <b>May be taken 6 times for credit.</b>  <b>1 hour lecture, 1 hour terminal time.</b>            Using the software application, iMovie, to produce movies on the computer with video clips captured from a video format camcorder with background audio, voice-over narrations, sound effects, transitions and titles. [Transferability: CSU]</p>	<p><b>LINC 90 INTERNET TECHNOLOGY 5 Units</b>  <b>Formerly: LINC 203</b>  <b>Advisory: Familiarity with PC or Mac; basic internet skills.</b>  <b>May be taken 3 times for credit.</b>  <b>4 hours lecture, 4 hours terminal time.</b>            Use the Internet to connect and communicate over the World Wide Web and e-mail, retrieve current useful information using searching tools, prepare a simple HTML Web pages, and locate Internet resources to find educational resources and information appropriate for use in the classroom. [Transferability: CSU]</p>
<p><b>LINC 83D IMOVIE I .5 Unit</b>  <b>Formerly: LINC 241S</b>  <b>Advisory: Familiarity with Mac.</b>  <b>May be taken 6 times for credit.</b>  <b>.5 hour lecture, .5 hour terminal time.</b>            Using the software application, iMovie, to produce movies on the computer with video clips captured from a video format camcorder with background audio, voice-over narrations, sound effects, transitions and titles. [Transferability: CSU]</p>	

<p><b>LINC 90A WEBINARS</b> 1 Unit  <b>Formerly: LINC 290</b>  <b>May be taken 6 times for credit.</b>  <b>1 hour lecture, 1 hour terminal time.</b>  Webinars allow for synchronous and asynchronous instruction. This course will use CCC Confer and other online tools including digital video, PowerPoint and Internet resources to demonstrate relevant, short, and to the point practical classroom and learning applications of Webinars; Transferability: CSU]</p>	<p><b>LINC 95A CHILD SAFETY, INTERNET ETHICS &amp; CYBER LAW</b> 2 Units  <b>Formerly: LINC 219</b>  <b>May be taken 6 times for credit.</b>  <b>2 hours lecture, 2 hours lecture-laboratory.</b>  Computer and Internet Ethics and Cyberlaw will review the current issues and legislation in computer ethics and cyberlaw. Copyright, fair use, legal implications and Acceptable Use Plans will be explored. The course will also cover Internet Safety and Child Safety on the Internet including the ability to evaluate the validity of Internet Resources. Through-out the course, you will be working towards developing strategies to protect your students while using the Internet. [Transferability: CSU]</p>
<p><b>LINC 90B OPEN EDUCATION RESOURCES</b> 1 Unit  <b>Formerly: LINC 215</b>  <b>May be taken 6 times for credit.</b>  <b>1 hour lecture.</b>  Introduction to Open Educational Resources (OER) and the use of public domain learning materials for teaching. Build educators knowledge and skills necessary to find, adapt, repurpose and create accessible OER for use in their classes. Specific topics covered include OER terminology, OER best practices and case studies, copyright and fair use issues as they pertain to OER, sources and repositories of public domain learning materials in various disciplines, technical issues regarding accessibility of public domain learning materials, and uses of Creative Commons licenses, tools and standards available to develop, organize and disseminate public domain learning materials, searching techniques for identifying public domain learning materials, professional collaboration strategies, criteria for assessing the suitability of public domain learning materials for use various disciplines, lesson plan development than incorporates use of the identified public domain learning materials. [Transferability: CSU]</p>	<p><b>LINC 95B TECHNOLOGY ETHICS &amp; CYBER LAW</b> 1 Unit  <b>Formerly: LINC 220</b>  <b>Advisory: Familiarity with PC or Mac; basic internet skills.</b>  <b>May be taken 2 times for credit.</b>  <b>1 hour lecture, 1 hour terminal time.</b>  This course is will review current issues and legislation in computer ethics and cyber law. Copyright, fair use, legal implications, Acceptable Use Plans will be discussed and implications for the classroom will be explored. Internet resources will be explored. This course will also cover validity of Internet resources. [Transferability: CSU]</p>
<p><b>LINC 90C ONLINE COLLABORATION TOOLS</b> 2 Units  <b>Formerly: LINC 214</b>  <b>Advisory: Familiarity with PC or Mac; basic internet skills.</b>  <b>May be taken 6 times for credit.</b>  <b>2 hours lecture, 2 hours terminal time.</b>  Collaboration is a fundamental basic skill of learning and work in the 21<sup>st</sup> century. This course will explore some different kinds of collaborative technologies using the Internet and how these can be integrated with curriculum and student projects to help provide students with experience n both effective communication and learning using new media, as well as providing teachers tools for planning and assessing collaborative student projects. [Transferability: CSU]</p>	<p><b>LINC 95C ASSESSMENT STRATEGIES FOR TECHNOLOGY INTEGRATION</b> 1 Unit  <b>Formerly: LINC 260</b>  <b>Advisory: Familiarity with PC or Mac; familiarity with technology integration in the classroom and the Internet.</b>  <b>May be taken 6 times for credit.</b>  <b>1 hour lecture, 1 hour terminal time.</b>  Provides techniques for assessing what technology can do to improve students' higher order thinking skills. Students will learn how to use assessment to drive learning. They will learn assessment strategies for students' multimedia projects [Transferability: CSU]</p>
<p><b>LINC 93A CREATING MORE EFFECTIVE VISUAL AIDS</b> 3 Units  <b>Formerly: LINC 289</b>  <b>May be taken 6 times for credit.</b>  <b>3 hours lecture, 3 hours terminal time.</b>  Educational research has shown that students demonstrate greater recall and understanding of materials presented in the classroom when pictorial representations of ideas and concepts accompany verbal information. In the class you will learn to create more effective PowerPoint presentations and overhead slides, and gain first-hand experience developing concept maps and visual organizers. In addition, you will learn about research on cognitive and multimedia learning and explore how to apply these ideas in classroom instruction. [Transferability: CSU]</p>	<p><b>LINC 96B HANDHELD DIGITAL MEDIA DEVICES I</b> .5 Unit  <b>Formerly: LINC 292A</b>  <b>Advisory: Basic computer skills.</b>  <b>May be taken 6 times for credit.</b>  <b>.5 hour lecture, .5 hour terminal time.</b>  Provides hands on experience with handheld devices (PDAs) such as Palms, Handsprings, etc. Students will learn how to operate PDAs including date books, calendars, address books, graffiti, beaming, downloading and using available software, and other tools and functions. [Transferability: CSU]</p>
<p><b>LINC 93B ASSISTIVE TECHNOLOGY &amp; UNIVERSAL ACCESS</b> 1 Unit  <b>Formerly: LINC 221</b>  <b>Advisory: Familiarity with PC or Mac; basic internet skills.</b>  <b>May be taken 3 times for credit.</b>  <b>1 hour lecture, 1 hour terminal time.</b>  This course is will review current issues and legislation in assistive technology and universal access. Issues of efficacy and appropriateness of accommodations required for parity with peers in an education setting will be review and discussed. Tools and issues of design, and compliance will be demonstrated. Internet resources will be explored. [Transferability: CSU]</p>	<p><b>LINC 96C HANDHELD DIGITAL MEDIA DEVICES II</b> .5 Unit  <b>Formerly: LINC 292B</b>  <b>Advisory: with Basic computer skills.</b>  <b>May be taken 6 times for credit.</b>  <b>.5 hour lecture, .5 hour terminal time.</b>  Provides hands on experience with handheld devices (PDAs) such as Palms, Handsprings, etc. Students will learn how to operate PDAs including date books, calendars, address books, graffiti, beaming, downloading and using available software, and other tools and functions. Emphasis on educational applications available. [Transferability: CSU]</p>
<p><b>LINC 98A DIRECTED STUDY IN DIGITAL LEARNING I</b> .5 Unit  <b>Formerly: LINC 228S</b>  <b>Advisory: Proficiency with computer operating systems (Mac or Windows), software application conventions, hardware, file system management, and internet technologies.</b>  <b>May be taken 4 times for credit.</b>  <b>.5 hour lecture.</b>  Designed for educators seeking to be educational technology leaders, enhance their knowledge and upgrade technology skills. Develop content knowledge and pedagogical technology ability for effective and appropriate integration of technology into learning environments. [Transferability: CSU]</p>	

**LINC 98B DIRECTED STUDY IN DIGITAL LEARNING II .5 Unit**

*Formerly: LINC 228T*

**Advisory: Proficiency with computer platforms (Mac or Windows), hardware, software conventions, and internet technologies. May be taken 4 times for credit.**

**.5 hour lecture.**

Designed for educators seeking to be an educational technology leader, enhance their knowledge and upgrade skills. Develop content knowledge and pedagogical technology skill for effective and appropriate integration of technology into learning environments. [Transferability: CSU]

**LINC 98M INTRODUCTION TO BIOINFORMATICS 1 Unit**

*Formerly: LINC 265*

**May be taken 6 times for credit.**

**1 hour lecture, 1 hour terminal time.**

Introduction to bioinformatics and NCBI. Hands-on tour of key bioinformatics web sites, focusing on NCBI (National Center for Biotechnology Information) and the use of bioinformatics databases, tools, and methods. Use of BLAST, multiple sequence alignment, genome databases, simple protein modeling tools, and online scientific journals. The course is built around problem centered learning, with exercises built on current real-world medical and biological problems. [Transferability: CSU]

## LIBRARY SCIENCE

**Language Arts**

**(650) 949-7608  
www.foothill.edu/ol/**

**LIBR 71 RESEARCH PAPER SEARCH STRATEGIES 1 Unit**

**Advisory: Familiarity with Mac or PC.**

**1 hour lecture.**

Intended for students writing a research paper in another class. Strategies and methods to identify a research topic and then find and evaluate information in various formats to meet the identified information needed. Consideration of the ethical and legal uses of information. Interdisciplinary application of concepts, often covering multicultural topics. [Foothill GE: Lifelong Understanding; Transferability: CSU]

## LINGUISTICS

**Language Arts**

**(650) 949-7250  
www.foothill.edu/la/**

**LING 23 MODERN ENGLISH: FUNCTION & GRAMMAR 4 Units**

**Prerequisite: Eligibility for ENGL 1A.**

**Advisory: Not open to students with credit in ENGL 23.**

**4 hours lecture.**

Introduction to basic linguistic concepts in describing the functions and grammar of present-day English. Focus on grammatical features of standard American English, Black English, and other English varieties as they function in the diverse types of communication between Americans, as well as in global interaction. Analysis of modern English relevant for those interested in refining their English, students of ESL and foreign languages, and prospective writers and language teachers. Offered Winter quarters. [Foothill GE: Humanities; Transferability: UC/CSU]

**LING 25 INTRODUCTION TO DESCRIPTIVE & HISTORICAL LINGUISTICS 4 Units**

**Prerequisite: Eligibility for ENGL 1A.**

**Advisory: Not open to students with credit in ENGL 25, 25H, or LING 25H.**

**4 hours lecture.**

Introduction to linguistic concepts in the study of structure, pattern, meaning, and change in language, with emphasis on British and American English. Introduction to historical linguistic theory and methods as applied to investigation of origin and development of spoken and written language. Offered Fall quarters. [Foothill GE: Humanities; Transferability: UC/CSU]

**LING 25H HONORS INTRODUCTION TO DESCRIPTIVE & HISTORICAL LINGUISTICS 4 Units**

**Prerequisite: Eligibility for ENGL 1A; Honors Institute participant.**

**Advisory: Not open to students with credit in ENGL 25, 25H, or LING 25.**

**4 hours lecture.**

Introduction to linguistic concepts in the study of structure, pattern, meaning, and change in language, with emphasis on British and American English. Introduction to historical linguistic theory and methods as applied to investigation of origin and development of spoken and written language. Honors section offers rigorous preparation in linguistic studies for students intending to transfer to a four-year college or university. Two research or fieldwork projects are required. Offered Fall quarters. [Foothill GE: Humanities; Transferable: UC/CSU]

**LING 26 LANGUAGE, MIND & SOCIETY 4 Units**

**Prerequisite: Eligibility for ENGL 1A.**

**Advisory: Not open to students with credit in ENGL 26.**

**4 hours lecture.**

Introduction to methods of linguistic analysis and basic concepts in psycholinguistics and sociolinguistics. Topics include function of the brain in language acquisition and language loss by mono/bilingual children and adults; role of language in society; language variability in diverse ethnic groups of speakers and diverse social uses; education and language planning. Offered Spring quarters. [Foothill GE: Humanities; Transferability: UC/CSU]

**LING 34H HONORS INSTITUTE SEMINAR IN LINGUISTICS 1 Unit**

*Formerly: LING 34*

**Prerequisite: Honors Institute participant.**

**Advisory: Not open to students with credit in LING 34.**

**1 hour lecture.**

A seminar in directed readings, discussions and projects in linguistics. Specific topics to be determined by the instructor. [Transferability: CSU; UC credit may be granted after transfer and upon portfolio review.]

## MATHEMATICS

**Physical Sciences, Mathematics & Engineering (650) 949-7259  
www.foothill.edu/psme/**

**MATH 1A CALCULUS 5 Units**

**Prerequisite: Satisfactory score on the mathematics placement test or MATH 49.**

**Advisory: Eligibility for ENGL 1A or ESLL 26.**

**5 hours lecture, 1 hour laboratory.**

Introduction to differential calculus, including limits, derivatives and their applications to curve-sketching, families of functions, and optimization. [Foothill GE: Communication & Analytical Thinking; Transferability: UC/CSU]

**MATH 1B CALCULUS 5 Units**

**Prerequisite: MATH 1A.**

**Advisory: Eligibility for ENGL 1A or ESLL 26.**

**5 hours lecture, 1 hour laboratory.**

Introduction to integral calculus including definite and indefinite integrals, the first and second Fundamental Theorems and their applications to geometry, physics, and the solution of elementary differential equations. [Foothill GE: Communication & Analytical Thinking; Transferability: UC/CSU]

**MATH 1C CALCULUS 5 Units**

**Prerequisite: MATH 1B.**

**Advisory: Eligibility for ENGL 1A or ESLL 26.**

**5 hours lecture, 1 hour laboratory.**

Introduction to functions of more than one variable, including vectors, partial differentiation, the gradient, contour diagrams and optimization. Additional topics include infinite series, convergence, Taylor and Fourier series. [Foothill GE: Communication & Analytical Thinking; Transferability: UC/CSU]

<b>MATH 1D</b>	<b>CALCULUS</b>	<b>5 Units</b>	<b>MATH 34H</b>	<b>HONORS INSTITUTE SEMINAR IN MATHEMATICS</b>	<b>1 Unit</b>
<p><b>Prerequisite:</b> MATH 1C. <b>Advisory:</b> Eligibility for ENGL 1A or ESLL 26. 5 hours lecture, 1 hour laboratory. Introduction to integration of functions of more than one variable, including double, triple, flux and line integrals. Additional topics include polar, cylindrical and spherical coordinates, parameterization, vector fields, path-independence, divergence and curl. [Transferability: UC/CSU]</p>			<p><b>Formerly:</b> MATH 34 <b>Prerequisite:</b> Honors Institute participant. <b>Advisory:</b> Not open to students with credit in MATH 34; eligibility for ENGL 1A or ESLL 26. 1 hour lecture for each unit of credit. A seminar in directed readings, discussions and projects in mathematics. Specific topics to be determined by the instructor. [Transferability: CSU; UC credit may be granted after transfer and upon portfolio review.]</p>		
<b>MATH 2A</b>	<b>DIFFERENTIAL EQUATIONS</b>	<b>5 Units</b>	<b>MATH 36</b>	<b>SPECIAL PROJECTS IN MATHEMATICS</b>	<b>1 Unit</b>
<p><b>Prerequisite:</b> MATH 1C. <b>Advisory:</b> Eligibility for ENGL 1A or ESLL 26. 5 hours lecture, 1 hour laboratory. Differential equations and selected topics of mathematical analysis. [Foothill GE: Communication &amp; Analytical Thinking; Transferability: UC/CSU]</p>			<b>MATH 36X</b>		<b>2 Units</b>
<b>MATH 2B</b>	<b>LINEAR ALGEBRA</b>	<b>5 Units</b>	<b>MATH 36Y</b>		<b>3 Units</b>
<p><b>Prerequisite:</b> MATH 1C. <b>Advisory:</b> Eligibility for ENGL 1A or ESLL 26. 5 hours lecture, 1 hour laboratory. A first course in Linear Algebra, including systems of linear equations, matrices, linear transformations, determinants, abstract vector spaces, eigenvalues and eigenvectors, inner product spaces and orthogonality, and selected applications of these topics. [Foothill GE: Communication &amp; Analytical Thinking; Transferability: UC/CSU]</p>			<p><b>Advisory:</b> Previous experience in mathematics recommended; eligibility for ENGL 1A or ESLL 26. Any combination of MATH 36–36Y may be taken for a maximum of 6 units 3 hours laboratory for each unit of credit. Advanced readings and projects in mathematics. Specific projects determined on consultation with instructor. Written reports required. Enrollment generally limited to those students enrolled in the calculus sequence. [Transferability: CSU]</p>		
<b>MATH 10</b>	<b>ELEMENTARY STATISTICS</b>	<b>5 Units</b>	<b>MATH 44</b>	<b>MATH FOR THE LIBERAL ARTS</b>	<b>5 Units</b>
<p><b>Prerequisite:</b> Satisfactory score on the mathematics placement test or MATH 105. <b>Advisory:</b> Eligibility for ENGL 1A or ESLL 26. 5 hours lecture, 1 hour laboratory. An introduction to modern methods of descriptive statistics, including collection and presentation of data; measures of central tendency and dispersion; probability; sampling distributions; hypothesis testing and statistical inference; linear regression and correlation; use of microcomputers for statistical calculations. Illustrations taken from the fields of business, economics, medicine, engineering, education, psychology, sociology and from culturally diverse situations. [Foothill GE: Communication &amp; Analytical Thinking; Transferability: UC/CSU]</p>			<p><b>Prerequisite:</b> Satisfactory score on the mathematics placement exam or MATH 105. <b>Advisory:</b> Eligibility for ENGL 1A or ESLL 26. 5 hours lecture, 1 hour laboratory. A survey of mathematical models and other tools to introduce the nonspecialist to the methods of quantitative reasoning. Problem solving by Polya's method with analytic, numeric, graphical, and verbal investigation. Selecting, constructing, and using mathematical models. Interpreting quantitative results in qualitative context. Emphasis on deductive reasoning and formal logic; algebraic, exponential, logarithmic, and trigonometric models; probability and the normal distribution; data analysis; and selected topics from discrete math, finite math, and statistics. [Foothill GE: Communication &amp; Analytical Thinking; Transferability: CSU]</p>		
<b>MATH 11</b>	<b>FINITE MATHEMATICS</b>	<b>5 Units</b>	<b>MATH 49</b>	<b>PRECALCULUS</b>	<b>5 Units</b>
<p><b>Prerequisite:</b> Satisfactory score on the mathematics placement test or MATH 105. <b>Advisory:</b> Eligibility for ENGL 1A or ESLL 26. 5 hours lecture, 1 hour laboratory. Set theory, basic combinatorial analysis, introduction to probability, linear equations and inequalities, introduction to linear programming and the simplex method, introduction to matrix algebra with applications, Markov chains, game theory and mathematics of finance. [Foothill GE: Communication &amp; Analytical Thinking; Transferability: UC/CSU]</p>			<p><b>Prerequisite:</b> Satisfactory score on the mathematics placement test or MATH 51. <b>Advisory:</b> Eligibility for ENGL 1A or ESLL 26. 5 hours lecture, 1 hour laboratory. An intensive study of linear, quadratic, polynomial, rational, logarithmic, exponential, and other functions and their related applications. Additional topics include functional notation, transformation of functions, families of functions, and inverse functions. [Foothill GE: Communication &amp; Analytical Thinking; Transferability: UC/CSU]</p>		
<b>MATH 12</b>	<b>CALCULUS FOR BUSINESS &amp; ECONOMICS</b>	<b>5 Units</b>	<b>MATH 51</b>	<b>TRIGONOMETRY</b>	<b>5 Units</b>
<p><b>Prerequisite:</b> MATH 11. <b>Advisory:</b> Eligibility for ENGL 1A or ESLL 26. 5 hours lecture, 1 hour laboratory. Elementary ideas of differential and integral calculus. Differentiation of multivariate functions with their applications. Applications to business and economics. [Foothill GE: Communication &amp; Analytical Thinking; Transferability: UC/CSU]</p>			<p><b>Prerequisite:</b> Satisfactory score on the mathematics placement test or MATH 105. <b>Advisory:</b> Eligibility for ENGL 1A or ESLL 26. 5 hours lecture, 1 hour laboratory. The theory of trigonometric functions and the applications of trigonometry. Topics include: radian measure and circular functions, graphs, identities, inverse trigonometric functions, trigonometric equations, vectors, and complex numbers. [Foothill GE: Communication &amp; Analytical Thinking; Transferability: CSU]</p>		
<b>MATH 22</b>	<b>DISCRETE MATHEMATICS</b>	<b>5 Units</b>	<b>MATH 100</b>	<b>OPEN COMPUTER LABORATORY</b>	<b>.5 Unit</b>
<p><b>Prerequisite:</b> MATH 49. <b>Advisory:</b> Not open to students with credit in CIS 18; eligibility for ENGL 1A or ESLL 26. 5 hours lecture, 1 hour laboratory. Discrete mathematics: set theory, logic, Boolean algebra, methods of proof, mathematical induction, number theory, discrete probability, combinatorics, functions, relations, recursion, algorithm efficiencies, graphs, trees. [Foothill GE: Communication &amp; Analytical Thinking; Transferability: UC/CSU]</p>			<b>MATH 100X</b>		<b>1 Unit</b>
			<b>MATH 100Y</b>		<b>2 Units</b>
			<p><b>Advisory:</b> Pass/No Pass. Any combination of MATH 100–100Y may be taken 6 times for credit, however, no single course may be taken more than 6 times for credit. 1.5 hours laboratory for each .5 unit of credit. Individual study and/or guidance provided for students who desire or require additional assistance in any of the mathematics courses.</p>		

<b>MATH 105</b>	<b>INTERMEDIATE ALGEBRA</b>	<b>5 Units</b>	<b>MATH 231</b>	<b>MATH-SPECIFIC STUDY SKILLS</b>	<b>2 Units</b>
<p>Prerequisite: Satisfactory score on the mathematics placement test or MATH 220. 5 hours lecture, 1 hour laboratory. Quadratic, polynomial, rational, radical, exponential and logarithmic functions and expressions with an emphasis on graphing and applications.</p>			<p>Non-degree applicable basic skills course. Advisory: Pass/No Pass. Corequisite: MATH 230 or 235. May be taken 6 times for credit. 2 hours lecture. Individualized study and guidance to support students enrolled in MATH 230. Development of math specific study skills and problem solving techniques.</p>		
<b>MATH 220</b>	<b>ELEMENTARY ALGEBRA</b>	<b>4 Units</b>	<b>MATH 234</b>	<b>PREPARING FOR ALGEBRA: SUMMER EDITION</b>	<b>5 Units</b>
<p>Formerly: MATH 101 Non-degree applicable basic skills course. Prerequisite: Satisfactory score on the mathematics placement test; MATH 200, 230, 230J, 234, or 238. Advisory: Not open to students with credit in MATH 101 or 224. Corequisite: MATH 221. 5 hours lecture, 1 hour laboratory. Linear equations, linear inequalities, graphs, linear systems, operations on quadratics, factoring, and proportional reasoning.</p>			<p>Non-degree applicable basic skills course. Prerequisite: Students must have been enrolled in MATH 230 the preceding Fall, Winter or Spring quarter; MATH 235. Advisory: Pass/No Pass; not open to students with credit in MATH 200. May be taken 3 times for credit. 5 hours lecture, 1 hour laboratory. Addition, subtraction, multiplication and division of whole numbers, fractions, decimals and signed numbers. Introduction to algebraic concepts including solving first-degree equations and evaluating and simplifying expressions. Development and applications of ratios, proportions, percents, geometric concepts and basic algebra. This course is a continuation of MATH 230.</p>		
<b>MATH 221</b>	<b>ACTIVITIES FOR MASTERY OF BEGINNING ALGEBRA CONCEPTS</b>	<b>1 Unit</b>	<b>MATH 235</b>	<b>ALTERNATE CREDIT ARITHMETIC &amp; MATHEMATICAL DEVELOPMENT</b>	<b>5 Units</b>
<p>Non-degree applicable basic skills course. Corequisite: MATH 220. 2 hours lecture. Activities to support mastery of beginning Algebra concepts. Course is designed to allow students concurrently enrolled in MATH 220 to discover, explore and practice algebraic rules and concepts in order to achieve mastery.</p>			<p>Non-degree applicable basic skills course. Corequisite: MATH 231. May be taken 4 times for credit. 8 hours lecture, 1 hour laboratory. Course is designed to allow students enrolled in Math 230 and Math 238 to receive credit for mastery of some but not all of the outcomes of Math 230 and Math 238. Students are required to attend the Math 230 course, turn in all work, and participate in the other tasks of the class.</p>		
<b>MATH 224</b>	<b>ELEMENTARY ALGEBRA: SUMMER EDITION</b>	<b>5 Units</b>	<b>MATH 236</b>	<b>ALTERNATE CREDIT ARITHMETIC &amp; MATHEMATICAL DEVELOPMENT: SUMMER EDITION</b>	<b>5 Units</b>
<p>Formerly: MATH 101 Non-degree applicable basic skills course. Prerequisite: Satisfactory score on the mathematics placement test; MATH 200, 230, 230J, 234, or 238. Advisory: Not open to students with credit in MATH 101 or 220. 5 hours lecture, 1 hour laboratory. Linear equations, linear inequalities, graphs, linear systems, operations on quadratics, factoring, and proportional reasoning.</p>			<p>Non-degree applicable basic skills course. May be taken 4 times for credit. 5 hours lecture, 1 hour laboratory. Course is designed to allow students enrolled in MATH 234 to receive credit for mastery of some but not all of the outcomes of MATH 234. Students are required to attend the MATH 234 course, turn in all work, and participate in the other tasks of the class.</p>		
<b>MATH 230</b>	<b>PREPARING FOR ALGEBRA</b>	<b>5 Units</b>	<b>MATH 238</b>	<b>PREPARING FOR ALGEBRA</b>	<b>5 Units</b>
<p>Non-degree applicable basic skills course. Prerequisite: Satisfactory score on the mathematics placement test or successful completion of MATH 300. Advisory: Pass/No Pass; not open to students with credit in MATH 200, 230J, 234, or 238. Corequisite: MATH 231. 8 hours lecture, 1 hour laboratory. Addition, subtraction, multiplication and division of whole numbers, fractions, decimals and signed numbers. Introduction to algebraic concepts including solving first-degree equations and evaluating and simplifying expressions. Development and applications of ratios, proportions, percents, geometric concepts and basic algebra.</p>			<p>Non-degree applicable basic skills course. Prerequisite: Satisfactory score on the mathematics placement test or successful completion of MATH 300. Advisory: Pass/No Pass; not open to students with credit in MATH 200. 8 hours lecture. Addition, subtraction, multiplication and division of whole numbers, fractions, decimals and signed numbers. Introduction to algebraic concepts including solving first-degree equations and evaluating and simplifying expressions. Development and applications of ratios, proportions, percents, geometric concepts and basic algebra.</p>		
<b>MATH 230J</b>	<b>PREPARING FOR ALGEBRA</b>	<b>3 Units</b>	<b>MATH 300</b>	<b>PREPARATION FOR ARITHMETIC</b>	<b>5 Units</b>
<p>Non-degree applicable basic skills course. Prerequisite: Completion of 7 or more modules of MATH 230. 3 hours lecture, 1 hour laboratory. Development and applications of percents and geometric concepts. Review of addition, subtraction, multiplication and division of whole numbers, fractions, decimals and signed numbers. Review of algebraic concepts including solving first-degree equations and evaluating and simplifying expressions, and applications of ratios and proportions.</p>			<p>Non-degree applicable basic skills course. 5 hours lecture. Introduction to addition, subtraction, multiplication and division of whole numbers in preparation for basic skills mathematics course.</p>		
<b>MATH 230X</b>	<b>ARITHMETIC PREPARATION</b>	<b>1 Unit</b>	<b>MATH 360</b>	<b>TECHNOLOGY PREPARATION FOR MATHEMATICS</b>	<b>1 Unit</b>
<p>Non-degree applicable basic skills course. 1 hour lecture. Introduction to addition, subtraction, multiplication and division of whole numbers in preparation for basic skills mathematics course.</p>			<p>Non-degree applicable credit course. 1 hour lecture. An introduction to the TI graphing calculator, as it applies to mathematics courses offered at Foothill College, including syntax, tables, graphing, solving equations, numerical differentiation and integration</p>		

## METEOROLOGY

Program offered by De Anza College. (408) 864-5678; [www.deanza.edu](http://www.deanza.edu)

## MUSIC

Fine Arts & Communication

(650) 949-7016  
[www.foothill.edu/fa/](http://www.foothill.edu/fa/)

### MUS 1 INTRODUCTION TO MUSIC 4 Units

4 hours lecture, 1 hour laboratory.

A study of Western music and its place in civilization. Selected listening and readings from the masterpieces of music of Europe and the Western Hemisphere with an emphasis on methods of comprehension, listening techniques, the elements of music, primary musical forms, and a wide range of concert repertoire. A variety of media consisting of slides, videos, recordings, and lecture will be used. Live performance used when possible. [Foothill GE: Humanities; Transferability: UC/CSU]

### MUS 2A GREAT COMPOSERS & MUSIC MASTERPIECES OF WESTERN CIVILIZATION 4 Units

4 hours lecture, 1 hour laboratory.

Introduction to the great composers and music masterpieces of Western culture. Includes composer biographies with emphasis on how composers synthesize or transform the aesthetic ideals of their time. Examines how composers' music reflects their own lives as well as mirrors contemporary social, political, and religious events. Historical periods include the Ancient World and the Medieval, Renaissance, and Baroque eras. Composers include Josquin, Lassus, Palestrina, Monteverdi, Purcell, Vivaldi, Handel and Bach. [Foothill GE: Humanities; Transferability: UC/CSU]

### MUS 2B GREAT COMPOSERS & MUSIC MASTERPIECES OF WESTERN CIVILIZATION 4 Units

4 hours lecture, 1 hour laboratory.

Introduction to the great composers and music masterpieces of Western culture. Includes composer biographies with emphasis on how composers synthesize or transform the aesthetic ideals of their time. Examines how composers' music reflects their own lives as well as mirrors contemporary social, political, and religious events. Historical periods include the Classical period up through early Romanticism. Composers include Gluck, Haydn, Mozart, Beethoven, Schubert and Weber. [Foothill GE: Humanities; Transferability: UC/CSU]

### MUS 2C GREAT COMPOSERS & MUSIC MASTERPIECES OF WESTERN CIVILIZATION 4 Units

4 hours lecture, 1 hour laboratory.

Introduction to the great composers and music masterpieces of Western culture. Includes composer biographies with emphasis on how composers synthesize or transform the aesthetic ideals of their time. Examines how their music reflects their own lives as well as mirrors contemporary social, political, and religious events. Historical period is mid-19<sup>th</sup> Century Romanticism through the present. Composers include Schumann, Chopin, Mendelssohn, Brahms, Berlioz, Liszt, Tchaikovsky, Mussorgsky, Strauss, Verdi, Wagner, Bizet, Debussy, Ravel, Ives, Cowell, Bartok, Berg, Webern, Stravinsky, Copland, Varese, Babbitt, Cage, Crumb, Ligeti, Penderecki, Reich, Glass and Adams. [Foothill GE: Humanities; Transferability: UC/CSU]

### MUS 2D WORLD MUSIC: ROOTS TO CONTEMPORARY GLOBAL FUSION 4 Units

4 hours lecture, 1 hour laboratory.

A survey of world music styles from their roots in the ethnic traditions of a specific culture through their evolution into new forms that retain vitality and relevance in contemporary society. Traces the elements that make each style distinctive from a purely musical perspective as well as the social, historical, and cultural context that shaped each style's development. Styles include salsa, reggae, ska, Celtic, Fado, klezmer, South African Township, High Life, sou kous, Bollywood (filmi), Chutney, Cajun, zydeco, and Hawaiian Slack Key Guitar. [Transferability: UC/CSU]

### MUS 3A BEGINNING MUSIC THEORY, LITERATURE & COMPOSITION 5 Units

Advisory: MUS 12A strongly recommended.

4 hours lecture, 2 hours lecture-laboratory.

Introduction to the fundamentals of music and their application to composition and music literature. Notation, scales, intervals, triads, and their use in basic composition. [Foothill GE: Humanities; Transferability: UC/CSU]

### MUS 3B INTERMEDIATE MUSIC THEORY, LITERATURE & COMPOSITION 5 Units

Advisory: MUS 3A proficiency or equivalent.

4 hours lecture, 2 hours lecture-laboratory.

Continuation of common practice procedures in music and their application to composition and music literature. Seventh chords, cadential chordal structures, secondary dominants and leading tone chords, modulation, binary and ternary form, sonata-allegro form, and variation technique. [Foothill GE: Humanities; Transferability: UC/CSU]

### MUS 3C ADVANCED MUSIC THEORY, LITERATURE & COMPOSITION 5 Units

Advisory: MUS 3B proficiency or equivalent.

4 hours lecture, 2 hours lecture-laboratory.

Continuation of late chromatic harmony and 20<sup>th</sup> Century compositional practice and theory. Application to composition and music literature. Impressionism, atonality, set theory, twelve-tone technique, graphic notation, and minimalism. [Foothill GE: Humanities; Transferability: UC/CSU]

### MUS 7 CONTEMPORARY MUSICAL STYLES: ROCK, POP & JAZZ 4 Units

4 hours lecture, 1 hour laboratory.

Contemporary Musical Styles is a research and listening based survey course that begins with the blues and continues with an introduction to contemporary jazz, popular songs, and rock music. It is a social history of rock and roll. It includes the study of prominent performers, composers, compositions, and styles associated with the evolution and stature of current musical idioms. [Foothill GE: Humanities; Transferability: UC/CSU]

### MUS 7D CONTEMPORARY MUSICAL STYLES: THE BEATLES IN THE CULTURE OF POPULAR MUSIC 4 Units

4 hours lecture, 1 hour laboratory.

Continuation of jazz, popular, and rock music with a focus on the Beatles. Includes prominent albums and songs associated with the band's evolution and stature, and their synthesis of a wide variety of popular and non popular musical styles. Examines the influences of pop music on the Beatles' early style as well as the group's own influence on music and pop culture in general. A variety of media consisting of videos, recordings, lecture, and live performance will be used. [Foothill GE: Humanities; Transferability: UC/CSU]

### MUS 7E HISTORY OF THE BLUES 4 Units

4 hours lecture, 1 hour laboratory.

The History of the Blues is a research based course that examines the geographical regions, social influences, technological innovations, and musical styles within the blues form. It is about the dissemination and popularization of the blues, the basic song form of African American origin that is marked by flatted "blue" notes. The course will cover the development of the blues in the United States throughout the 20<sup>th</sup> century. Emphasis will be on the creation of the 12 bar blues, its evolution into jazz, rhythm and blues, rock and roll, and its impact on social issues. [Foothill GE: Humanities; Transferability: UC/CSU]

### MUS 8 MUSIC OF MULTICULTURAL AMERICA 4 Units

Advisory: Not open to students with credit in MUS 8H.

4 hours lecture, 1 hour laboratory.

A comparative and integrative study of the multicultural musical styles of the United States. Includes the musics of Native Americans, European Americans, African Americans, Chicano/Latino Americans, and Asian Americans, from their historical roots to the present. Includes a wide variety of musical styles such as Folk, Spirituals, Gospel, Soul, Blues, Jazz,

Rap, Cajun, Zydeco, Salsa and Tejano. Analysis of musical traditions from a technical and a cultural perspective; and sequential development of listening and descriptive skills through different media such as films, recordings and computer-assisted instruction. [Foothill GE: United States Cultures & Communities, Human; Transferability: UC/CSU]

**MUS 8H HONORS MUSIC OF MULTICULTURAL AMERICA 4 Units**

**Prerequisite:** Honors Institute participant.

**Advisory:** Not open to students with credit in MUS 8.

**4 hours lecture, 1 hour laboratory.**

A comparative and integrative study of the multicultural musical styles of the United States. Includes the musics of Native Americans, European Americans, African Americans, Chicano/Latino Americans, and Asian Americans, from their historical roots to the present. Includes a wide variety of musical styles such as Folk, Spirituals, Gospel, Soul, Blues, Jazz, Rap, Cajun, Zydeco, Salsa, and Tejano. Analysis of musical traditions from a technical and a cultural perspective; and sequential development of listening and descriptive skills through a variety of media including films, recordings, and computer-assisted instruction. The honors course offers an enriched and challenging experience for the more talented student, including deeper content, more rigorous grading, and more demanding and creative assignments requiring application of higher-level thinking, writing, and communication skills. [Foothill GE: United States Cultures & Communities, Human; Transferability: UC/CSU]

**MUS 10 MUSIC FUNDAMENTALS 4 Units**

**4 hours lecture, 1 hour laboratory.**

Music Fundamentals is a beginning theory course where the basic elements of musicianship and harmony are explored through lecture, listening, and written assignments. Rudiments of music like pitch, rhythm, harmony, style, and form will be examined as rock and roll is analyzed through classical music theory. [Foothill GE: Humanities; Transferability: UC/CSU]

**MUS 11A JAZZ & SWING 4 Units**

**Formerly: MUS 64A**

**4 hours lecture, 1 hour laboratory.**

History and analysis of jazz styles and trends from the development of Ragtime to 1969. An introduction to the instruments, performers, composers, compositions and recordings that defined jazz before the introduction of rock as the primary commercial music style in the US. Presentation of jazz and swing recordings, videos and print resources. Major artists include Louis Armstrong, Duke Ellington, Benny Goodman, Glenn Miller, Lionel Hampton, Count Basie, Charlie Parker, Dizzy Gillespie, Miles Davis, Sonny Rollins, Charles Mingus and John Coltrane. Style periods include Early ('Dixieland'), Big Band, Jump, Swing, Bebop, Hard Bop, Cool, Modal, and Avant-Garde Jazz. [Foothill GE: Humanities; Transferability: UC/CSU]

**MUS 11B FUNK, FUSION & HIP-HOP 4 Units**

**Formerly: MUS 64B**

**4 hours lecture, 1 hour laboratory.**

History and analysis of funk, fusion and Hip Hop styles from 1969 to the present. An introduction to the instruments, performers, composers, compositions and recordings that defined/define funk, fusion & Hip Hop from the collapse of traditional jazz and the introduction of funk and jazz fusion to the present. Presentation of recordings, videos and print resources. Major artists include Miles Davis, Herbie Hancock, James Brown, Sly Stone, Weather Report, Wayne Shorter, George Clinton and P-Funk, Jaco Pastorius, Pat Metheny, Grandmaster Flash, Africa Bambaataa, Chuck D. and Dr. Dre. Style periods include Early Jazz Fusion, Early Funk, East Bay Funk, Groove and Smooth Jazz, Modern Fusion, Early Hip Hop and Commercial Rap. [Foothill GE: Humanities; Transferability: UC/CSU]

**MUS 11C SALSA & LATIN JAZZ 4 Units**

**Formerly: MUS 64C**

**4 hours lecture, 1 hour laboratory.**

History and analysis of Afro-Caribbean musical styles that have developed into modern Salsa and Latin Jazz. An introduction to the instruments, performers, composers, compositions and recordings that defined/define Salsa and Latin Jazz. Presentation of recordings, videos and print resources. Major artists include Tito Puente, Machito, Perez Prado, Eddie Palmieri, Giovanni Hidalgo, Israel 'Cachao' Lopez, Mario Bauza, Frankie Ruiz, Celia Cruz, Luis Enrique,

Paquito D'Rivera, Poncho Sanchez, Chucho Valdez, and others. Styles include Danzon, Son, Mambo, Rhumba, Guaguanco, Guaracha, Son Montuno, Cha Cha, Guajira, Cumbia, Plena, Bomba, Merengue and others. [Foothill GE: Non-GE, Human; Transferability: UC/CSU]

**MUS 12A BEGINNING CLASS PIANO 2 Units**

**Advisory:** Concurrent enrollment in MUS 10 and 12AL.

**May be taken 6 times for credit.**

**2 hours lecture, 1 hour laboratory.**

Group instruction in piano for those with no previous training. Emphasis is on finger technique, note reading, elementary chording, and performance of simple piano literature. For music majors as well as the general student. [Transferability: UC/CSU]

**MUS 12AL CLASS PIANO LABORATORY I 1 Unit**

**Advisory:** Pass/No Pass.

**May be taken 6 times for credit.**

**3 hours laboratory.**

Supervised practice of piano repertoire and technical material assigned in MUS 12A. [Transferability: UC/CSU]

**MUS 12B INTERMEDIATE CLASS PIANO 2 Units**

**Advisory:** MUS 12A or equivalent skills; concurrent enrollment in MUS 12BL.

**May be taken 6 times for credit.**

**2 hours lecture, 1 hour laboratory.**

Continuation of MUS 12A with increased emphasis on good tone production, independence of hands, development of eye-hand coordination, simple harmonization and transposition, and building repertoire. [Transferability: UC/CSU]

**MUS 12BL CLASS PIANO LABORATORY II 1 Unit**

**Advisory:** Pass/No Pass.

**May be taken 6 times for credit.**

**3 hours laboratory.**

Supervised practice of piano repertoire and technical material assigned in MUS 12B. [Transferability: UC/CSU]

**MUS 12C ADVANCED CLASS PIANO 2 Units**

**Advisory:** MUS 12B or equivalent skills; concurrent enrollment in MUS 12CL.

**May be taken 6 times for credit.**

**2 hours lecture, 1 hour laboratory.**

Continuation of MUS 12B with greater emphasis on building a repertoire, varied styles of performance, and ensemble playing. [Transferability: UC/CSU]

**MUS 12CL CLASS PIANO LABORATORY III 1 Unit**

**Advisory:** Pass/No Pass.

**May be taken 6 times for credit.**

**3 hours laboratory.**

Supervised practice of piano repertoire and technical material assigned in MUS 12C. [Transferability: UC/CSU]

**MUS 12D PIANO REPERTOIRE 2 Units**

**Prerequisite:** MUS 12C or equivalent.

**Advisory:** Concurrent enrollment in MUS 12DL.

**May be taken 6 times for credit.**

**2 hours lecture, 1 hour laboratory.**

The study and performance of selected piano literature from the 18<sup>th</sup> to 20<sup>th</sup> centuries. Emphasis will be on interpretation, practice techniques, and expansion of repertoire. [Transferability: UC/CSU]

**MUS 12DL PIANO REPERTOIRE LABORATORY 1 Unit**

**Advisory:** Pass/No Pass.

**May be taken 6 times for credit.**

**3 hours laboratory.**

Supervised practice of piano repertoire and technical material assigned in MUS 12D. [Transferability: UC/CSU]

<p><b>MUS 12E</b>      <b>PIANO MASTER CLASS</b>      <b>2 Units</b>  <b>Advisory:</b> MUS 12C or equivalent skills.  <b>May be taken 6 times for credit.</b>  <b>2 hours lecture, 1 hour laboratory.</b>  The study and performance of selected piano literature from the 18<sup>th</sup> and 20<sup>th</sup> centuries. Emphasis will be on performance, interpretation, practice techniques, and expansion of repertoire. [Transferability: UC/CSU]</p>	<p><b>MUS 14B</b>      <b>INTERMEDIATE CLASSICAL GUITAR</b>      <b>2 Units</b>  <b>Advisory:</b> MUS 14A  <b>May be taken 6 times for credit.</b>  <b>2 hours lecture, 1 hour laboratory.</b>  Continuation of MUS 14A. Covers more advanced techniques for the right and left hands. Includes reading standard notation up to the 5<sup>th</sup> position. Increased emphasis is placed on solo guitar literature in addition to ensemble literature. No public performances are required. [Transferability: UC/CSU]</p>
<p><b>MUS 13A</b>      <b>CLASS VOICE I</b>      <b>1 Unit</b>  <b>Advisory:</b> Concurrent enrollment in MUS 12A and 13AL.  <b>May be taken 4 times for credit.</b>  <b>2 hours lecture-laboratory, 1 hour laboratory.</b>  Group instruction in fundamental techniques of singing. Opportunity to develop positive concepts of tone production, diction, stage presence, and music reading needed by the singer. [Transferability: UC/CSU]</p>	<p><b>MUS 14C</b>      <b>ADVANCED CLASSICAL GUITAR</b>      <b>2 Units</b>  <b>Advisory:</b> MUS 14B.  <b>May be taken 6 times for credit.</b>  <b>2 hours lecture, 1 hour laboratory.</b>  Continuation of MUS 14B. Covers more advanced techniques for the right and left hands. Includes reading standard notation up to the 9<sup>th</sup> position. Includes more complex solo ensemble literature. Additional class time is spent with lectures, demonstrations and performances. No public performances are required. [Transferability: UC/CSU]</p>
<p><b>MUS 13AL</b>      <b>CLASS VOICE LABORATORY</b>      <b>1 Unit</b>  <b>Advisory:</b> Pass/No Pass.  <b>May be taken 4 times for credit.</b>  <b>3 hours laboratory.</b>  Supervised practice of vocal repertoire and technical material assigned in MUS 13A. [Transferability: UC/CSU]</p>	<p><b>MUS 15A</b>      <b>BEGINNING FOLK GUITAR</b>      <b>2 Units</b>  <b>May be taken 6 times for credit.</b>  <b>2 hours lecture, 1 hour laboratory.</b>  A performance based course in beginning guitar (nylon, steel, or electric guitar) with a concentration on folk music. Traditional and popular songs will be used to demonstrate the development of right and left hand techniques. Standard music notation, tablature, and chord symbols will be presented and students can choose instrumental or popular vocal selections to play. [Transferability: UC/CSU]</p>
<p><b>MUS 13B</b>      <b>CLASS VOICE II</b>      <b>1 Unit</b>  <b>Prerequisite:</b> MUS 13A.  <b>Corequisite:</b> MUS 13BL.  <b>May be taken 4 times for credit.</b>  <b>2 hours lecture-laboratory, 1 hour laboratory.</b>  Continuation of MUS 13A with additional emphasis on the development of the voice as a solo instrument. [Transferability: UC/CSU]</p>	<p><b>MUS 15B</b>      <b>INTERMEDIATE FOLK GUITAR</b>      <b>2 Units</b>  <b>Prerequisite:</b> MUS 15A or equivalent.  <b>May be taken 6 times for credit.</b>  <b>2 hours lecture, 1 hour laboratory.</b>  Development of traditional finger-picking style playing and picking techniques. Solo and ensemble performance on an intermediate level. Emphasis on reading traditional notation, chord symbols and tablature. [Transferability: UC/CSU]</p>
<p><b>MUS 13BL</b>      <b>CLASS VOICE LABORATORY</b>      <b>1 Unit</b>  <b>Advisory:</b> Pass/No Pass.  <b>May be taken 4 times for credit.</b>  <b>3 hours laboratory.</b>  Supervised practice of vocal repertoire and technical material assigned in MUS 13B. [Transferability: UC/CSU]</p>	<p><b>MUS 15C</b>      <b>ADVANCED FOLK GUITAR</b>      <b>2 Units</b>  <b>Prerequisite:</b> MUS 15A and 15B or equivalent.  <b>May be taken 6 times for credit.</b>  <b>2 hours lecture, 1 hour laboratory.</b>  Further instruction in the playing of folk guitar with an emphasis on finger-picking, barre chords, and altered tunings. Sight reading in tablature, chord symbols, and standard notation. Instrumental Blues and blues scales. [Transferability: UC/CSU]</p>
<p><b>MUS 13C</b>      <b>CLASS VOICE III</b>      <b>1 Unit</b>  <b>Prerequisite:</b> MUS 13A and 13B.  <b>Corequisite:</b> MUS 13CL.  <b>May be taken 4 times for credit.</b>  <b>2 hours lecture-laboratory, 1 hour laboratory.</b>  Continuation of MUS 13A and 13B, with additional emphasis on musical phrasing, artistic interpretation, and foreign language usage. [Transferability: UC/CSU]</p>	<p><b>MUS 18</b>      <b>MUSIC PUBLISHING FOR SONGWRITERS</b>      <b>3.5 Units</b>  <b>Formerly:</b> MUS 59  <b>May be taken 6 times for credit.</b>  <b>2 hour lecture, 1 hour lecture-laboratory, 3 hours laboratory.</b>  This course prepares the student to navigate the music publishing business by eliminating the legalese and explaining the business in everyday language. Class includes writing original songs for review. Active listening and constructive critiquing of original student compositions. [Transferability: UC/CSU]</p>
<p><b>MUS 13CL</b>      <b>CLASS VOICE LABORATORY</b>      <b>1 Unit</b>  <b>Advisory:</b> Pass/No Pass.  <b>May be taken 4 times for credit.</b>  <b>3 hours laboratory.</b>  Supervised practice of vocal repertoire and technical material assigned in MUS 13C. [Transferability: UC/CSU]</p>	<p><b>MUS 27</b>      <b>SYMPHONY &amp; CONCERTO</b>      <b>4 Units</b>  <b>Advisory:</b> MUS 1.  <b>4 hours lecture.</b>  Development of the symphony and concerto from the late 16<sup>th</sup> Century to the present. Emphasis on musical elements (compositional technique, performance practice and musical style) and on the forms' reflection of the social, religious, political and aesthetic values of each time period. Special focus on works currently being performed by local orchestras. [Transferability: UC/CSU]</p>
<p><b>MUS 14A</b>      <b>BEGINNING CLASSICAL GUITAR</b>      <b>2 Units</b>  <b>May be taken 6 times for credit.</b>  <b>2 hours lecture, 1 hour laboratory.</b>  A guitar fundamentals course that places emphasis on reading standard notation in the first position. Techniques such as rest stroke, free stroke, and correct left hand position are covered. Fundamental exercises and pieces will be played by the student in class as the instructor provides accompaniment. Includes an overview of the literature and the major performers of the classical guitar. No public performances are required. [Transferability: UC/CSU]</p>	

<b>MUS 34H</b>	<b>HONORS INSTITUTE SEMINAR IN MUSIC</b>	<b>1 Unit</b>	<b>MUS 56</b>	<b>COMPOSING &amp; ARRANGING WITH SIBELIUS</b>	<b>4 Units</b>
<p><b>Formerly: MUS 34</b>  <b>Prerequisite:</b> Honors Institute participant.  <b>Advisory:</b> Not open to students with credit in MUS 34.  <b>1 hour lecture.</b>            A seminar in directed readings, discussions and projects in music.  <b>[Transferability: CSU; UC credit may be granted after transfer and upon portfolio review.]</b></p>			<p><b>May be taken 3 times for credit.</b>  <b>2 hours lecture, 2 hours lecture-laboratory, 3 hours laboratory.</b>            Beginning composing and arranging with Sibelius® notation software. Integrate Sibelius with Pro Tools® and Reason®. Learn to write basic lead sheets with lyrics using either notation or guitar tab, and small group arrangements all the way to large orchestral scores in any musical style. This course can be taken concurrently with MUS 3, 10, 58 or 59 and is highly recommended for anyone considering a career in music, or the songwriter who wants to publish his/her music. Prior musical training is not required, and there are no stylistic restrictions. <b>[Transferability: UC/CSU]</b></p>		
<b>MUS 35</b>	<b>SPECIAL PROJECTS IN MUSIC</b>	<b>2 Units</b>	<b>MUS 58A</b>	<b>SONGWRITER'S WORKSHOP I</b>	<b>3.5 Units</b>
<p><b>May be taken 6 times for credit.</b>  <b>6 hours laboratory.</b>            A laboratory course involving an approved student project in music such as theory, history and literature, and applied music. Performances or music productions for community musical events may be planned and executed in this class. <b>[Transferability: CSU]</b></p>			<p><b>May be taken 6 times for credit.</b>  <b>2 hours lecture, 1 hour lecture-laboratory, 3 hours laboratory.</b>            Workshop course for songwriters that focuses on contemporary songwriting styles and techniques. Over the course of the class different songwriting methods, components and structures are presented. Students are assigned songwriting projects. Course includes analytical listening and discussion of various songwriting styles. Class is appropriate for all levels of songwriting competency <b>[Transferability: CSU]</b></p>		
<b>MUS 41</b>	<b>LIVE MUSIC PERFORMANCE WORKSHOP</b>	<b>2 Units</b>	<b>MUS 58B</b>	<b>SONGWRITER'S WORKSHOP II</b>	<b>3.5 Units</b>
<p><b>May be taken 6 times for credit.</b>  <b>1 hour lecture, 3 hours laboratory.</b>            Seminar-style course provides a forum for performing and presenting music and multimedia work, receiving constructive feedback, and encountering a broad diversity of styles in the work of others. All music performance practices are welcome, including electronic and visual media that integrate music. A wide range of musical styles will be explored including Folk, Reggae, Jazz, Blues, Electronic, and Classical. Students may use traditional acoustic, electric, and software based virtual instruments. In addition to standard repertoire, the course provides an opportunity for performance of original compositions. Students will gain music performing experience and also learn the technical side of sound reinforcements systems, concert promotion and stage management. The culmination of the student's work for the quarter will be participation in a live music concert. <b>[Transferability: CSU]</b></p>			<p><b>May be taken 6 times for credit.</b>  <b>2 hours lecture, 1 hour lecture-laboratory, 3 hours laboratory.</b>            Continuation of MUS 58A. Workshop course for songwriters that focuses on contemporary songwriting styles and techniques. Over the course of the class different songwriting methods, components and structures are presented. Students are assigned songwriting projects. Course includes analytical listening and discussion of various songwriting styles. Class is appropriate for all levels of songwriting competency <b>[Transferability: CSU]</b></p>		
<b>MUS 50A</b>	<b>MUSIC BUSINESS</b>	<b>4 Units</b>	<b>MUS 58C</b>	<b>SONGWRITER'S WORKSHOP III</b>	<b>4 Units</b>
<p><b>4 hours lecture, 2 hours laboratory.</b>            Study of legal and business aspects of the music industry. Emphasis on publishing, licensing, and promotion. Copyright law, interaction between songwriters and music publishers, record companies, distributors and the rules that govern them. How music is licensed, service marks, trademarks and patents. The role of lawyers, agents, personal managers, producers and promoters. Licensing and copyright of intellectual properties in the growing multimedia industry and the internet. Synchronization of music in film, video and television. Career development and how major/independent labels market and distribute media. <b>[Transferability: CSU]</b></p>			<p><b>Prerequisite:</b> MUS 58A, 58B or the equivalent.  <b>May be taken 6 times for credit.</b>  <b>2 hours lecture, 2 hours lecture-laboratory, 3 hours laboratory.</b>            Continuation of MUS 58A and 58B. Workshop course for songwriters that focuses on contemporary songwriters such as Dave Matthews, Kurt Cobain, Sarah McGlachlan, Joni Mitchell, Stevie Wonder, John Mayer, James Taylor, etc. Each week a different songwriting technique is presented, along with student performances and songwriting assignments. In class listening and discussion of various songwriting styles along with guest speakers, songwriters and industry representatives. <b>[Transferability: CSU]</b></p>		
<b>MUS 50B</b>	<b>ENTERTAINMENT LAW &amp; NEW MEDIA</b>	<b>4 Units</b>	<b>MUS 60A</b>	<b>PRODUCING IN THE HOME STUDIO I</b>	<b>4 Units</b>
<p><b>4 hours lecture, 2 hours laboratory.</b>            In-depth study and discussion of entertainment law as it applies to the emerging new media market and the music industry. Internet sales and distribution for new media, file sharing, licensing for the web, and digital copyright considerations. Promotional packages, web site development, delivery systems, career promotion strategies, contracts and touring. In-depth analysis of contracts and regulations/potential of starting an independent media production company, record label, or online retail site. Sampling licenses/international copyright law and publishing. <b>[Transferability: CSU]</b></p>			<p><b>May be taken 3 times for credit.</b>  <b>4 hours lecture, 2 hours laboratory.</b>            Design, set up and operation of an audio/video recording studio in a small environment. Space considerations, electrical requirements and acoustic treatment options. Computer requirements including processor speed, memory requirements, data storage devices and monitor selection/placement. MIDI keyboard types and compatibility, mixer selection and setup, cable selection and care, microphone design, and USB/firewire interface options. Software programs and compatibility issues. How to produce recordings from start to finish in a home studio. <b>[Transferability: CSU]</b></p>		
<b>MUS 50C</b>	<b>CAREERS IN MUSIC</b>	<b>4 Units</b>	<b>MUS 60B</b>	<b>PRODUCING IN THE HOME STUDIO II</b>	<b>4 Units</b>
<p><b>Formerly: MUS 65</b>  <b>May be taken 3 times for credit.</b>  <b>2 hours lecture, 2 hours lecture-laboratory, 3 hours laboratory.</b>            An overview of the music industry and its career opportunities. Areas of study include studio management and engineering, music merchandising on the local and national levels, artist promotion, concert promotion, concert management, music contracting, graphic support in music recording, the role of the agent/personal manager, technical support in electronic music, technical support in traditional music, video and film production and editing, instrument maintenance and repair, and music retailing. Guest lectures from local industry professionals, field trips to studios, production facilities and retail facilities. <b>[Transferability: CSU]</b></p>			<p><b>May be taken 3 times for credit.</b>  <b>4 hours lecture, 2 hours laboratory.</b>            In-depth operation of an audio/video recording studio in a small environment. Microphone selection and placement, creative sound treatments in non-traditional environments, and application of plug-in effects. Use of auxiliary tracks and busses. Mixing and mastering in various digital formats. <b>[Transferability: CSU]</b></p>		

**MUS 62 SOUND REINFORCEMENT & LIVE RECORDING 4 Units**

May be taken 3 times for credit.

2 hours lecture, 2 hours lecture-laboratory, 3 hours laboratory.

Setup and operation of live sound reinforcement systems. Basic design and operation of analog mixing boards. Microphone type, design, construction and selection. Monitor systems and their application with musical groups and performers. Practice with live musicians in practice and performance settings. [Transferability: CSU]

**MUS 66A INTRODUCTION TO DIGITAL AUDIO: PRO TOOLS 4 Units**

May be taken 3 times for credit.

2 hours lecture, 2 hours lecture-laboratory, 3 hours laboratory.

Introduction to creating music with computers, keyboards and audio samples (beats) using Pro Tools. Basic principles and use of MIDI sequencing/audio software. Songwriting, musical composition, and the basic elements of music (pitch, rhythm, harmony, style and form) as they relate to contemporary music. Basic music production using Pro Tools. All styles are included, and prior musical training is not required. [Transferability: CSU]

**MUS 66B INTRODUCTION TO DIGITAL AUDIO: REASON & PRO TOOLS 4 Units**

May be taken 3 times for credit.

2 hours lecture, 2 hours lecture-laboratory, 3 hours laboratory.

Creating and editing digital audio with Pro Tools and Reason. Songwriting, musical composition, and the basic elements of music (pitch, rhythm, harmony, style and form) as they relate to contemporary music. Introduction to using Reason both as a stand-alone digital audio workstation as a ReWire application within the Pro Tools production environment. [Transferability: CSU]

**MUS 66C INTRODUCTION TO DIGITAL AUDIO: LIVE, REASON & PRO TOOLS 4 Units**

May be taken 3 times for credit.

2 hours lecture, 2 hours lecture-laboratory, 3 hours laboratory.

Creating and editing digital audio with Pro Tools, Reason, and Ableton Live. Using Live as a stand-alone digital audio workstation and performance instrument. Pro Tools RTAS and Audio Suite plug-in effects and how they are used in the production of complete musical arrangements in digital music. Songwriting, musical composition, and the basic elements of music (pitch, rhythm, harmony, style and form) as they relate to contemporary music. [Transferability: CSU]

**MUS 68 CAREERS IN NEW MEDIA 1 Unit**

Advisory: Not open to students with credit in ART 71, GRDS 51, PHOT 67, or VART 53.

2 hours lecture-laboratory.

Exploring the field of New Media. Survey of transfer schools, new media art studios, company art departments, media agencies and job opportunities. Overview of careers and functions. [Transferability: CSU]

**MUS 80A RECORDING STUDIO BASICS 4 Units**

May be taken 3 times for credit.

2 hours lecture, 2 hours lecture-laboratory, 3 hours laboratory.

Introduction to fundamental concepts and techniques of mixing boards, amplifiers, microphones, signal processors and their application to both live and studio sound reinforcement. Basic introduction to computer based recording with Digidesign Pro Tools. Microphone placement, physics of sound as it relates to recording, sound reinforcement and studio setup techniques. [Transferability: CSU]

**MUS 81A AUDIO RECORDING & PRODUCTION 4 Units**

May be taken 3 times for credit.

2 hours lecture, 2 hours lecture-laboratory, 3 hours laboratory.

Introduction to multitrack recording and production using Digidesign's Pro Tools®. Contemporary production techniques such as beat (loop) construction and editing, timestretching, pitchshifting and quantizing. Basic introduction to digital plug-in effects. Microphone selection, design, placement, and multitrack recording. Introduction of digital recording techniques using smaller, 2 to 8 track Pro Tools LE® systems and larger, 24 track TDM systems. This course gives the student access to our recording studio. [Transferability: CSU]

**MUS 81B SOUND DESIGN FOR FILM & VIDEO 3.5 Units**

May be taken 4 times for credit.

3 hours lecture, 1.5 hours laboratory.

Creating and editing soundtracks and audio for digital video, music video and film. Recording live sound, and integrating sound effects from a digital library. Dialogue editing and re-recording (looping), and musical soundtrack creation. Synchronization of audio to video using timecode, aesthetic quality of sound and music as it relates to video content, and the production of video/audio projects using Final Cut Pro/Avid Media Composer and Pro Tools. [Transferability: CSU]

**MUS 81C MIXING & MASTERING WITH PRO TOOLS 4 Units**

May be taken 3 times for credit.

2 hours lecture, 2 hours lecture-laboratory, 3 hours laboratory.

Mixing and mastering multitrack recordings using Pro Tools. EQ, compression, reverb, delays, tempo maps, "Lo-Fi" techniques, multi-band compression. Comparison and contrast of various styles of mixing including jazz, classical, country, rock, hip hop and electronica. Example exercises featuring professional recordings and mixes. Understanding and applying mixing concepts such as balance, dimension, and monitoring. Deliver final mixes that translate accurately to various speaker systems and listening environments. [Transferability: CSU]

**MUS 81D PRO TOOLS & PLUG-INS I 4 Units**

May be taken 3 times for credit.

2 hours lecture, 2 hours lecture-laboratory, 3 hours laboratory.

Creative applications of plug-ins used in contemporary music production and sound design. Signal processing, equalization, compression, Beat Detective, distortion, reverb, delay, pitch correction, advanced plug-in automation techniques. Compare plug-ins and processors from different companies. Includes Waves Certification Program textbook providing high-quality, standardized means of mastering Waves plug-ins. Upon successful completion of this course, student is awarded Waves Certification Level A. [Transferability: CSU]

**MUS 81E PRO TOOLS & PLUG INS II 4 Units**

May be taken 3 times for credit.

2 hours lecture, 2 hours lecture-laboratory, 3 hours laboratory.

Creative editing and mixing techniques using Pro Tools plug-ins. Study and compare plug-ins from different manufactures. Drum replacement and triggering, audio quantizing techniques. Apply Melodyne and Autotune pitch correction, EQ and compression, Elastic Audio editing. Sound restoration plug-ins, forensic audio enhancement, convolution reverbs, virtual instruments, advanced plug-in automation and signal processing techniques. Example exercises include sound design plug-ins for music, film, and video games. [Transferability: CSU]

**MUS 82A PRO TOOLS 101: INTRODUCTION TO PRO TOOLS 4 Units**

Formerly: MUS 82B

May be taken 4 times for credit.

2 hours lecture, 2 hours lecture-laboratory, 3 hours laboratory.

Digidesign Certified course focuses on foundation skills needed to operate Pro Tools at a basic level. Build sessions that include multitrack recordings of live instruments, MIDI sequences, software synthesizers and samplers, audio looping with REX or ACID files. Develop essential techniques for recording, editing, and mixing. This is a required class for the Digidesign Pro Tools Operator Certification. [Transferability: CSU]

**MUS 82B PRO TOOLS 110: ESSENTIALS OF PRO TOOLS 4 Units**

May be taken 4 times for credit.

2 hours lecture, 2 hours lecture-laboratory, 3 hours laboratory.

Essential Pro Tools concepts and techniques. Recording, editing and routing audio and MIDI data. Managing sessions and tracks, using virtual instruments, plug-ins, editing techniques, loop recording, Elastic Audio and music notation. Introduction to automation modes and workflows. This is a required class for the Digidesign Pro Tools Operator Certification. [Transferability: CSU]

**MUS 82C PRO TOOLS 201: PRO TOOLS PRODUCTION ESSENTIALS** 4 Units  
 May be taken 4 times for credit.  
 2 hours lecture, 2 hours lecture-laboratory, 3 hours laboratory.  
 Digidesign Certified course covers the core concepts and skills needed to operate a Pro Tools system in a professional studio environment. Introduction to Pro Tools HD systems and control surfaces. Concepts such as automation, editing, mixing, hardware setup and session management. Experience will be gained through a series of class exercise and project files. This is a required class for the Digidesign Pro Tools Operator Certification, and will prepare students for enrollment in Pro Tools 300 Expert Level Certification Courses. [Transferability: CSU]

**MUS 82D PRO TOOLS 210M: MUSIC PRODUCTION TECHNIQUES** 4 Units  
 May be taken 4 times for credit.  
 2 hours lecture, 2 hours lecture-laboratory, 3 hours laboratory.  
 Digidesign Certified course completes skills needed to operate a sophisticated Pro Tools system in a professional music production environment. Music production techniques, composing with MIDI, loop editing, sampling in Pro Tools, Beat Detective, Sound Replacer, final mixing and mastering. Upon successful completion of this course, student will be awarded Pro Tools Operator Certification in Music. [Transferability: CSU]

**MUS 85A MUSIC & MEDIA: EDISON TO HENDRIX** 4 Units  
 4 hours lecture, 2 hours laboratory.  
 Introductory study of the history and development of popular music from the inception of recording through the first televised performances of the Beatles in the U.S. Development of media delivery including recording, radio, television, and how those delivery systems changed both the content of music, and its use by the public. The class will investigate the influence of media on the development of styles such as jazz, swing, country, rockabilly and rock and roll, including societal changes brought about by media delivery of music and how it became associated with graphic imagery such as television and cinema. [Foothill GE: Humanities; Transferability: UC/CSU]

**MUS 85B MUSIC & MEDIA: HENDRIX TO HIP-HOP** 4 Units  
 4 hours lecture, 2 hours laboratory.  
 Introductory study of the history and development of popular music from 1964 through the present in the U.S. The class will examine the development of media delivery systems after The Beatles' first appearances on television through the growth of rock and alternative styles. Styles and artist to be studied are such as punk, ska, the rebirth of country music and the rise of hip hop culture, examining artists such as Jimi Hendrix, Pink Floyd, David Bowie, Frank Zappa, Prince, The Police, Chuck D. and others. The class will study the development and growth of music videos as an art form and the delivery/promotional systems developed for them such as MTV. [Foothill GE: Humanities; Transferability: UC/CSU]

**MUS 86 INTRODUCTION TO DIGITAL SOUND, VIDEO & ANIMATION** 4 Units  
 Advisory: Not open to students with credit in ART 88, DRAM 86, GID 86 or VART 86.  
 2 hours lecture, 2 hours lecture-laboratory, 3 hours laboratory.  
 Basic instruction using the computer for emerging media technologies; digital sound, video editing and animation. Emphasis on time-based media and creative problem solving. [Transferability: CSU]

**MUS 90 MUSIC FOR MINORS TRAINING** 3 Units  
 Advisory: Instructor approval based on demonstrated ability to maintain rhythm and pitch, and some recent child-related leadership experience.  
 May be taken 2 times for credit.  
 6 hours lecture-laboratory.  
 Training of volunteers (docents) to teach a comprehensive music program for elementary age classes. [Transferability: CSU]

**MUS 150 MUSIC LABORATORY** .5 Unit  
**MUS 150X** 1 Unit  
**MUS 150Y** 1.5 Units  
**MUS 150Z** 2 Units  
 Non-degree applicable credit course.  
 Any combination of MUS 150–150Z may be taken 6 times for credit, however, no single course may be taken more than 6 times for credit. 1.5 hours laboratory for each .5 unit of credit.  
 Supervised activities in musical skills and materials related to music courses in which students are currently enrolled.

**MUS 190 DIRECTED STUDY** .5 Unit  
**MUS 190X** 1 Unit  
**MUS 190Y** 1.5 Units  
**MUS 190Z** 2 Units  
 Non-degree applicable credit course.  
 Advisory: Pass/No Pass.  
 Any combination of MUS 190–190Z may be taken 6 times for credit, however, no single course may be taken more than 6 times for credit. 1.5 hours laboratory for each .5 unit of credit.  
 Supervised activities in Music and/or Music Performance for students who desire or require additional help in attaining comprehension and competency in learning skills in a music subject area. Supervised by a music faculty member.

## MUSIC PERFORMANCE

Fine Arts & Communication (650) 949-7016  
[www.foothill.edu/fa/](http://www.foothill.edu/fa/)

**MUSP 20 REPERTORY CHORUS** 2 Units  
 Prerequisite: Enrollment subject to standardized audition demonstrating musical ability and technical proficiency.  
 May be taken 6 times for credit.  
 3 hours lecture-laboratory, 2 hours laboratory.  
 Study, rehearsal and performance of choral repertoire drawn from a broad historical and stylistic range. Includes sacred and secular material, with focus on developing a varied concert program. Performances both on and off campus. Attendance at all performances required. [Transferability: UC/CSU]

**MUSP 21 COLLEGE CHORALE** 2 Units  
 May be taken 6 times for credit.  
 3 hours lecture-laboratory, 2 hours laboratory.  
 Sing in harmony a variety of choral music, including spirituals, folk songs, pop hits, standard octavos and Broadway medleys. This course is open without regard for previous musical background. Attendance at all scheduled performances is required. [Transferability: UC/CSU]

**MUSP 22 JAZZ SINGERS: INTRODUCTION TO VOCAL JAZZ ENSEMBLE** 2 Units  
 Prerequisite: Enrollment subject to standardized audition demonstrating musical ability and technical proficiency.  
 May be taken 6 times for credit.  
 3 hours lecture-laboratory, 2 hours laboratory.  
 Study, rehearsal and performance of contemporary vocal ensemble repertoire drawn from the popular and jazz idiom. For students with little or no experience in vocal jazz. Attendance at all performances required. [Transferability: UC/CSU]

**MUSP 23 FANFAIRS: ADVANCED VOCAL JAZZ ENSEMBLE** 2 Units  
 Prerequisite: Enrollment subject to standardized audition demonstrating musical ability and technical proficiency.  
 May be taken 6 times for credit.  
 3 hours lecture-laboratory, 2 hours laboratory.  
 Study, rehearsal and performance of contemporary vocal ensemble repertoire drawn from the popular and jazz idiom. For students with previous experience in vocal jazz. Attendance at all performances required. [Transferability: UC/CSU]



MUSP 35 STAGE BAND 2 Units  
 MUSP 35X 4 Units  
 MUSP 35Y 6 Units  
 MUSP 35Z 8 Units

Prerequisite: Enrollment subject to standardized audition demonstrating musical ability and technical proficiency.

Any combination of MUSP 35–35Z may be taken 6 times for credit, however, no single course may be taken more than 6 times for credit. 3 hours lecture-laboratory, 2 hours laboratory for 2 units of credit.

Study and preparation of beginning-level materials suitable for the large jazz ensemble. This course is intended for the less experienced player in this idiom. The basic jazz techniques related to big band performance will be stressed. Attendance at all scheduled performances is mandatory. [Transferability: UC/CSU]

MUSP 36 JAZZ LABORATORY BAND 2 Units  
 MUSP 36X 4 Units  
 MUSP 36Y 6 Units  
 MUSP 36Z 8 Units

Prerequisite: Enrollment subject to standardized audition demonstrating musical ability and technical proficiency.

Advisory: MUS 10 or equivalent experience.

Any combination of MUSP 36–36Z may be taken 6 times for credit, however, no single course may be taken more than 6 times for credit. 3 hours lecture-laboratory, 2 hours laboratory for 2 units of credit.

Study and preparation of intermediate level materials suitable for the large jazz ensemble. Attendance at all scheduled performances is mandatory. [Transferability: UC/CSU]

MUSP 37 STRING ORCHESTRA 2 Units  
 MUSP 37X 4 Units  
 MUSP 37Y 6 Units  
 MUSP 37Z 8 Units

Prerequisite: Enrollment subject to standardized audition demonstrating musical ability and technical proficiency.

Any combination of MUSP 37–37Z may be taken 6 times for credit, however, no single course may be taken more than 6 times for credit. 3 hours lecture-laboratory, 2 hours laboratory for 2 units of credit.

Reading, study and performance of Chamber and orchestral literature for strings. Attendance at all scheduled performance is required. [Transferability: UC/CSU]

MUSP 38 CHAMBER ORCHESTRA 2 Units  
 MUSP 38X 4 Units  
 MUSP 38Y 6 Units  
 MUSP 38Z 8 Units

Prerequisite: Enrollment subject to standardized audition demonstrating musical ability and technical proficiency.

Any combination of MUSP 38–38Z may be taken 6 times for credit, however, no single course may be taken more than 6 times for credit. 3 hours lecture-laboratory, 2 hours laboratory for 2 units of credit.

Study and performance of Chamber orchestral literature from the Renaissance to the present. Attendance at all scheduled performances is required. [Transferability: UC/CSU]

MUSP 39 COLLEGE ORCHESTRA 2 Units  
 MUSP 39X 4 Units  
 MUSP 39Y 6 Units  
 MUSP 39Z 8 Units

Prerequisite: Enrollment subject to standardized audition demonstrating musical ability and technical proficiency.

Any combination of MUSP 39–39Z may be taken 6 times for credit, however, no single course may be taken more than 6 times for credit. 3 hours lecture-laboratory, 2 hours laboratory for 2 units of credit.

Reading, study and performance of the orchestral literature of various styles and periods best suited for the college level instrumentalist. Attendance at all scheduled performances is required. [Transferability: UC/CSU]

MUSP 40 SYMPHONY ORCHESTRA 2 Units  
 MUSP 40X 4 Units  
 MUSP 40Y 6 Units  
 MUSP 40Z 8 Units

Prerequisite: Enrollment subject to standardized audition demonstrating musical ability and technical proficiency.

Any combination of MUSP 40–40Z may be taken 6 times for credit, however, no single course may be taken more than 6 times for credit. 3 hours lecture-laboratory, 2 hours laboratory for 2 units of credit.

Study, rehearsal and performance of the great masterworks for symphony orchestra with emphasis on works from the Classical through the Modern era of symphonic composition. Attendance at all scheduled rehearsals and performances are required. [Transferability: UC/CSU]

MUSP 43 CONTEMPORARY JAZZ ENSEMBLE 2 Units  
 Prerequisite: Enrollment subject to standardized audition demonstrating musical ability and technical proficiency.  
 May be taken 6 times for credit.  
 3 hours lecture-laboratory, 2 hours laboratory.

Study and preparation of advanced-level materials suitable for the large jazz ensemble. Selected music written in progressive or modern styles from the '60s–'90s will be studied and performed. Attendance at all scheduled performances is mandatory. [Transferability: UC/CSU]

MUSP 49 MUSIC REHEARSAL & PERFORMANCE 2 Units  
 MUSP 49X 4 Units  
 MUSP 49Y 6 Units  
 MUSP 49Z 8 Units

Advisory: Pass/No Pass.

Any combination of MUSP 49–49Z may be taken 6 times for credit, however, no single course may be taken more than 6 times for credit. 3 hours lecture-laboratory, 2 hours laboratory for 2 units of credit.

Supervised participation in public performance in a music department ensemble. Enrollment is for the duration of one particular performance or concert tour. [Transferability: UC/CSU]

MUSP 61A–F APPLIED JAZZ TRAINING 2 Units  
 Prerequisite: Enrollment subject to standardized audition demonstrating musical ability and technical proficiency.  
 May be taken 6 times for credit.

.5 hour lecture, 1.5 hours lecture-laboratory, 5 hours laboratory. .5 hour per week lecture-recital instruction by the college staff, and one lesson per week with a private instructor by the student. A minimum of 10 .5 hour lessons per quarter must be verified. [Transferability: CSU]

MUSP 95X PERFORMANCE PRACTICES 1.5 Units  
 MUSP 95Y IN MUSIC 2 Units

Prerequisite: Enrollment subject to standardized audition demonstrating musical ability and technical proficiency.

Any combination of MUSP 95–95Y may be taken 6 times for credit, however, no single course may be taken more than 6 times for credit. 4 hours laboratory for each unit of credit.

A study of historical performance practices of vocal and instrumental music through group rehearsal and public performance of selected works. Attendance at all scheduled performances is required. [Transferability: CSU]

MUSP 96 CONCERT PREPARATION & PRESENTATION 1 Unit

Prerequisite: Enrollment subject to standardized audition demonstrating musical ability and technical proficiency.

May be taken 6 times for credit, however, no single course may be taken more than 6 times for credit. 4 hours laboratory.

A laboratory course using techniques and procedures for developing quality musical performances. Attendance at all scheduled performances is required. [Transferability: CSU]

MUSP 191 CHORAL REPERTOIRE PRACTICUM 2 Units  
 MUSP 191X 3 Units  
 MUSP 191Y 4 Units  
 MUSP 191Z 5.5 Units

Prerequisite: Enrollment subject to standardized audition demonstrating musical ability and technical proficiency.

Advisory: Pass/No Pass.

Any combination of MUSP 191–191Z may be taken 6 times for credit, however, no single course may be taken more than 6 times for credit. 3 hours lecture-laboratory, 1.5 hours laboratory for 2 units of credit. Study, rehearsal, and performance of choral repertoire. Designed as an advanced performance course for ensemble singers wishing to explore the vast choral repertoire more fully, including music from medieval to contemporary, and non-Western music. Concert performances both on and off campus. Attendance at all performances required.

MUSP 193 INSTRUMENTAL 2 Units  
 MUSP 193X REPERTOIRE PRACTICUM 3 Units  
 MUSP 193Y 4 Units  
 MUSP 193Z 5.5 Units

Prerequisite: Enrollment subject to standardized audition demonstrating musical ability and technical proficiency.

Advisory: Pass/No Pass.

Any combination of MUSP 193–193Z may be taken 6 times for credit, however, no single course may be taken more than 6 times for credit. 3 hours lecture-laboratory, 1.5 hours laboratory for 2 units of credit. Study, rehearsal, and performance of instrumental repertoire. Designed as an advanced performance course for players of string, wind, and percussion instruments wishing to explore the vast instrumental repertoire more fully, including music from renaissance to contemporary, and non-western music. Concert performances both on and off campus. Attendance at all performances required.

## NANOTECHNOLOGY

Physical Sciences, Mathematics & Engineering (650) 949-7259  
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NANO 51 INTRODUCTION TO NANOTECHNOLOGY 5 Units

Formerly: ENGR 76

Advisory: Not open to students with credit in ENGR 76; CHEM 30A or equivalent; PHYS 10 or equivalent; BIOL 10 or equivalent. 5 hours lecture.

Introduction to the underlying principles and applications of the emerging field of nanotechnology. Intended for a multidisciplinary audience with a variety of backgrounds. Introduces scientific principles and theory relevant at the nanoscale dimension. Discusses current and future nanotechnology applications in engineering and materials, physics, chemistry, biology, electronics and computing, and medicine. [Transferability: CSU]

NANO 52 INTRODUCTION TO MATERIALS SCIENCE 5 Units

Advisory: Knowledge of atomic and molecular structure, chemical reactions including kinetics and thermodynamics, basic physical properties of materials, knowledge of electromagnetic and electrostatic behavior; thermal and electrical conductivity of materials. 5 hours lecture.

Introduction to the fundamental science and technology of modern materials, including semiconductors, electronics, MEMS, magnetic recording, carbon nanostructures, polymers and composite materials, and high performance metals and alloys. Topics include a review of the periodic table, atomic and electronic structure, chemical bonding and molecular geometry, crystal structure and crystallization, phase diagrams and phase transitions, and semiconduction. A review of modern materials and material structures includes colloids and particles, metals and alloys, ceramics and glasses, and polymers and thermoplastics. Particular emphasis placed on understanding the basic physics and chemistry of important material processes, such as the physics of solids and importance of defects and impurities in material structures. Depending

on student interests, advanced topics can include surface chemistry, quantum structures, and fabrication of nanostructures such as carbon nanotubes and organic thin films. [Transferability: CSU]

NANO 53 MATERIALS CHARACTERIZATION 5 Units  
 Advisory: NANO 52 or equivalent; students should have a basic knowledge of materials science, physics, and inorganic/organic chemistry; experience with some type of analytical instrumentation is beneficial. 5 hours lecture.

Focuses on techniques for micro and nano characterization of materials, including surface imaging and analysis techniques. Surveys the physics of instrumentation involved in characterizing materials, the typical approach to analyzing a wide variety of materials, including Micro Electro Mechanical Systems, carbon nanotubes, thin films, polymers, glasses, and other common nanomaterials. Materials analysis approaches to quality assurance and quality control, failure analysis, and problem solving. Hands-on exercises and experiential learning will include use of the Scanning Electron Microscope, Atomic Force Microscope-SPM, Auger Electron Spectroscopy, and analysis of X-Ray Photoelectron spectroscopy, Fourier Transform Infrared Spectroscopy, and Raman spectroscopy techniques. [Transferability: CSU]

NANO 54 SURFACES & THIN FILMS 5 Units

Advisory: NANO 52 and NANO 53 or equivalent; students should have a basic knowledge of materials science, physics, and inorganic/organic chemistry. 5 hours lecture.

Introduction to the physical chemistry and material properties of surface structures and states, and their importance in building devices at the nanoscale dimension, especially in thin films. The study of surfaces includes review of basic properties and roles of surface mechanisms, forces that lead to surface tension, physisorption and chemisorption, electronic and structural responses to surface termination, surface modification techniques, and modern methods for spectroscopic investigation in the context of industrial applications. The study of thin film fundamentals includes the theory, design, deposition, characterization, and applications in industry. Special topics may include Langmuir-Blodgett films, Self-Assembled Monolayers (SAMs), plasma surface modification, plasma polymerized organic films, and photovoltaics. [Transferability: CSU]

NANO 55 INTRODUCTION TO MICRO & NANO ELECTRONICS 5 Units

Advisory: NANO 51, 52, 53, ENGR 35, 37, PHYS 4D, MATH 2A or 10. 5 hours lecture.

Introduces and explains terminology, underlying principles, fundamental operational models, properties, and concepts associated with modern electronic circuits and their applications. Fundamentals of carrier generation, transport, recombination, and biasing in semiconductors. Provides insight into the internal workings of the “building-block” device structures such as the PN-junction diode, metal semiconductor contacts, bipolar junction transistors, MOS capacitors, and field effect devices, solar cells, and LEDs. First order device models that reflect physical principles and are useful for integrated circuit analysis and design. Introduction to quantum effects. [Transferability: CSU]

NANO 56 PRINCIPLES OF MEMS, NEMS & SENSORS 5 Units

Advisory: NANO 51, 52, and 54; knowledge of semiconductor devices and processing is very beneficial. 5 hours lecture.

Introduction to the underlying principles and applications of micro and nano machined sensors and actuators, focusing on the use of fabrication technology for their realization. Basic mechanisms of transduction and the relative merits of different technologies. The basic principles for sensing displacement, force, pressure, acceleration, temperature, gases, and other physical parameters. Industry applications, design challenges, and manufacturing issues. Emerging micro and nano machining techniques and directions for future research. [Transferability: CSU]

**NANO 57 INTRODUCTION TO MICRO & NANO FABRICATION TECHNIQUES 5 Units**

**Advisory:** ENGR 76 or NANO 51; NANO 52 or equivalent; NANO 54, 55 and 56.  
**5 hours lecture.**

Introduction to the underlying principles, techniques, and applications of fabrication technology from the top down and bottom up perspective. For students interested in the physical bases and practical methods of micro and nanoscale fabrication technology or the impact of technology on device design. Topics: the fundamental principles and methods of semiconductor/ IC fabrication processes, crystal growth, oxidation, doping, etching, deposition, current lithography techniques, next generation lithography techniques, molecular manufacturing, DNA templating, protein assembly, packaging, back-end processing, quality control and yield analysis. [Transferability: CSU]

**NANO 58 MICRO & NANO FABRICATION TECHNIQUES LABORATORY 5 Units**

**Advisory:** NANO 51, 52, 53, 54, 55, 56 and 57.  
**5 hours lecture.**

This course involves hands on practical laboratory fabrication experience, process simulation using SUPREM or ATHENA, and testing of a simple fabricated device. Emphasis is on the practical aspects of fabrication, such as safety, silicon wafer cleaning, lithography, etching, oxidation, diffusion, ion implantation, deposition, and wafer testing. Process simulators (SUPREM or ATHENA) are used to illustrate concepts, provide insight to the lab experience, and compare actual results to expected results. Class size will be limited and divided into groups. In addition to class lectures, each group will meet once a week for a minimum of a 4-hour guided lab session. Each group will be guided by an instructor or teaching assistant. The laboratory guide will give a demonstration of the fabrication equipment and the process, and then individuals will be able to participate in processing under his or her supervision. [Transferability: CSU]

**NANO 59 NANOBIO TECHNOLOGY SCIENCES 5 Units**

**Advisory:** NANO 51 and 52; BTEC 52A; knowledge of molecular biology is essential; organic chemistry strongly recommended.  
**5 hours lecture.**

Examines the convergence of nanotechnology and biotechnology. Investigates biology as a small nanotechnology system, structural and functional principles in bionanotechnology and biomolecular design. Emphasis on self-assembly of organic and inorganic nanostructures using proteins as molecular bionanomachines and DNA templating. Explores the use of artificial genomes and synthetic proteins in novel cellular systems. Basic knowledge of design and use of biosensors and BioMEMS, microarray technology (GeneChip<sup>®</sup>), nanopore DNA sequencing, and microfluidic devices. Special topics may include digital cells and insilico biology, biomaterials, and biomedical devices designed and engineered using micro and nanotechnology. [Transferability: CSU]

**NANO 60 INTRODUCTION TO CLEAN TECHNOLOGY 5 Units**

**Advisory:** NANO 51; Knowledge of materials science, energy systems, and electricity.  
**5 hours lecture.**

Introduction to the field of clean technology, known as cleantech, intended for a multidisciplinary audience with a variety of backgrounds and interests. Emphasizes technologies and applications in engineering and materials, physics, chemistry, and related fields in nanoscience especially related to environmental remediation, and new engineering approaches to fuel cells, motors, batteries, and insulation, among other aspects of energy conservation. Introduces principles and theory relevant to solar energy using silicon and other thin film and nanoscale approaches. Discusses current and future trends in global energy demand and production, emphasizing the urgent need for both increased capacity and zero emission technology. [Transferability: CSU]

**NANO 61 MICRO & NANO FABRICATION TECHNIQUES CAPSTONE 5 Units**

**Prerequisite:** Satisfactory completion of NANO 51, 52, 53 and at least one course from Nano 54–60; consent of supervisory faculty.  
**5 hours lecture.**

Capstone course requiring research to be undertaken by students during their tenure in the Nanoscience program, or a properly documented experiential learning outcome. Research can be conducted through any college or university, but must include a course number and evaluation by properly credentialed faculty. A range of interdisciplinary projects will be accepted by contributing schools, including departments of Chemistry, Biochemistry, Biology, Biotechnology, Physics, Engineering, and Materials Science, enabling students to carry out experimental investigations in any applied area of nanotechnology. Work will be accompanied by a 15 to 25-page research document, formatted consistently with scholarly publications, including necessary citations. Internships should include a description of research goals and objectives, learning outcomes, and wherever possible, include entry into an electronic portfolio. Internships from NASA, SRI, and other universities are applicable for students to pursue. [Transferability: CSU]

**NON-CREDIT: BASIC SKILLS**

**Non-Credit (650) 949-6950**

**NCBS 400 LANGUAGE & LIFE SKILLS LITERACY 0 Units**

**Non-degree applicable non-credit course.**  
**Unlimited repeatability.**  
**72 hours total.**

Provides elementary and secondary level instruction and a self-paced lab experience for students working to improve communication, pronunciation, reading and speaking. Students work with instructor and computer based language program, Rosetta Stone, to improve English language skills. Assists students in preparation for credit level ESL courses.

**NCBS 401A MATHEMATICAL FOUNDATIONS FOR COLLEGE PART I 0 Units**

**Formerly: MATH 300**  
**Non-degree applicable non-credit course.**  
**Unlimited repeatability.**  
**20 hours total.**

This is part one of a bridge program that focuses on the development of quantitative thinking skills within the context of the culture of the college classroom, assessment skills without a calculator, exploration of resources offered by the community college, development of basic mathematical literacy skills.

**NCBS 401B MATHEMATICAL FOUNDATIONS FOR COLLEGE PART II 0 Units**

**Formerly: MATH 300**  
**Non-degree applicable non-credit course.**  
**Prerequisite:** NCBS 401A  
**Unlimited repeatability.**  
**40 hours total.**

This is part two of a bridge program that focuses on the development of quantitative thinking skills within the context of addition, subtraction, multiplication and division of whole numbers in preparation for basic skills mathematics course.

## NON-CREDIT: ENGLISH AS A SECOND LANGUAGE

Non-Credit (650) 949-6950

**NCEL 400 BRIDGE TO COLLEGE 0 Units**

Non-degree applicable non-credit course.

Advisory: Completion of the adult education course sequence or test score above 247 on the CASAS Level C Reading test.

Unlimited repeatability.

60 hours total.

This is a bridge to college course for non-native speakers of English that focuses on the development of English language skills within the context of the culture of the college classroom, classroom communication skills and exploration of life paths and the resources offered by the community college.

## NON-CREDIT: PARENTING EDUCATION

Non-Credit (650) 949-6950

**NCP 400 STRONG START FOR CHILDREN 0 Units**

Non-degree applicable non-credit course.

Unlimited repeatability.

8 hours total.

Introduces families and caregivers to stages of child development, best practices in parenting and links students to resources. Emphasis placed on child development, effective communication and discipline, and school readiness. This is the first course in a sequence of three (with NCP 401 and NCP 402) which leads to a Certificate of Completion in Parenting Skills and helps prepare students for credit classes in Child Development. May be offered bilingually.

**NCP 401 NURTURING HEALTHY CHOICES 0 Units**

Non-degree applicable non-credit course.

Unlimited repeatability.

8 hours total.

Introduces families and caregivers to healthy feeding practices, best practices in parenting, and links students to resources. Emphasis placed on family wellness, nutrition and healthy feeding dynamics as related to the child's developmental stages. Second course in a sequence of three (with NCP 400 and NCP 402) which leads to a Certificate of Completion in Parenting Skills and helps prepare students for credit classes in Child Development. May be offered bilingually.

**NCP 402 PARENT INVOLVEMENT: THE IMPORTANCE OF FAMILY IN THE LIVES OF CHILDREN 0 Units**

Non-degree applicable non-credit course.

Unlimited repeatability.

8 hours total.

Introduces families and caregivers to the importance of family in the lives of children, best practices in parenting and linking students to resources. Emphasis placed on parent involvement, accessing resources and navigating systems in multicultural communities. Third course in a sequence of three (with NCP 400 and NCP 401) which leads to a Certificate of Completion in Parenting Skills and helps prepare students for credit classes in child development. May be offered bilingually.

**NCP 403 BUILDING BRIDGES, OPENING DOORS, RAISING EMOTIONALLY HEALTHY CHILDREN 0 Units**

Non-degree applicable non-credit course.

Unlimited repeatability.

24 hours total.

A Parents as Partners Series targeted to families and their caregivers, providers and educators serving these families. Provides an understanding of the importance of meeting emotional needs in raising healthy children through parenting and child development, prenatal through adolescence. Completion of this class helps prepare students for credit classes in Child Development. May be offered bilingually.

## NON-CREDIT: SHORT-TERM VOCATIONAL

Non-Credit (650) 949-6950

**NCSV 400 GERIATRIC HOME AIDE BASICS 0 Units**

Non-degree applicable non-credit course.

Unlimited repeatability.

60 hours total.

Prepares students to care for ambulatory elderly clients in their own homes with focus on basic clientele needs and skills required to meet those needs. Intended for students pursuing a career as a geriatric home aide. Completion of both NCSV 400 and 401 leads to a noncredit certificate in Geriatric Home Aide.

**NCSV 401 GERIATRIC HOME AIDE - NUTRITION 0 Units**

Non-degree applicable non-credit course.

Unlimited repeatability.

44 hours total.

Prepares students to care for ambulatory elderly clients in their own homes. Focus on nutrition, including dietary needs of geriatric and AIDS patients, cultural foods, cooking, and kitchen sanitation. Intended for students pursuing a career as a geriatric home aide. Completion of both NCSV 400 and 401 leads to a noncredit certificate in Geriatric Home Aide.

## NON-CREDIT: WORK FORCE PREPARATION

Non-Credit (650) 949-6295

**NCWP 400 BLUEPRINT FOR WORKPLACE SUCCESS 0 Units**

Non-degree applicable non-credit course.

Unlimited repeatability

36 hours total.

Provides students with the necessary tools and techniques in order to identify and/or enhance the job-related abilities and qualities they possess, find a job, successfully apply and interview and keep the job by using effective workplace behaviors and communication skills. Completion of this course in addition to NCWP 401, 402 and 403 leads to a Job Readiness Certificate of Completion.

**NCWP 401 BLUEPRINT FOR CUSTOMER SERVICE 0 Units**

Non-degree applicable non-credit course.

Unlimited repeatability

18 hours total.

Provides students necessary tools in order to develop good customer service skills for the workplace focusing on getting to know customers, listening and problem solving. Completion of this course in addition to NCWP 400, 402 and 403 leads to a Job Readiness Certificate of Completion.

**NCWP 402 30 WAYS TO SHINE AS A NEW EMPLOYEE 0 Units**

Non-degree applicable non-credit course.

Unlimited repeatability

6 hours total.

Provides students with necessary tools in order to succeed in the workplace focusing on how to participate in a new work environment, to work with customers and new colleagues, how to dress and behave, and how to make a difference as a new employee. Completion of this course in addition to NCWP 400, 401 and 403 leads to a Job Readiness Certificate of Completion.

**NCWP 403 JOB CLUB 0 Units**

Non-degree applicable non-credit course.

Unlimited repeatability

7 hours total.

Provides students with the necessary tools and skills in order to succeed in the workplace. These skills include the process of looking for appropriate work, preparing for an interview, contacting employers, writing a resume and cover letter for a specific job, and participating in a job interview. Completion of this course in addition to NCWP 400, 401 and 402 leads to a Job Readiness Certificate of Completion.

## OCEANOGRAPHY

Program offered by De Anza College. (408) 864-5678; [www.deanza.edu](http://www.deanza.edu)

## PERFORMING ARTS

### Fine Arts & Communication

(650) 949-7479  
[www.foothill.edu/fa/](http://www.foothill.edu/fa/)

P A 11	THEATRICAL REHEARSAL	2 Units
P A 11X	& PERFORMANCE	4 Units
P A 11Y		6 Units
P A 11Z		8 Units

**Advisory:** Not open to students with credit in DRAM 49 or THTR 49. Any combination of P A 11–11Z may be taken 6 times for credit, however, no single course may be taken more than 6 times for credit.

3 hours lecture-laboratory, 2 hours laboratory for 2 units of credit. Supervised participation in scheduled theatrical productions, as cast or crew. Enrollment in each course is for the duration of the production. [Transferability: UC/CSU]

P A 21	MUSIC REHEARSAL & PERFORMANCE	2 Units
P A 21X		4 Units
P A 21Y		6 Units
P A 21Z		8 Units

**Advisory:** Pass/No Pass

Any combination of P A 21–21Z may be taken 6 times for credit, however, no single course may be taken more than 6 times for credit. 3 hours lecture-laboratory, 2 hours laboratory for 2 units of credit. Supervised participation in public performance in a music department ensemble. Enrollment is for the duration of one particular performance or concert tour. [Transferability: UC/CSU]

P A 111	PERFORMANCE PRACTICES	2 Units
P A 111X	IN THEATRE	4 Units
P A 111Y		8 Units
P A 111Z		16 Units

**Prerequisite:** Enrollment subject to audition.

**Advisory:** Pass/No Pass.

Any combination of P A 111–111Z may be taken 6 times for credit, however, no single course may be taken more than 6 times for credit. 8 hours laboratory for 2 units of credit.

Study, rehearsal, and performance of theatre performance pieces. Designed as a performance course for actors and theatre technicians wishing to explore the vast theatre repertoire more fully and with other performance artists. Repertoire may include works from Greek to contemporary, non-musical and musical theatre, and non-western theatre. Performances both on and off campus. Attendance at all performances required.

P A 121	PERFORMANCE PRACTICES IN	2 Units
P A 121X	VOCAL MUSIC	4 Units
P A 121Y		8 Units
P A 121Z		16 Units

**Prerequisite:** Enrollment subject to audition.

**Advisory:** Pass/No Pass.

Any combination of P A 121–121Z may be taken 6 times for credit, however, no single course may be taken more than 6 times for credit. 8 hours laboratory for 2 units of credit.

Study, rehearsal, and performance of vocal/choral repertoire. Designed as an advanced performance course for ensemble singers wishing to explore the vast choral repertoire more fully with other performance artists. Repertoire includes music from medieval to contemporary, and non-western music. Concert performances both on and off campus. Attendance at all performances required.

P A 131	PERFORMANCE PRACTICES IN	2 Units
P A 131X	INSTRUMENTAL MUSIC	4 Units
P A 131Y		8 Units
P A 131Z		16 Units

**Prerequisite:** Enrollment subject to audition.

**Advisory:** Pass/No Pass.

Any combination of P A 131–131Z may be taken 6 times for credit, however, no single course may be taken more than 6 times for credit. 8 hours laboratory for 2 units of credit.

Study, rehearsal, and performance of instrumental performance pieces for varied ensembles. Designed as a performance course for players of string, wind, and percussion instruments wishing to explore the vast instrumental repertoire more fully with other performance artists, including music from renaissance to contemporary, and non-western music. Concert performances both on and off campus. Attendance at all performances required.

P A 141	PERFORMING ARTS COLLEGIUM	2 Units
P A 141X		4 Units
P A 141Y		8 Units
P A 141Z		16 Units

**Prerequisite:** Enrollment subject to audition.

**Advisory:** Pass/No Pass.

Any combination of P A 141–141Z may be taken 6 times for credit, however, no single course may be taken more than 6 times for credit. 8 hours laboratory for 2 units of credit.

An advanced laboratory course involving approved student performance, or performance support in music, theatre, or dance, including theatre technicians, and sound and video recording arts. Performances or productions for community musical, theatre or dance events may be planned and executed in this class. Includes required public performances. May be taken 6 times for credit.

P A 150	PERFORMING ARTS LABORATORY	.5 Unit
P A 150X		1 Unit
P A 150Y		2 Units
P A 150Z		3 Units

**Prerequisite:** Enrollment subject to audition.

**Advisory:** Pass/No Pass.

Any combination of P A 150–150Z may be taken 6 times for credit, however, no single course may be taken more than 6 times for credit. 1.5 hours laboratory for each .5 unit of credit.

Supervised activities in performing arts, related to skills and materials of other performing arts courses in which students are currently enrolled.

P A 161	DIRECTED STUDIES IN THE	.5 Unit
P A 161X	PERFORMING ARTS	1 Unit
P A 161Y		2 Units
P A 161Z		3 Units

**Prerequisite:** Enrollment subject to audition.

**Advisory:** Pass/No Pass.

Any combination of P A 161–161Z may be taken 6 times for credit, however, no single course may be taken more than 6 times for credit. 1.5 hours laboratory for each .5 unit of credit.

A directed study laboratory course involving approved student performance, or performance support in music, theatre, or dance, including theatre technicians, and sound and video recording arts. Performances or productions for community musical, theatre or dance events may be planned and executed in this class. Includes required public performances.

## PHARMACY TECHNOLOGY

Biological & Health Sciences (650) 949-6955  
www.foothill.edu/bio/programs/pharmtec/

### PHT 50 ORIENTATION TO PHARMACY TECHNOLOGY 3 Units

Prerequisite: Admission to Pharmacy Technology Program.  
3 hours lecture.

An orientation to the role and working environment of the pharmacy technician, in both inpatient and outpatient settings. An introduction to the legal responsibilities and technical activities of the pharmacy technician. [Transferability: CSU]

### PHT 51 BASIC PHARMACEUTICS 4 Units

Prerequisite: Admission to the Pharmacy Technology Program.  
4 hours lecture.

An introduction to the pharmacological principles as they are related to and support an understanding of rational drug usage. An understanding of the profound influence of drug laws, standards and regulations. [Transferability: CSU]

### PHT 52A INPATIENT DISPENSING 3 Units

Prerequisite: Admission to Pharmacy Technology Program.  
2 hours lecture, 3 hours laboratory.

A general study of the usual technician functions associated with an institutional drug distribution system. Practical experience in the manipulative and record-keeping functions of extemporaneous preparations in an inpatient pharmacy. [Transferability: CSU]

### PHT 52B ASEPTIC TECHNIQUE & IV PREPARATION 4 Units

Prerequisite: PHT 52A.  
3 hours lecture, 3 hours laboratory.

The compounding of sterile products according to the appropriate technique. An introduction to the concepts of sterility and incompatibility. The use of applicable quality assurance processes and performance of work in accordance with the laws, regulations, and standards which govern the preparation of sterile products, with special emphasis on the preparation of parenteral chemotherapy with strict adherence to all precautionary standards. [Transferability: CSU]

### PHT 53 AMBULATORY PHARMACY PRACTICE 4 Units

Prerequisite: Admission to the Pharmacy Technology Program.  
3 hours lecture, 3 hours laboratory

A review of the skills needed to operate effectively in an ambulatory setting, with emphasis on receiving and controlling inventory, processing prescriptions using computerized prescription processing, and medical insurance billing. Customer relations. [Transferability: CSU]

### PHT 54A DOSAGE CALCULATIONS A 3 Units

Prerequisite: Admission to Pharmacy Technology Program.  
3 hours lecture.

An introduction to the use of pharmaceutical measuring systems with emphasis on the metric system and intersystem conversions. [Transferability: CSU]

### PHT 54B DOSAGE CALCULATIONS B 3 Units

Prerequisite: PHT 54A.  
3 hours lecture.

Calculation of the correct oral and parenteral dosages of drugs using information from prescriptions or medications orders. Accurate determination of the correct amount of ingredients for the compounding of pharmaceutical products from a prescription or medications order. [Transferability: CSU]

### PHT 55A PHARMACOLOGY A 6 Units

Prerequisite: PHT 50.  
6 hours lecture.

A study of the basic anatomy, physiology, and pharmacology of the nervous system, the senses, the endocrine system, the digestive system, the urinary system, and the reproductive system. [Transferability: CSU]

### PHT 55B PHARMACOLOGY B 6 Units

Prerequisite: PHT 55A.  
6 hours lecture.

A study of the basic anatomy, physiology, and pharmacology of body tissues and membranes, the integumentary system, the skeletal system, the muscular system, the cardiovascular system, the blood, the lymphatic system and immunization, the respiratory system. A review of body temperature. A discussion on metabolism with emphasis on nutrition. [Transferability: CSU]

### PHT 56A DISPENSING & COMPOUNDING A 4 Units

Prerequisite: PHT 50.  
2 hours lecture, 6 hours laboratory.

General preparation of nonsterile solid and liquid pharmaceutical dosage forms for oral and topical use. Practical experience in the manipulative and record-keeping functions associated with the compounding and dispensing of prescriptions for ambulatory patients. Study of dosage forms, advantages and disadvantages, uses, storage and packaging of pharmaceutical products. [Transferability: CSU]

### PHT 56B DISPENSING & COMPOUNDING B 3 Units

Prerequisite: PHT 56A.  
2 hours lecture, 3 hours laboratory.

General preparation of topical, transdermal, rectal, ophthalmic, and otic pharmaceutical dosage forms. Practical experience in the manipulative and record keeping functions associated with the compounding and dispensing of prescriptions. Study of dosage forms, advantages and disadvantages, uses, storage and packaging of pharmaceutical products. [Transferability: CSU]

### PHT 60A RETAIL CLINICAL I 1.5 Units

Prerequisite: Admission to the Pharmacy Technology Program.  
8 hours clinical experience

The practice, in an outpatient environment, of skills developed in didactic and laboratory training. Activities will be performed by the student and evaluated by a preceptor. [Transferability: CSU]

### PHT 60B RETAIL CLINICAL II 1.5 Units

Prerequisite: PHT 60A.  
8 hours clinical experience.

The practice, in the outpatient environment, of skills developed in didactic and laboratory training. Activities will be performed by the student and evaluated by a preceptor. [Transferability: CSU]

### PHT 61 HOME HEALTHCARE SUPPLIES 3 Units

Prerequisite: PHT 50.  
2 hours lecture, 3 hours laboratory.

Study of diseases and conditions that require ongoing health maintenance by the patient, and the tests and devices used for the control of these diseases and conditions. Single-use test kits for routine health screening. An evaluation of alternative forms of health care. A study of the vitamins and minerals commonly used in pharmaceutical preparations. [Transferability: CSU]

### PHT 62A HOSPITAL CLINICAL I 1.5 Units

Prerequisite: Admission to Pharmacy Technology Program.  
8 hours clinical experience

The practice, in both inpatient and outpatient environments, of skills developed in didactic and laboratory training. Activities will be performed by the student and evaluated by a preceptor. [Transferability: CSU]

### PHT 62B HOSPITAL CLINICAL II 1.5 Units

Prerequisite: Admission to Pharmacy Technician Program  
8 hours clinical experience

The practice, in an inpatient environment, of skills developed in didactic and laboratory training of preparation of sterile products. Activities will be performed by the student and evaluated by a preceptor. [Transferability: CSU]

**PHT 200L PHARMACY TECHNICIANS AS A CAREER** 1 Unit  
 Non-degree applicable credit course.  
 1.5 hours lecture-laboratory.  
 Introduction to the pharmaceutical sciences and the functions of a pharmacy technician in health care. Role of the pharmacy technician, areas of specialization in the field, technical standards, state registration requirements and employment opportunities.

## PHILOSOPHY

**Business & Social Sciences** (650) 949-7322  
[www.foothill.edu/bss/](http://www.foothill.edu/bss/)

**PHIL 1 CRITICAL THINKING & WRITING** 5 Units  
 Prerequisite: ENGL 1A.  
 5 hours lecture.  
 Develops understanding of informal logic and practical reasoning skills necessary for academic success, including tools needed to analyze information from a variety of sources such as academic essays, philosophic literature, news media and advertising. Focus on skills of argumentation including, but not limited to, elements of an argument, deductive and inductive forms of argumentation, the evaluation of arguments and the recognition of a variety of fallacies. Skills developed through a series of written assignments of increasing scope and difficulty culminating in a sophisticated argumentative essay. [Foothill GE: Communication & Analytical Thinking; Transferability: UC/CSU]

**PHIL 2 INTRODUCTION TO SOCIAL & POLITICAL PHILOSOPHY** 4 Units  
 4 hours lecture.  
 Social and political philosophies of classical, modern and contemporary thinkers. [Foothill GE: Humanities; Transferability: UC/CSU]

**PHIL 4 INTRODUCTION TO PHILOSOPHY** 4 Units  
 4 hours lecture.  
 Introductory survey of basic principles and concerns of philosophy and of philosophical questions. Examines selected concepts concerned with the meaning and nature of reality, knowledge, morals, religion, aesthetics and issues of social and political concern. [Foothill GE: Humanities; Transferability: UC/CSU]

**PHIL 7 INTRODUCTION TO SYMBOLIC LOGIC** 5 Units  
 5 hours lecture.  
 Use of logic as a tool for analyzing arguments. Development of formal proof techniques including quantification theory. [Foothill GE: Communication & Analytical Thinking; Transferability: UC/CSU]

**PHIL 8 ETHICS** 5 Units  
 5 hours lecture.  
 Standards of right and wrong. Concepts of good, duty, egoism, altruism, freedom, personal and social responsibility. Responsible decision making. Situational ethics. [Foothill GE: Communication & Analytical Thinking, Human; Transferability: UC/CSU]

**PHIL 11 INTRODUCTION TO THE PHILOSOPHY OF ART** 4 Units  
 4 hours lecture.  
 Analysis of central problems and challenges in aesthetics. Art and beauty, possibility of objectivity in criticism, modern and traditional definitions of a work of art. Considers truth and meaning in fine arts and literature, natural beauty and its relationship to excellence in music and architecture. [Foothill GE: Humanities; Transferability: UC/CSU]

**PHIL 20A HISTORY OF WESTERN PHILOSOPHY FROM SOCRATES THROUGH ST. THOMAS** 4 Units  
 4 hours lecture.  
 Examination of Western philosophy with an emphasis on Greek philosophy from Thales through Aristotle and selected medieval philosophers from Augustine to St. Thomas Aquinas. [Foothill GE: Humanities; Transferability: UC/CSU]

**PHIL 20B HISTORY OF WESTERN PHILOSOPHY FROM THE RENAISSANCE THROUGH KANT** 4 Units  
 4 hours lecture.  
 Examination of Western philosophy in the early modern period with an emphasis on major philosophers such as Descartes, Hume and Kant. [Transferability: UC/CSU]

**PHIL 20C CONTEMPORARY PHILOSOPHY: 19TH & 20TH CENTURY THOUGHT** 4 Units  
 Advisory: Eligibility for ENGL 1A or ESLL 26.  
 4 hours lecture  
 Survey of the history of western philosophy during the 19<sup>th</sup> and 20<sup>th</sup> centuries. Examination of major philosophic developments, theories and movements. Special attention to the influence of 19<sup>th</sup> and 20<sup>th</sup> century thought on our contemporary world view. [Transferability: UC/CSU]

**PHIL 22 INTRODUCTION TO WORLD RELIGIONS: THE SEARCH FOR SPIRITUAL MEANING** 4 Units  
 4 hours lecture.  
 Examines the ability of religion to satisfy the spiritual needs of its followers. Focus on individual confrontation of dynamic social forces at work globally in the 1990's. Multicultural views as applied to world religions. [Foothill GE: United States Cultures & Communities, Human; Transferability: UC/CSU]

**PHIL 24 COMPARATIVE WORLD RELIGIONS: EAST** 4 Units  
 4 hours lecture.  
 Origin, history and significant ideas of the world's major Eastern religions. Primitive religion, Hinduism, Buddhism, Confucianism, Taoism, and Shintoism as seen through the perspective of contemporary American expressions and practice. [Foothill GE: Humanities; Transferability: UC/CSU]

**PHIL 25 COMPARATIVE WORLD RELIGIONS: WEST** 4 Units  
 4 hours lecture.  
 Origin, history and significant ideas of the world's major Western religions as seen through the practice and expression of contemporary American diversity. Comparisons of fundamental insights, ideals and contributions towards human moral heritage of primitive religion, Zoroastrianism, Judaism, Christianity, and Islam. [Foothill GE: Humanities; Transferability: UC/CSU]

**PHIL 34H HONORS INSTITUTE SEMINAR IN PHILOSOPHY** 1 Unit  
 Formerly: PHIL 34  
 Prerequisite: Honors Institute participant.  
 Advisory: Not open to students with credit in PHIL 34.  
 1 hour lecture.  
 A seminar in directed readings, discussions and projects in philosophy. Specific topics to be determined by the instructor. [Transferability: CSU; UC credit may be granted after transfer and upon portfolio review.]

**PHIL 35 DEPARTMENT HONORS PROJECTS IN PHILOSOPHY** 1 Unit  
 May be taken 6 times for credit.  
 1 hour lecture.  
 Seminar in readings, research, critical techniques and practice. Specific topics vary. [Transferability: CSU]

**PHIL 36 SPECIAL PROJECTS IN PHILOSOPHY 1 Unit**  
**PHIL 36X 2 Units**  
**PHIL 36Y 3 Units**  
**PHIL 36Z 4 Units**

Any combination of PHIL 36–36Z may be taken 6 times for credit, however, no single course may be taken more than 6 times for credit. Advanced readings research, and/or project in philosophy. Specific topics determined in consultation with instructor. [Transferability: CSU]

**PHIL 50 INTRODUCTION TO CRITICAL THINKING 4 Units**

**Advisory:** Eligibility for ENGL 1A or ESLL 26.  
**4 hours lecture.**

Develops understanding of informal logic and practical reasoning skills necessary for academic success, including tools needed to analyze information from a variety of sources such as academic essays, philosophic literature, news media and advertising. Focus on skills of argumentation including, but not limited to, elements of an argument, deductive and inductive forms of argumentation, the evaluation of arguments and the recognition of a variety of fallacies. Skills developed through written analysis of a variety of sources including but not limited to academic articles, news media, televised debates and advertisements. [Foothill GE: Communication & Analytical Thinking; Transferability: UC/CSU]

## PHOTOGRAPHY

Fine Arts & Communication

(650) 949-7318

[www.foothill.edu/fa/photo](http://www.foothill.edu/fa/photo)

**PHOT 1 BLACK & WHITE PHOTOGRAPHY I 4 Units**  
**2 hours lecture, 3 hours lecture-laboratory, 2 hours laboratory.**

Fundamentals of black and white still photography. Introduction to the historical development of the medium and the role that photography has played in shaping social issues and its effect on culture. Practical investigation of photography's potential to contribute to personal visual expression. Exposure to multiple perspectives on photography as practiced and contributed by diverse cultures. Topics cover photographic seeing, camera operation, use of aperture and shutter settings for aesthetic and sensitometric control, film processing, printing, and use of natural light for personal expression and communication. Introduction to electronic imaging processes. [Foothill GE: Humanities; Transferability: UC/CSU]

**PHOT 2 BLACK & WHITE PHOTOGRAPHY II 4 Units**

**Prerequisite:** PHOT 1 or equivalent.

**May be taken 2 times for credit.**

**2 hours lecture, 3 hours lecture-laboratory, 1.5 hours laboratory.** Emphasis on control of available light through use of tripods and push-processing; use of electronic flash and studio lights; attributes of various films and appropriate chemistry for each; graded papers; larger format cameras, introduction to sensitometry; specialized developing and printing techniques, enhancing personal photographic expression; digital manipulation of the photographic image. [Transferability: UC/CSU]

**PHOT 5 INTRODUCTION TO PHOTOGRAPHY 4 Units**

**3 hours lecture, 2 hours lecture-laboratory.**

A survey of the historical and practical aspects of photography as an art form. Students will be introduced to the use of light, composition and communication through images. Significant photographers from a diversity of backgrounds will inspire students in the practice of photography and developing an appreciation of the varied uses of the photographic image in our culture. [Foothill GE: Humanities; Transferability: UC/CSU]

**PHOT 8 PHOTOGRAPHY OF MULTICULTURAL AMERICA 4 Units**

**Advisory:** Not open to students with credit in PHOT 8H.

**4 hours lecture, 2 hours laboratory.**

Examination of photography's role in shaping ideas about race, class, gender, sexuality and national identity in America. Critical analysis of images from a wide range of genres including: commercial photography, portraiture, social documentary, photojournalism, ethnographic and

scientific photography, erotica, and fine-art photography are discussed within their historical and social context. [Foothill GE: United States Cultures & Communities, Human; Transferability: UC/CSU]

**PHOT 8H HONORS PHOTOGRAPHY OF MULTICULTURAL AMERICA 4 Units**

**Prerequisite:** Honors Institute participant.

**Advisory:** Not open to students with credit in PHOT 8.

**4 hours lecture, 2 hours laboratory.**

Examination of photography's role in shaping ideas about race, class, gender, sexuality and national identity in America. Critical analysis of images from a wide range of genres including: commercial photography, portraiture, social documentary, photojournalism, ethnographic and scientific photography, erotica, and fine-art photography are discussed within their historical and social context. The honors course offers an enriched and challenging experience for the more talented student, including deeper content, more rigorous grading, and more demanding and creative assignments requiring application of higher-level thinking, writing, and communication skills. [Foothill GE: United States Cultures & Communities, Human; Transferability: UC/CSU]

**PHOT 10 HISTORY OF PHOTOGRAPHY 4 Units**

**Advisory:** PHOT 1 or equivalent; not open to students with credit in PHOT 10H.

**3 hours lecture, 3 hours laboratory.**

The history of still photography from the earliest investigations of the camera obscura to late 20<sup>th</sup> Century electronic imaging. Emphasis on the role of photographs as a social and cultural force and on our artistic heritage of camera work. [Foothill GE: Humanities; Transferability: UC/CSU]

**PHOT 10H HONORS HISTORY OF PHOTOGRAPHY 4 Units**

**Prerequisite:** Honors Institute participant.

**Advisory:** PHOT 1 or equivalent; not open to students with credit in PHOT 10.

**3 hours lecture, 3 hours laboratory.**

The history of still photography from the earliest investigations of the camera obscura to late 20<sup>th</sup> Century electronic imaging. Emphasis on the role of photographs as a social and cultural force and on our artistic heritage of camera work. The honors course offers an enriched and challenging experience for the more talented student, including deeper content, more rigorous grading, and more demanding and creative assignments requiring application of higher-level thinking, writing, and communication skills. [Foothill GE: Humanities; Transferability: UC/CSU]

**PHOT 11 CONTEMPORARY ISSUES IN PHOTOGRAPHY 4 Units**

**Formerly:** PHOT 59

**Advisory:** Not open to students with credit in PHOT 11H or 59.

**3 hours lecture, 3 hours laboratory.**

Survey of contemporary issues in photography. Critical theory and other issues surrounding contemporary photographic practices are explored through the style and content of work by selected contemporary photographers. Censorship, copyright, appropriation, and other current issues affecting the contemporary photographer are discussed. The interplay of traditional and digital photography and how it affects our concepts of truth, reality, society, and culture. [Foothill GE: Humanities; Transferability: UC/CSU]

**PHOT 11H HONORS CONTEMPORARY ISSUES IN PHOTOGRAPHY 4 Units**

**Prerequisite:** Honors Institute participant.

**Advisory:** Not open to students with credit in PHOT 11 or 59.

**3 hours lecture, 3 hours laboratory.**

Survey of contemporary issues in photography. Critical theory and other issues surrounding contemporary photographic practices are explored through the style and content of work by selected contemporary photographers. Censorship, copyright, appropriation, and other current issues affecting the contemporary photographer are discussed. The interplay of traditional and digital photography and how it affects our concepts of truth, reality, society, and culture. The honors course offers an enriched and challenging experience for the more talented student, including deeper content, more

rigorous grading, and more demanding and creative assignments requiring application of higher-level thinking, writing, and communication skills. [Transferability: CSU; UC approval is pending.]

**PHOT 13 EXPERIMENTAL PHOTOGRAPHY 4 Units**  
Advisory: PHOT 2.

May be taken 3 times for credit.

2 hours lecture, 3 hours lecture-laboratory, 1.5 hour laboratory.

Exploration of experimental approaches to creative photography, using silver and nonsilver processes. Introduction to digital manipulation of images. [Transferability: UC/CSU]

**PHOT 50 BLACK & WHITE PHOTOGRAPHY III 4 Units**  
Prerequisite: PHOT 2.

May be taken 3 times for credit.

2 hours lecture, 3 hours lecture-laboratory, 1.5 hour laboratory.

Exploration of photographic seeing through the use of advanced processing and printing techniques; introduction to the Zone System and film calibration; creating special effects; high contrast and infrared films; integration of aesthetics and technique, emphasis on development of a personal style. [Transferability: CSU; UC approval is pending.]

**PHOT 51 ZONE SYSTEM PHOTOGRAPHY 4 Units**  
Prerequisite: PHOT 2.

May be taken 3 times for credit.

2 hours lecture, 3 hours lecture-laboratory, 1.5 hours laboratory.

An exploration of the Zone System through use of special processing and fine printing techniques. A study of the integration of aesthetics, film calibration, development of film, printing, and techniques associated with the Zone System. Acquisition of fine printing and archival processing techniques suitable for producing exhibit quality presentations. Application of understanding of Zone System to both digital and color materials. Appreciation of contributions by photographers of diverse backgrounds. [Transferability: CSU]

**PHOT 55 SPECIAL PROJECTS IN PHOTOGRAPHY 2 Units**

Prerequisite: PHOT 2 or 65B.

May be taken 6 times for credit.

1 hour lecture, 3 hours laboratory.

Specific topics in creative, technical or applied photography must be determined in consultation with instructor. A limited area is explored in depth. [Transferability: CSU]

**PHOT 57A PHOTOGRAPHIC PORTFOLIO DEVELOPMENT 4 Units**

Prerequisite: PHOT 1, 2, 50 or PHOT 5, 65A, 65B or instructor's permission.

Advisory: PHOT 10 or 11.

May be taken 3 times for credit.

2 hours lecture, 3 hours lecture-laboratory, 1.5 hours laboratory.

Organization and assembly of a photographic portfolio from concept to final presentation. Intensive advanced class requiring the student to build a group of photographic works that function both individually and as a group. Concerns will include how to make images that communicate clearly, how to blend technical execution with meaning and how to give and receive feedback to further a photographic project and that of fellow photographers. [Transferability: CSU]

**PHOT 57B PROFESSIONAL PRACTICES IN PHOTOGRAPHY 4 Units**

Prerequisite: PHOT 1, 2, 50 or PHOT 5, 65A, 65B and PHOT 57A, or instructor's permission.

Advisory: PHOT 10 or 11.

May be taken 3 times for credit.

2 hours lecture, 3 hours lecture-laboratory, 1.5 hours laboratory.

Organization of photographic work from prior classes and projects to meet individual goals including transfer, exhibition and employment. Development of professional materials such as resume, Web site and business cards as well as finalization of a photographic portfolio to meet the qualifications for an A.A. Degree in Photography. Develop support materials for applications and exhibitions. Student must share work with photography community through exhibition or other methods of display. [Transferability: CSU]

**PHOT 63 PHOTOJOURNALISM 4 Units**

Prerequisite: PHOT 2.

May be taken 4 times for credit.

2 hours lecture, 3 hours lecture-laboratory, 1.5 hours laboratory.

Instruction in basic skills needed for effective online and print photography for use in newspapers, magazines, web journals and blogs with emphasis on developing appropriate behavior and craft needed in meeting deadlines for photojournalistic publication. Assignments include news photographs, human interest and feature pictures, and the picture story. Special emphasis on print quality, picture editing, layout design, image content and captioning. Introduction to digital capture, preparation of files and transmittal of photographs, and video and sound recording techniques. [Transferability: CSU; UC approval is pending.]

**PHOT 65A DIGITAL PHOTOGRAPHY I 4 Units**

Advisory: PHOT 1, 5 or equivalent.

May be taken 3 times for credit.

2 hours lecture, 3 hours lecture-laboratory, 1.5 hours laboratory.

Introduction to the tools for expressive communication in digital photography using Adobe Photoshop and Adobe Photoshop Lightroom. Development of skills in image capture, enhancement, printing, and web publishing, for both fine art and commercial applications. [Transferability: CSU; UC approval is pending.]

**PHOT 65B DIGITAL PHOTOGRAPHY II 4 Units**

Advisory: PHOT 65A or equivalent experience.

May be taken 3 times for credit.

2 hours lecture, 3 hours lecture-laboratory, 1.5 hours laboratory.

Intermediate-level exploration with the tools for expressive communication in digital photography using Adobe Photoshop and Adobe Photoshop Lightroom. Development of skills in image capture, enhancement, printing, and web publishing, for both fine art and commercial applications. [Transferability: CSU; UC approval is pending.]

**PHOT 65C DIGITAL PHOTOGRAPHY III 4 Units**

Advisory: PHOT 65B or equivalent.

May be taken 3 times for credit.

2 hours lecture, 3 hours lecture-laboratory, 1.5 hours laboratory.

Advanced-level exploration with the tools for expressive communication in digital photography using Adobe Photoshop and Adobe Photoshop Lightroom. Development of skills in image capture, enhancement, printing, and web publishing, for both fine art and commercial applications. [Transferability: CSU; UC approval is pending.]

**PHOT 68A DARKROOM TOPICS IN PHOTOGRAPHY 1 Unit**

Advisory: PHOT 1 or 5.

May be taken 6 times for credit.

2 hours lecture-laboratory.

Investigation of a specific aspect or topic of photography through discussion and demonstration by the instructor(s). [Transferability: CSU]

**PHOT 68B DIGITAL TOPICS IN PHOTOGRAPHY 1 Unit**

Advisory: PHOT 1 or 5.

May be taken 6 times for credit.

2 hours lecture-laboratory.

Investigation of a specific aspect or topic of photography through discussion and demonstration by the instructor(s). [Transferability: CSU]

**PHOT 68C STUDIO LIGHTING TOPICS IN PHOTOGRAPHY 1 Unit**

Advisory: PHOT 1 or 5.

May be taken 6 times for credit.

2 hours lecture-laboratory.

Investigation of a specific aspect or topic of photography through discussion and demonstration by the instructor(s). [Transferability: CSU]

<b>PHOT 68D</b>	<b>EXPERIMENTAL TOPICS IN PHOTOGRAPHY</b>	<b>1 Unit</b>	<b>PHOT 78A</b>	<b>LANDSCAPE FIELD STUDY IN PHOTOGRAPHY</b>	<b>1 Unit</b>
<p>Advisory: PHOT 1 or 5. May be taken 6 times for credit. 2 hours lecture-laboratory. Investigation of a specific aspect or topic of photography through discussion and demonstration by the instructor(s). [Transferability: CSU]</p>			<p>Advisory: PHOT 1 or 5. May be taken 6 times for credit. 2 hours lecture-laboratory. Investigation of a specific aspect or topic of photography through discussion and demonstration by the instructor(s) in the field. [Transferability: CSU]</p>		
<b>PHOT 68E</b>	<b>LECTURE TOPICS IN PHOTOGRAPHY</b>	<b>1 Unit</b>	<b>PHOT 78B</b>	<b>SOCIAL CONCERNS FIELD STUDY IN PHOTOGRAPHY</b>	<b>1 Unit</b>
<p>Advisory: PHOT 1 or 5. May be taken 6 times for credit. 2 hours lecture-laboratory. Investigation of a specific aspect or topic of photography through discussion and demonstration by the instructor(s). [Transferability: CSU]</p>			<p>Advisory: PHOT 1 or 5. May be taken 6 times for credit. 2 hours lecture-laboratory. Investigation of a specific aspect or topic of photography through discussion and demonstration by the instructor(s) in the field. [Transferability: CSU]</p>		
<b>PHOT 68F</b>	<b>EXHIBITION TOPICS IN PHOTOGRAPHY</b>	<b>1 Unit</b>	<b>PHOT 78C</b>	<b>DOCUMENTARY FIELD STUDY IN PHOTOGRAPHY</b>	<b>1 Unit</b>
<p>Advisory: PHOT 1 or 5. May be taken 6 times for credit. 2 hours lecture-laboratory. Investigation of a specific aspect or topic of photography through discussion and demonstration by the instructor(s). [Transferability: CSU]</p>			<p><b>Formerly: PHOT 78</b> Advisory: PHOT 1 or 5. May be taken 6 times for credit. 2 hours lecture-laboratory. Investigation of a specific aspect or topic of photography through discussion and demonstration by the instructor(s) in the field. [Transferability: CSU]</p>		
<b>PHOT 70</b>	<b>INTRODUCTION TO COLOR PHOTOGRAPHY</b>	<b>4 Units</b>	<b>PHOT 78D</b>	<b>MUSEUM/GALLERY FIELD STUDY IN PHOTOGRAPHY</b>	<b>1 Unit</b>
<p>Prerequisite: PHOT 2. May be taken 3 times for credit. 2 hours lecture, 3 hours lecture-laboratory, 1.5 hours laboratory. Introduction to color transparencies, types of transparency films; contrast control and color balance; projection of color slides as a series and as multi-image presentations; making color enlargements from transparencies. Introduction to printing color negatives, including various controls on exposure, developing and printing. Theory and principles of three-color photography, including densitometry as related to evaluation of negatives and selection of proper filtration. [Transferability: UC/CSU]</p>			<p><b>Formerly: PHOT 78</b> Advisory: PHOT 1 or 5. May be taken 6 times for credit. 2 hours lecture-laboratory. Investigation of a specific aspect or topic of photography through discussion and demonstration by the instructor(s) in the field. [Transferability: CSU]</p>		
<b>PHOT 71</b>	<b>THE PHOTOGRAPHIC BOOK</b>	<b>4 Units</b>	<b>PHOT 78E</b>	<b>TECHNIQUES FIELD STUDY IN PHOTOGRAPHY</b>	<b>1 Unit</b>
<p>Prerequisite: PHOT 1 or 5 or 65A or equivalent experience. May be taken 3 times for credit. 2 hours lecture, 3 hours lecture-laboratory, 1.5 hours laboratory. Exploration of the book for the display and sharing of photographic imagery including the history of the photographic book and its uses in fine art, commercial and documentary photography. Use of appropriate technology for creation of photographic books including digital image editing, color correction, graphic design and typography. Investigation of sequencing and presentation of photographs in book format for communication. [Transferability: CSU]</p>			<p><b>Formerly: PHOT 78</b> Advisory: PHOT 1 or 5. May be taken 6 times for credit. 2 hours lecture-laboratory. Investigation of a specific aspect or topic of photography through discussion and demonstration by the instructor(s) in the field. [Transferability: CSU]</p>		
<b>PHOT 72</b>	<b>DIGITAL CAMERA TECHNIQUE</b>	<b>4 Units</b>	<b>PHOT 150</b>	<b>PHOTOGRAPHY</b>	<b>.5 Unit</b>
<p>Prerequisite: PHOT 5, 65A or equivalent experience. 2 hours lecture, 3 hours lecture-laboratory, 1.5 hours laboratory. Exploration of the digital camera in multiple formats. Understanding the current tools and develop skill in imagemaking in the digital realm. Issues unique to the digital process including workflow, archiving, image resolution as well as basic photographic concerns such as composition and visual communication will be explored. [Transferability: CSU]</p>			<b>PHOT 150X</b>	<b>PRODUCTION LABORATORY</b>	<b>1 Unit</b>
			<b>PHOT 150Y</b>		<b>2 Units</b>
			<b>PHOT 150Z</b>		<b>3 Units</b>
			<p>Corequisite: Concurrent enrollment in a photography course requiring laboratory access. Any combination of PHOT 150, 150X, 150Y or 150Z may be taken 6 times for credit, however, no single course may be taken more than 6 times for credit. 2 hours laboratory for each .5 unit of credit. Supervised use of photographic studio and darkroom equipment for projects assigned in still photography courses, including basic, intermediate, advanced, color, and special project courses. Hours to be arranged within scheduled availability of photography department open facilities.</p>		
<b>PHOT 74</b>	<b>STUDIO PHOTOGRAPHY TECHNIQUES</b>	<b>4 Units</b>			
<p>Prerequisite: PHOT 2. May be taken 3 times for credit. 2 hours lecture, 3 hours lecture-laboratory, 1.5 hours laboratory. Introduction and overview to large format (view camera), digital medium format cameras, and studio lighting; exploration of photographic practices in a studio environment; emphasis on developing effective skills and techniques necessary to begin a career in studio photography. [Transferability: CSU]</p>					

**PHOT 180 PHOTOGRAPHIC PRACTICES .5 Unit**  
**PHOT 180X 1 Unit**  
**PHOT 180Y 2 Units**  
**PHOT 180Z 3 Units**  
**Corequisite:** Concurrent enrollment in a photography course requiring laboratory access or by instructor referral.  
**Any combination of PHOT 180–180Z may be taken 6 times for credit, however, no single course may be taken more than 6 times for credit. 2 hours laboratory for each .5 unit of credit.**  
 Supervised use of photographic studio and darkroom equipment for projects assigned in still photography courses, including basic, intermediate, advanced, color, digital, and special project courses. Hours to be arranged within scheduled availability of photography department open facilities.

**PHOT 190 DIRECTED STUDY .5 Unit**  
**PHOT 190X 1 Unit**  
**PHOT 190Y 2 Units**  
**PHOT 190Z 3 Units**  
**Prerequisite:** PHOT 1 or 5 or equivalent.  
**Any combination of PHOT 190–190Z may be taken 6 times for credit, however, no single course may be taken more than 6 times for credit. .5 hour lecture for each .5 unit of credit.**  
 Directed study for students who desire or require additional help in attaining comprehension and competency in learning skills in a photographic area.

## PHYSICAL EDUCATION

Physical Education (650) 949-7742  
[www.foothill.edu/ath/](http://www.foothill.edu/ath/)

**PHED 1 INTRODUCTION TO PHYSICAL EDUCATION AS A PROFESSION 4 Units**  
**Formerly: H P 1**  
**Advisory:** Not open to students with credit in H P 1.  
**4 hours lecture.**

Introduction to the general nature of the physical education profession and its related fields of health, recreation and athletics. [Transferability: UC/CSU]

**PHED 2 SPORT IN SOCIETY 4 Units**  
**Formerly: H P 1B**  
**Advisory:** Not open to students with credit in H P 1B.  
**4 hours lecture.**

This course looks at current and past sports related cultural and historical issues and practices to study the role of sport in society. [Transferability: UC/CSU]

**PHED 3 THEORIES & TECHNIQUES OF COACHING SPORTS 4 Units**  
**Formerly: H P 37**  
**Advisory:** Not open to students with credit in H P 37.  
**4 hours lecture.**

Instruction in the theories and techniques of coaching sport and its variables which contribute to team performance and success. This course addresses developing a coaching philosophy, sport psychology, sport pedagogy, sport physiology and sport management. [Transferability: UC/CSU]

**PHED 4 CONCEPTS OF PHYSICAL FITNESS & WELLNESS 4 Units**  
**Formerly: H P 48**  
**Advisory:** Not open to students with credit in H P 48.  
**4 hours lecture.**

Study of physical fitness, training principles, appropriate exercise and health practices with application to lifelong health and exercise habits. [Foothill GE: Lifelong Understanding; Transferability: UC/CSU]

**PHED 5 FUNDAMENTALS OF HATHA YOGA 4 Units**  
**Formerly: H P 44H**  
**Advisory:** Not open to students with credit in H P 44H.  
**4 hours lecture.**

Fundamentals of Hatha Yoga is an in depth survey and scientific analysis of the techniques and principles of various styles of Hatha Yoga. Ideal for instructors preparing for certification, and students wishing to deepen their personal practice. [Foothill GE: Lifelong Understanding; Transferability: UC/CSU]

**PHED 6 PERFORMANCE ENHANCING SUBSTANCES IN SPORT & EXERCISE 4 Units**  
**4 hours lecture.**

This course addresses current and historical issues as well as general social, biochemical and behavioral information related to performance enhancing substances in sport and exercise. Areas to be addressed include, but are not limited to: Anabolics, Blood Doping, Diuretics, Nutritional Ergogenic Aids, Social and Recreational Drugs, Stimulants, Emerging Science and Technologies, and Drug Testing.

**PHED 8 THEORY & CONCEPTS OF EXERCISE PHYSIOLOGY 4 Units**  
**4 hours lecture.**

Basic concepts and principles of exercise science and how the human body responds to the demands of physical activity. Emphasis on anatomy, physiology, and biomechanics. Includes factors related to maintaining optimal body weight, nutrition, and increasing one's flexibility. [Transferability: UC/CSU]

**PHED 9 BASIC NUTRITION FOR SPORTS & FITNESS 4 Units**  
**4 hours lecture.**

Practical applications of basic nutrition concepts and how food choices affect health and fitness. Includes computer utilization of personal dietary analysis and evaluation. Standard food guides and guidelines to select foods that would maximize individual health are utilized in this course. [Transferability: UC/CSU]

**PHED 10A AQUATICS: LEVEL I, BEGINNING SWIMMING 1 Unit**  
**May be taken 6 times for credit.**  
**3 hours laboratory.**

Introduction to swimming and safety skills. Includes physical and mental adjustment to water, buoyancy and body position, survival skills, and basic swim strokes. [Foothill GE: Lifelong Understanding; Transferability: UC/CSU]

**PHED 10B AQUATICS: LEVEL II, INTERMEDIATE SWIMMING 1 Unit**  
**May be taken 6 times for credit.**  
**3 hours laboratory.**

A continuation of development of swim and safety skills beyond the beginning phase. Includes physical and mental adjustment to water, buoyancy and body position, survival skills, and the basic swim strokes. [Foothill GE: Lifelong Understanding; Transferability: UC/CSU]

**PHED 10C AQUATICS LEVEL III, MASTERS SWIMMING/ADVANCED SWIM TRAINING 1 Unit**  
**May be taken 6 times for credit.**  
**3 hours laboratory.**

Advanced program of swim strokes, competitive turns, and endurance training. [Foothill GE: Lifelong Understanding; Transferability: UC/CSU]

**PHED 11A WATER EXERCISE 1 Unit**  
**May be taken 6 times for credit.**  
**3 hours laboratory.**

A unique non-impact form of aquatic exercise designed to improve cardiovascular endurance, muscular strength, endurance, and flexibility while wearing a flotation belt to maintain an upright position in deep water. [Foothill GE: Lifelong Understanding; Transferability: UC/CSU]

<p><b>PHED 11B AQUATIC FITNESS</b> 1 Unit            May be taken 6 times for credit.            3 hours laboratory.            An aerobic water fitness program applying the basic principles of exercise and dynamics of water movement. [Foothill GE: Lifelong Understanding; Transferability: UC/CSU]</p>	<p><b>PHED 20C POWER PILATES &amp; FLEXIBILITY EXERCISES</b> 1 Unit            May be taken 6 times for credit.            3 hours laboratory.            A vigorous and dynamic full body conditioning class using mat and standing exercises to tighten, tone and lengthen core muscles and flexibility exercises to improve mobility and stability. Students must provide their own fitness mat. [Foothill GE: Lifelong Understanding; Transferability: UC/CSU]</p>
<p><b>PHED 13A INTERMEDIATE/ADVANCED WATER POLO</b> 1 Unit  <i>Formerly: H P 8A</i>            May be taken 6 times for credit.            3 hours laboratory.            Intermediate/advanced water polo for competitive play. Includes offensive and defensive drills, strategies, and techniques. [Foothill GE: Lifelong Understanding; Transferability: UC/CSU]</p>	<p><b>PHED 21A BEGINNING HATHA YOGA</b> 1 Unit            May be taken 6 times for credit.            3 hours laboratory.            Introduction to the discipline of yoga. Emphasis on the practice and demonstration of the beginning postures and the usage of yoga for stress management and exercise. [Foothill GE: Lifelong Understanding; Transferability: UC/CSU]</p>
<p><b>PHED 17A BEGINNING KARATE</b> 1 Unit  <i>Formerly: H P 84X</i>            May be taken 6 times for credit.            3 hours laboratory.            Introduction to beginning skills and techniques of karate. Includes punching, blocking, striking and kicking techniques. [Foothill GE: Lifelong Understanding; Transferability: UC/CSU]</p>	<p><b>PHED 21B INTERMEDIATE HATHA YOGA</b> 1 Unit            Advisory: Some beginning Hatha yoga.            May be taken 6 times for credit.            3 hours laboratory.            Intermediate training in Hatha yoga, skills and techniques; independent, group, and personalized training; emphasis on asana practice and pranayama. [Foothill GE: Lifelong Understanding; Transferability: UC/CSU]</p>
<p><b>PHED 17B INTERMEDIATE KARATE</b> 1 Unit  <i>Formerly: H P 84A</i>            Prerequisite: PHED 17A or equivalent.            May be taken 6 times for credit.            3 hours laboratory.            Intermediate karate skills and techniques. Analysis and application of biomechanics, individual and group interaction, and uses of Karate. [Foothill GE: Lifelong Understanding; Transferability: UC/CSU]</p>	<p><b>PHED 21C POWER YOGA</b> 1 Unit  <i>Formerly: H P 44P</i>            May be taken 6 times for credit.            3 hours laboratory.            Power Yoga is a combination of the traditional forms of yoga woven into one powerful all-inclusive practice. Postures are combined into a vigorous, flowing series, linking one movement to the next, building strength, flexibility, and endurance. [Foothill GE: Lifelong Understanding; Transferability: UC/CSU]</p>
<p><b>PHED 19A FUNDAMENTALS OF TAI CHI</b> 1 Unit  <i>Formerly: H P 83</i>            May be taken 6 times for credit.            3 hours laboratory.            Introduction to the internal martial art of Tai Chi. Includes practice and discussion of fundamental Tai Chi exercises and its relationship to mind-body awareness. [Foothill GE: Lifelong Understanding; Transferability: UC/CSU]</p>	<p><b>PHED 21D VINYASA FLOW YOGA</b> 1 Unit  <i>Formerly: H P 44V</i>            May be taken 6 times for credit.            3 hours laboratory.            Vinyasa yoga is a form of traditional hatha yoga that focuses on integrating breath and movement, awareness and alignment, strength, and flexibility. Vinyasa uses six discrete series of sequences of advancing difficulty with repeated closing sections between each sequence. Each variation is linked to the next one by a succession of specific transitional movements. Likened to a dynamic dance, postures or asanas are connected through the breath for a transformative and balancing effect. The Vinyasa practice ranges from slow flowing to fast aerobic, developing strength and endurance. [Foothill GE: Lifelong Understanding; Transferability: UC/CSU]</p>
<p><b>PHED 19B KICKBOXING FOR FITNESS</b> 1 Unit            May be taken 3 times for credit.            3 hours laboratory.            Introduction to the basic skills and mechanics of kickboxing for fitness. Total cardiovascular workout emphasizing footwork, body mechanics, punching and kicking combinations and basic offensive and defensive techniques. [Foothill GE: Lifelong Understanding; Transferability: UC/CSU]</p>	<p><b>PHED 22 FULL BODY FLEXIBILITY</b> 1 Unit            May be taken 6 times for credit.            3 hours laboratory.            Increased flexibility enhances physical performance, helps maintain muscle fitness and assists in injury rehabilitation. This course is designed for individuals with a variety of fitness experience levels. Students must provide their own fitness mat. [Foothill GE: Lifelong Understanding; Transferability: UC/CSU]</p>
<p><b>PHED 20A BEGINNING MAT PILATES</b> 1 Unit            May be taken 6 times for credit.            3 hours laboratory.            Traditional Mat Pilates exercises and principles are combined to achieve body control, core strength and joint mobility. Students must provide their own fitness mat. [Foothill GE: Lifelong Understanding; Transferability: UC/CSU]</p>	<p><b>PHED 22A STRETCHING &amp; PILATES FOR FLEXIBILITY</b> 1 Unit            May be taken 6 times for credit.            3 hours laboratory.            A stretching program emphasizing seated flexibility exercises for the hips, hamstrings and spine. Complimentary abdominal exercises and standing postures will be introduced to develop balance, tone and endurance. Students must provide their own fitness mat. [Foothill GE: Lifelong Understanding; Transferability: UC/CSU]</p>
<p><b>PHED 20B INTERMEDIATE MAT PILATES</b> 1 Unit            May be taken 6 times for credit.            3 hours laboratory.            An intermediate level mat Pilates class focusing on fluid transitions between stretching and strengthening exercises to improve coordination, endurance, posture, flexibility and balance for a more streamlined shape. Students provide their own fitness mat. [Foothill GE: Lifelong Understanding; Transferability: UC/CSU]</p>	

<p><b>PHED 22B PILATES &amp; YOGA</b> 1 Unit  <b>May be taken 6 times for credit.</b>  <b>3 hours laboratory.</b>  This class combines basic Pilates mat exercises to strengthen abdominals with full body yoga based stretches for development of improved posture, flexibility, and relaxation. Students must provide their own fitness mat. [Foothill GE: Lifelong Understanding; Transferability: UC/CSU]</p>	<p><b>PHED 25A SWING ANALYSIS</b> 1 Unit  <b>May be taken 6 times for credit.</b>  <b>3 hours laboratory.</b>  Using the Swing Solutions video technology, the student will identify and correct individual golf swing flaws and design drills to develop skills to improve golf strokes. [Foothill GE: Lifelong Understanding; Transferability: UC/CSU]</p>
<p><b>PHED 22C CORE FLOW STRENGTH</b> 1 Unit  <b>Formerly: H P 32F</b>  <b>May be taken 6 times for credit.</b>  <b>3 hours laboratory.</b>  A combination Pilates and Yoga class designed to improve strength, body control, and coordination. Resistance and stability equipment will be incorporated with abdominal, low back, and full body exercises. Students must provide their own fitness mat. [Foothill GE: Lifelong Understanding; Transferability: CSU; UC approval is pending.]</p>	<p><b>PHED 26 BEGINNING TENNIS SKILLS</b> 1 Unit  <b>May be taken 6 times for credit.</b>  <b>3 hours laboratory.</b>  Introduction to beginning tennis play including basic strokes, drills, rules and etiquette. [Foothill GE: Lifelong Understanding; Transferability: UC/CSU]</p>
<p><b>PHED 23A TRAIL HIKING</b> 1 Unit  <b>May be taken 6 times for credit.</b>  <b>3 hours laboratory.</b>  This course will provide students the opportunity to exercise in the great outdoors to gain and improve cardiovascular fitness, muscular strength and endurance through hiking at a fitness pace on the trail. [Foothill GE: Lifelong Understanding; Transferability: UC/CSU]</p>	<p><b>PHED 26A INTERMEDIATE/ADVANCED TENNIS</b> 1 Unit  <b>May be taken 6 times for credit.</b>  <b>3 hours laboratory.</b>  Intermediate/advanced tennis for competitive play includes covering drills, advanced strategies, techniques and rules. [Foothill GE: Lifelong Understanding; Transferability: UC/CSU]</p>
<p><b>PHED 23B DAY HIKING</b> 1 Unit  <b>May be taken 6 times for credit.</b>  <b>3 hours laboratory.</b>  A hiking class designed to prepare healthy, fit individuals for a final 8–12 mile hike on established trails over moderate to steep terrain. [Foothill GE: Lifelong Understanding; Transferability: UC/CSU]</p>	<p><b>PHED 27 WALK FOR HEALTH</b> 1 Unit  <b>Formerly: H P 16</b>  <b>May be taken 6 times for credit.</b>  <b>3 hours laboratory.</b>  Introduction to fitness walking. Includes basic principles of exercise and how they relate to fitness walking. [Foothill GE: Lifelong Understanding; Transferability: UC/CSU]</p>
<p><b>PHED 23C MULTI-DAY HIKING</b> 2 Units  <b>May be taken 6 times for credit.</b>  <b>6 hours laboratory.</b>  Emphasis on preparing fit individuals for a final two-day hike of up to 10-miles each day over moderate to steep terrain. Basic outdoor skills such as fitness development, risk management, trip planning and minimum impact will be identified. (Transportation, equipment and any park fees are provided by the student.) [Foothill GE: Lifelong Understanding; Transferability: UC/CSU]</p>	<p><b>PHED 27A RUN FOR FITNESS</b> 1 Unit  <b>Formerly: H P 61</b>  <b>May be taken 6 times for credit.</b>  <b>3 hours laboratory.</b>  The student will gain an appreciation for all phases of running, improve cardiovascular fitness, increase flexibility, develop endurance, and gain an understanding of the physiologic responses of the body to running. [Foothill GE: Lifelong Understanding; Transferability: UC/CSU]</p>
<p><b>PHED 24 INTRODUCTION TO GOLF</b> 1 Unit  <b>May be taken 6 times for credit.</b>  <b>3 hours laboratory.</b>  This course teaches the fundamentals of the golf swing, knowledge of equipment, terminology and course etiquette. [Foothill GE: Lifelong Understanding; Transferability: UC/CSU]</p>	<p><b>PHED 28 SLOW PITCH SOFTBALL</b> 1 Unit  <b>Formerly: H P 28</b>  <b>May be taken 6 times for credit.</b>  <b>3 hours laboratory.</b>  Coeducational softball games with instruction in throwing, fielding and hitting. [Foothill GE: Lifelong Understanding; Transferability: UC/CSU]</p>
<p><b>PHED 24A SKILL DEVELOPMENT FOR THE EXPERIENCED GOLFER</b> 1 Unit  <b>May be taken 6 times for credit.</b>  <b>3 hours laboratory.</b>  Development of golf skills for the intermediate player including grip, posture and swing fundamentals, selection of equipment, rule interpretations, etiquette and course management. [Foothill GE: Lifelong Understanding; Transferability: UC/CSU]</p>	<p><b>PHED 29 FUTSAL-INDOOR SOCCER</b> 1 Unit  <b>May be taken 6 times for credit.</b>  <b>3 hours laboratory.</b>  Indoor soccer class developing basic skills including passing, shooting, dribbling and heading. Includes game strategy, tactics, and laws of the game. [Foothill GE: Lifelong Understanding; Transferability: UC/CSU]</p>
<p><b>PHED 24B SKILLS OF GOLF COURSE PLAY</b> 2 Units  <b>Formerly: H P 25DX</b>  <b>May be taken 6 times for credit.</b>  <b>6 hours laboratory.</b>  Students will play an 18 hole golf course and utilize the knowledge and skills developed in beginning and intermediate golf classes. [Foothill GE: Lifelong Understanding; Transferability: UC/CSU]</p>	<p><b>PHED 29A TOURNAMENT SOCCER</b> 1 Unit  <b>Formerly: H P 129</b>  <b>Advisory: Previous intercollegiate or club soccer play.</b>  <b>May be taken 6 times for credit.</b>  <b>3 hours laboratory.</b>  Participation in tournament soccer competition at an intermediate and advanced level of play. [Foothill GE: Lifelong Understanding; Transferability: UC/CSU]</p>
	<p><b>PHED 30 WINTER SPORTS CONDITIONING</b> 1 Unit  <b>May be taken 6 times for credit.</b>  <b>4 hours laboratory.</b>  Course designed to develop physical conditioning level for safe and pleasurable winter sports activity. Exercise will be geared toward developing flexibility, strength and aerobic endurance. [Foothill GE: Lifelong Understanding; Transferability: UC/CSU]</p>

<p><b>PHED 34A INTERCOLLEGIATE SOCCER (WOMEN) 3 Units</b>  <i>Formerly: H P 35B</i>            May be taken 6 times for credit.            14.5 hours lecture-laboratory.            Competitive intercollegiate soccer working toward personal development, athletic scholarship, and career opportunities. [Foothill GE: Lifelong Understanding; Transferability: UC/CSU]</p>	<p><b>PHED 34J SPORTS TECHNIQUES &amp; CONDITIONING 2 Units</b>  <i>Formerly: PHED 601</i>            May be taken 6 times for credit.            6 hours laboratory.            This course is designed to teach and practice sport specific techniques and conditioning including drills, weight and flexibility training, and cardio-respiratory development. [Transferability: CSU; UC approval is pending.]</p>
<p><b>PHED 34B INTERCOLLEGIATE VOLLEYBALL (WOMEN) 3 Units</b>  <i>Formerly: H P 35C</i>            May be taken 6 times for credit.            14.5 hours lecture-laboratory.            Competitive intercollegiate volleyball working toward personal development, athletic scholarship, and career opportunities. [Foothill GE: Lifelong Understanding; Transferability: UC/CSU]</p>	<p><b>PHED 35A INTERCOLLEGIATE SOCCER (MEN) 3 Units</b>  <i>Formerly: H P 40B</i>            May be taken 6 times for credit.            14.5 hours lecture-laboratory.            Competitive intercollegiate soccer working toward personal development, athletic scholarship and career opportunities. [Foothill GE: Lifelong Understanding; Transferability: UC/CSU]</p>
<p><b>PHED 34C INTERCOLLEGIATE BASKETBALL (WOMEN) 3 Units</b>  <i>Formerly: H P 35D</i>            May be taken 6 times for credit.            14.5 hours lecture-laboratory.            Competitive intercollegiate women's basketball working toward personal development, athletic scholarship, and career opportunities. [Foothill GE: Lifelong Understanding; Transferability: UC/CSU]</p>	<p><b>PHED 35B INTERCOLLEGIATE FOOTBALL (MEN) 3 Units</b>  <i>Formerly: H P 40C</i>            May be taken 6 times for credit.            14.5 hours lecture-laboratory.            Competitive intercollegiate football working toward personal development, athletic scholarship and career opportunities. [Foothill GE: Lifelong Understanding; Transferability: UC/CSU]</p>
<p><b>PHED 34D INTERCOLLEGIATE TENNIS (WOMEN) 3 Units</b>  <i>Formerly: H P 35E</i>            May be taken 6 times for credit.            14.5 hour lecture-laboratory.            Competitive intercollegiate tennis working toward personal development, athletic scholarship, and career opportunities. [Foothill GE: Lifelong Understanding; Transferability: UC/CSU]</p>	<p><b>PHED 35C INTERCOLLEGIATE BASKETBALL (MEN) 3 Units</b>  <i>Formerly: H P 40D</i>            May be taken 6 times for credit.            14.5 hours lecture-laboratory.            Competitive intercollegiate basketball working toward personal development, athletic scholarship and career opportunities. [Foothill GE: Lifelong Understanding; Transferability: UC/CSU]</p>
<p><b>PHED 34E INTERCOLLEGIATE SOFTBALL (WOMEN) 3 Units</b>  <i>Formerly: H P 35F</i>            Advisory: Previous high school, club or collegiate softball playing experience.            May be taken 6 times for credit.            14.5 hours lecture-laboratory.            Competitive intercollegiate softball for experienced female athletes. [Foothill GE: Lifelong Understanding; Transferability: UC/CSU]</p>	<p><b>PHED 35D INTERCOLLEGIATE TENNIS (MEN) 3 Units</b>  <i>Formerly: H P 40E</i>            May be taken 6 times for credit.            14.5 hours lecture-laboratory.            Competitive intercollegiate tennis working toward personal development, athletic scholarship, and career opportunities. [Foothill GE: Lifelong Understanding; Transferability: UC/CSU]</p>
<p><b>PHED 34F INTERCOLLEGIATE GOLF (WOMEN) 3 Units</b>  <i>Formerly: H P 35G</i>            May be taken 6 times for credit.            15 hours lecture-laboratory.            Intercollegiate development of athletic skills, physical and mental conditioning for competitive play in golf. [Foothill GE: Lifelong Understanding; Transferability: UC/CSU]</p>	<p><b>PHED 35E INTERCOLLEGIATE GOLF (MEN) 3 Units</b>  <i>Formerly: H P 40G</i>            May be taken 4 times for credit.            14.5 hours lecture-laboratory.            Competitive intercollegiate golf working toward skill development, athletic scholarship and career opportunities. [Foothill GE: Lifelong Understanding; Transferability: UC/CSU]</p>
<p><b>PHED 34G INTERCOLLEGIATE DANCE PERFORMANCE 3 Units</b>  <i>Formerly: H P 40P</i>            Advisory: PHED 34G and DANC 11 are interchangeable.            May be taken 6 times for credit.            15 hours laboratory.            Supervised participation in scheduled productions of the dance department, in cast or crew. A laboratory course for the resident and touring company of the college, including instruction on the how to of a full-scale theatrical production for public performance. [Foothill GE: Lifelong Understanding; Transferability: UC/CSU]</p>	<p><b>PHED 35F INTERCOLLEGIATE SWIMMING (MEN &amp; WOMEN) 3 Units</b>  <i>Formerly: H P 40H</i>            May be taken 6 times for credit.            14.5 hours lecture-laboratory.            Competitive intercollegiate swimming program for student athletes working on skill development, athletic scholarship and career opportunities. [Foothill GE: Lifelong Understanding; Transferability: UC/CSU]</p>
<p><b>PHED 34H PRE-SEASON CONDITIONING 2 Units</b>  <i>Formerly: H P 35K</i>            May be taken 6 times for credit.            6 hours lecture-laboratory.            A continuation in the development of athletic skills, physical and mental conditioning which is required to be successful in intercollegiate athletics. [Foothill GE: Lifelong Understanding; Transferability: UC/CSU]</p>	<p><b>PHED 35G INTERCOLLEGIATE WATER POLO 3 Units</b>  <i>Formerly: H P 40K</i>            May be taken 6 times for credit.            14.5 hours lecture-laboratory.            Competitive intercollegiate water polo working toward personal development, athletic scholarship and career opportunities. [Foothill GE: Lifelong Understanding; Transferability: UC/CSU]</p>

<p><b>PHED 36 INDOOR ARCHERY</b> 1 Unit  <i>Formerly: H P 23A</i>            May be taken 6 times for credit.            3 hours laboratory.            Introduction to the sport of archery. Emphasis will be placed on instinctive shooting, scoring, terminology, safety and etiquette. [Foothill GE: Lifelong Understanding; Transferability: UC/CSU]</p>	<p><b>PHED 46 WEIGHT LIFTING FOR HEALTH &amp; FITNESS</b> 1 Unit            May be taken 6 times for credit.            3 hours laboratory.            This course will provide training and instruction on the use of weights for lifetime fitness and health. [Foothill GE: Lifelong Understanding; Transferability: UC/CSU]</p>
<p><b>PHED 37 BADMINTON: SINGLES &amp; DOUBLES</b> 1 Unit            May be taken 6 times for credit.            3 hours laboratory.            Strategy and competition for both singles and doubles in badminton play. [Foothill GE: Lifelong Understanding; Transferability: UC/CSU]</p>	<p><b>PHED 46A CORE FLOW STRENGTH TRAINING</b> 1 Unit            May be taken 6 times for credit.            3 hours laboratory.            A total body conditioning class that emphasizes intense free weight exercises set to music and incorporates core conditioning. Featured equipment includes dumbbells, body bar, resistance bands, body weight and balls. Students must provide their own fitness mat. [Foothill GE: Lifelong Understanding; Transferability: UC/CSU]</p>
<p><b>PHED 38A BASKETBALL FUNDAMENTALS</b> 1 Unit            May be taken 6 times for credit.            3 hours laboratory.            An introduction to the fundamental skills and strategies of the team sport of basketball. Skill work drills and full-court tournament play. [Foothill GE: Lifelong Understanding; Transferability: UC/CSU]</p>	<p><b>PHED 47B THIGHS, ABS &amp; GLUTEUS (TAG)</b> 1 Unit  <i>Formerly: H P 32G</i>            May be taken 6 times for credit.            3 hours laboratory.            This course is designed to strengthen thigh, abdominal and gluteus muscles in an intensive, fun and highly energized workout. [Foothill GE: Lifelong Understanding; Transferability: UC/CSU]</p>
<p><b>PHED 38B BASKETBALL GAME SKILLS</b> 1 Unit            May be taken 6 times for credit.            3 hours laboratory.            Tournament play plus an individual emphasis on intermediate skill development and the techniques of team play. [Foothill GE: Lifelong Understanding; Transferability: UC/CSU]</p>	<p><b>PHED 47C CARDIO PUMP</b> 1 Unit  <i>Formerly: H P 14F</i>            May be taken 6 times for credit.            3 hours laboratory.            An intense total body workout designed to improve endurance and strengthen and define every muscle in every way. Students must provide their own fitness mat. [Foothill GE: Lifelong Understanding; Transferability: UC/CSU]</p>
<p><b>PHED 39 INDOOR SOCCER</b> 1 Unit  <i>Formerly: H P 29A</i>            May be taken 6 times for credit.            3 hours laboratory.            Introduction in the fundamental skills and strategies for indoor soccer. Includes rules and an opportunity for active participation in game situations. [Foothill GE: Lifelong Understanding; Transferability: UC/CSU]</p>	<p><b>PHED 49A SURVIVOR TRAINING</b> 1 Unit  <i>Formerly: H P 16D</i>            May be taken 6 times for credit.            3 hours laboratory.            Designed for average group exercise participant, the class uses sports fitness drills and functional training to develop footwork, anaerobic and aerobic conditioning, muscular strength and power. [Foothill GE: Lifelong Understanding; Transferability: UC/CSU]</p>
<p><b>PHED 40 BEGINNING VOLLEYBALL</b> 1 Unit  <i>Formerly: H P 30</i>            May be taken 6 times for credit.            3 hours laboratory.            Introduction to the game of volleyball. Includes basic skills, strategy, and team play. [Foothill GE: Lifelong Understanding; Transferability: UC/CSU]</p>	<p><b>PHED 49B BOOT CAMP TRAINING</b> 3 Units  <i>Formerly: H P 3C</i>            May be taken 6 times for credit.            3 hours laboratory.            This course is designed for students who want an annual program in which group training uses functional fitness activities to develop core strength, cardiovascular conditioning and muscle strength and power. [Foothill GE: Lifelong Understanding; Transferability: UC/CSU]</p>
<p><b>PHED 41 INDOOR CYCLING-SPIN</b> 1 Unit  <i>Formerly: H P 46B</i>            May be taken 6 times for credit.            3 hours laboratory.            An indoor cycling program to enhance cardiovascular fitness and improve cycling techniques. Emphasis will be on improving endurance through non-impact activity. [Foothill GE: Lifelong Understanding; Transferability: UC/CSU]</p>	<p><b>PHED 50C NUTRITIONAL ASSESSMENT &amp; FITNESS</b> 1 Unit            May be taken 6 times for credit.            3 hours laboratory.            A study of nutritional concepts, body fat assessment and work-out programs for lifetime fitness [Foothill GE: Lifelong Understanding; Transferability: UC/CSU]</p>
<p><b>PHED 42 BOWLING FOR FITNESS</b> 1 Unit            May be taken 6 times for credit.            3 hours laboratory.            A comprehensive study of the physical skills and practice for lifetime enjoyment of bowling. [Foothill GE: Lifelong Understanding; Transferability: UC/CSU]</p>	<p><b>PHED 52 YEARLONG GOLF</b> 3 Units            May be taken 6 times for credit.            3 hours laboratory.            Development of golf skills and play for both the beginning and intermediate golfer. This class is continued for three academic quarters, fall, winter and spring. [Foothill GE: Lifelong Understanding; Transferability: UC/CSU]</p>
<p><b>PHED 45 FITNESS FOR LIFE</b> 1 Unit  <b>PHED 45X</b> 2 Units            May be taken 6 times for credit.            3 hours laboratory for each unit of credit.            The course is designed to increase muscle strength, endurance and cardiovascular fitness through self paced program of use on cardio, strength and fitness machines. [Foothill GE: Lifelong Understanding; Transferability: UC/CSU]</p>	

<p><b>PHED 53 HEALTH &amp; FITNESS ACTIVITIES 3 Units</b>            May be taken 6 times for credit.            9 hours laboratory.            Year long course designed to develop and increase health and fitness using cardio, strength and flexibility training. [Foothill GE: Lifelong Understanding; Transferability: UC/CSU]</p>	<p><b>PHED 62E CLINICAL EXPERIENCES IN SPORTS MEDICINE V 3 Units</b>  <i>Formerly: H P 52C</i>  <b>Prerequisite:</b> PHED 62A, 62B, 62C and 62D.  <b>Corequisite:</b> Completion of, or concurrent enrollment in PHED 67 series or equivalent.            May be taken 3 times for credit.            9 hours laboratory.            Advanced experience in athletic emergency care, athletic injury prevention, therapeutic treatment, and rehabilitation of athletic injuries. Observation of orthopedic surgeries, assisting in physical therapy clinics or other related allied health settings compliment the on-campus Athletic Treatment Center. [Transferability: CSU]</p>
<p><b>PHED 60 SPECIAL PROJECTS IN PHYSICAL EDUCATION 2 Units</b>  <i>Formerly: H P 60</i>            May be taken 6 times for credit.            6 hours lecture-laboratory.            Individual development of special projects, materials and activities related to physical education and athletics. [Transferability: CSU]</p>	<p><b>PHED 65A PNF: INTRODUCTION TO THE UPPER EXTREMITY 3 Units</b>  <i>Formerly: H P 52F</i>            2 hours lecture, 1 hour laboratory, 1 hour online.            Theory and hands on practice emphasizing the upper extremity: stretching, strengthening, stabilization and active/passive range of motion including goniometric measurements. Students must have reliable and ongoing Internet access to complete Quizzes, Discussions and Assignments. [Transferability: CSU]</p>
<p><b>PHED 62A CLINICAL EXPERIENCES IN SPORTS MEDICINE I 3 Units</b>  <i>Formerly: H P 52A</i>  <b>Corequisite:</b> Completion of, or concurrent enrollment in PHED 67 series or equivalent or instructor authorization.            May be taken 3 times for credit.            9 hours laboratory            Hands-on experience in athletic emergency care, athletic injury prevention, therapeutic treatment, and rehabilitation of athletic injuries in the on-campus Athletic Treatment Center. Observation of orthopedic surgical procedures with the permission of the team physician is available. [Transferability: CSU]</p>	<p><b>PHED 65B PNF: INTRODUCTION TO THE LOWER EXTREMITY 3 Units</b>  <i>Formerly: H P 52G</i>            2 hours lecture, 1 hour laboratory, 1 hour online.            Theory and hands on practice emphasizing lower extremity stretching, strengthening, stabilization and active range of motion including goniometric measurement. Students must have reliable and ongoing Internet access to complete Quizzes, Discussions and Assignments. [Transferability: CSU]</p>
<p><b>PHED 62B CLINICAL EXPERIENCES IN SPORTS MEDICINE II 3 Units</b>  <i>Formerly: H P 52A</i>  <b>Corequisite:</b> Completion of, or concurrent enrollment in PHED 67 series or equivalent or instructor authorization.            May be taken 3 times for credit.            9 hours laboratory.            Hands-on experience in athletic emergency care, athletic injury prevention, therapeutic treatment, and rehabilitation of athletic injuries in the on-campus Athletic Treatment Center. Observation of orthopedic surgical procedures with the permission of the team physician is available. [Transferability: CSU]</p>	<p><b>PHED 66 FIRST AID &amp; CPR/AED 2 Units</b>  <i>Formerly: H P 51C</i>            May be taken 6 times for credit.            1 hour lecture, 3 hours laboratory.            This course is designed to provide the layperson with the knowledge and skills to respond to an emergency. The course will provide certification opportunity in First Aid and CPR/AED as well as Professional Rescuer. [Transferability: CSU]</p>
<p><b>PHED 62C CLINICAL EXPERIENCES IN SPORTS MEDICINE III 3 Units</b>  <i>Formerly: H P 52B</i>  <b>Prerequisite:</b> PHED 62A and 62B.  <b>Corequisite:</b> Completion of, or concurrent enrollment in PHED 67 series or equivalent.            May be taken 3 times for credit.            9 hours laboratory.            Hands-on experience in emergency care, injury prevention, treatment and rehabilitation of athletic injuries in the on-campus Athletic Treatment Center. Off-campus athletic training facilities and outpatient physical therapy clinics may also be utilized for the internship. Observation of orthopedic surgical procedures with the permission of the team physician is available. [Transferability: CSU]</p>	<p><b>PHED 67A PREVENTION OF ATHLETIC INJURIES 3 Units</b>  <i>Formerly: H P 67A</i>  <b>Advisory:</b> Not open to students with credit in H P 67A.            2 hours lecture, 1 hour laboratory, 1 hour online.            Athletic injury prevention is emphasized through pre-participation physical exams, exercise programs, preventative taping, proper fitting of equipment, and protective braces. Students must have reliable and ongoing Internet Access to complete Quizzes, Discussions and Assignments. [Transferability: UC/CSU]</p>
<p><b>PHED 62D CLINICAL EXPERIENCES IN SPORTS MEDICINE IV 3 Units</b>  <i>Formerly: H P 52B</i>  <b>Prerequisite:</b> PHED 62A, 62B and 62C.  <b>Corequisite:</b> Completion of, or concurrent enrollment in PHED 67 series or equivalent.            May be taken 3 times for credit.            9 hours laboratory.            Hands-on experience in emergency care, injury prevention, treatment and rehabilitation of athletic injuries in the on-campus Athletic Treatment Center. Off-campus athletic training facilities and outpatient physical therapy clinics may be utilized for the internship. Observation of orthopedic surgical procedures with the permission of the team physician is available. [Transferability: CSU]</p>	<p><b>PHED 67B EMERGENCY ATHLETIC INJURY CARE 3 Units</b>  <i>Formerly: H P 67B</i>  <b>Advisory:</b> Not open to students with credit in H P 67B.            2 hours lecture, 1 hour laboratory, 1 hour online.            American Red Cross Standard First Aid/CPR certificates are available upon completion of the course. Lecture and laboratory are devoted to basic injury recognition and emergency response of acute trauma. Practical hands-on skills are emphasized in laboratories. Students must have reliable and ongoing Internet access to complete Quizzes, Discussions and Assignments. [Transferability: UC/CSU]</p>
	<p><b>PHED 67C TREATMENT &amp; REHABILITATION OF ATHLETIC INJURIES 3 Units</b>  <i>Formerly: H P 67C</i>  <b>Advisory:</b> Not open to students with credit in H P 67C.            2 hours lecture, 1 hour laboratory, 1 hour online.            Follow-up injury treatment, phases of tissue healing, and stages of rehabilitation including therapeutic modalities. Students must have reliable and ongoing Internet Access to complete Quizzes, Discussions and Assignments. [Transferability: UC/CSU]</p>

**PHED 73      INTERNSHIP FOR PERSONAL TRAINING      2 Units**

May be taken 2 times for credit.

6 hours laboratory.

Internship program designed to provide personal fitness trainers with the practical hands-on skills to gain valuable experience with the students at Fitness Centers. Includes conducting assessments of fitness, prescribing appropriate physical exercises, and safely instructing students in the step-by-step procedures of how to execute strength, cardiovascular, and flexibility exercises. [Transferability: CSU]

**PHED 601      SPORTS TECHNIQUES & CONDITIONING      2 Units**

May be taken 6 times for credit.

6 hours laboratory.

This course is designed to teach and practice sport specific techniques and conditioning including drills, weight and flexibility training, and cardio-respiratory development.

**PHYSICAL SCIENCES & ENGINEERING**

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**PSE 41      CLASS PRACTICES: MIDDLE SCHOOL SCIENCE      2 Units**

Formerly: CHEM 41

**Prerequisite:** Satisfactory score on the mathematics placement test or MATH 104 or 105; college level chemistry or physics course; recommendation from a math, physics, or chemistry faculty and approval by the instructor; will require a current TB test, finger printing, and background investigation.

**Advisory:** ENGL 100 or ESLL 25; Pass/No Pass; not open to students with credit in CHEM 41.

1.5 hours lecture, 2 hours laboratory.

Introduce prospective science, technology, engineering, and mathematics (STEM) teachers to the field of Middle School education and the teaching and learning of science in Middle School classrooms. Pairs of students are placed in local Middle School classrooms to observe, participate, and assist a Mentor Teacher in instruction. Students also participate in the weekly seminar and discussion of learning in Middle School culture, cognitive development of students, and best means to teach appropriate science concepts at this level. Foothill students are expected to work a minimum of 20 hours (2 hrs/week x 10 weeks; will be adjusted for Middle School calendar as required) in the Middle School classroom during the quarter. Introduced to the concepts that as classroom assistants or teachers, they are role models to the elementary students and there is a large responsibility inherent in assuming this role. Support creating a respectful and inclusive classroom atmosphere where children learn most effectively. [Transferability: UC/CSU]

**PSE 42      CLASS PRACTICES; ELEMENTARY SCHOOL SCIENCE      2 Units**

Formerly: CHEM 42

**Prerequisite:** Satisfactory score on the mathematics placement test or MATH 104 or 105; college level chemistry or physics course; recommendation from a math, physics, or chemistry faculty and approval by the instructor; will require a current TB test, finger printing, and background investigation.

**Advisory:** ENGL 100 or ESLL 25; Pass/No Pass; not open to students with credit in CHEM 42.

1.5 hours lecture, 2 hours laboratory.

Introduce prospective science, technology, engineering, and mathematics (STEM) teachers to the field of Elementary School education and the teaching and learning of science in Elementary School classrooms. Pairs of students are placed in local Elementary School classrooms to observe, participate, and assist a Mentor Teacher in instruction. Students also participate in the weekly seminar and are introduced to inquiry-based learning practices, National and California standards, reading and learning differences in children and the cognitive ability of elementary-age children as it relates to the introduction of concepts, curricular planning, classroom management, and learning assessment. Foothill students are expected to work a minimum of 20 hours (2 hrs/week x 10 weeks; will be

adjusted for Elementary School calendar as required) in the Elementary School classroom during the quarter. Introduced to the concepts that as classroom assistants or teachers, they are role models to the elementary students and there is a large responsibility inherent in assuming this role. Contribute to creating a respectful and inclusive classroom atmosphere where children learn most effectively. [Transferability: UC/CSU]

**PSE 43      CLASS PRACTICES: HIGH SCHOOL SCIENCE      2 Units**

**Prerequisite:** Satisfactory score on the mathematics placement test or MATH 105; college level chemistry or physics course; recommendation from a math, physics, or chemistry faculty and approval by the instructor; will require a current TB test, finger printing, and background investigation.

**Advisory:** ENGL 100 or ESLL 25; Pass/No Pass.

May be taken 2 times for credit.

1.5 hours lecture, 2 hours laboratory.

Introduce prospective science, technology, engineering, and mathematics (STEM) teachers to the field of high school education and the teaching and learning of science in high school classrooms. Students are placed in local high school classrooms to observe, participate, and assist a mentor teacher in instruction. Students also participate in the weekly seminar and discussion of learning in K-12 culture, cognitive development of students, and best means to teach appropriate science concepts at this level. Foothill students are expected to work a minimum of 20 hours (2 hrs/week x 10 weeks; will be adjusted for K-12 calendar as required) in the high school classroom during the quarter. Introduced to the concepts that as classroom assistants or teachers, they are role models to the K-12 students and there is a large responsibility inherent in assuming this role. Support creating a respectful and inclusive classroom atmosphere where children learn most effectively. [Transferability: UC/CSU]

**PSE 111      PASS THE TORCH TEAM LEADER TRAINING      1 Unit**

**Prerequisite:** An earned A or B+ grade with instructor recommendation in one of the following: MATH 220, 105, 10, 49, 51, 1A, 1B, 1C, 1D, 2A, 2B or a "Pass" in MATH 230; student must currently be a team leader for a Pass the Torch study team.

May be taken 2 times for credit.

1 hour lecture.

Training in team leading skills necessary for assisting a member in the Pass the Torch Program, including study skills, college policies, professionalism, ethics and role modeling of successful student behavior. Techniques of subject specific tutoring skills, with attention given to diverse learning styles. Practice of these skills through sample student works and instructor assignments and, when applicable, content-specific suggestions from the member's instructor.

**PSE 301      CAREER DEVELOPMENT THROUGH CLASSROOM OBSERVATIONS      .5 Unit  
PSE 301X      1 Unit  
PSE 301Y      1.5 Units  
PSE 301Z      2 Units**

Non-degree applicable credit course.

Any combination of PSE 301-301Z may be taken 6 times for credit, however, no single course may be taken more than 6 times for credit. 1.5 hours laboratory for each .5 unit of credit.

Students will refresh and develop their outlook on teaching and learning by observing exemplary faculty in a classroom setting. Students will also review the syllabus of any observed class for further insights. The faculty to be observed must first give their permission prior to the observation. Additionally, students must submit a schedule of classes to be observed to the instructor of record that detail the required 6 hours of classroom observation for each .5 unit of credit.

**PSE 302      PEDAGOGICAL LEADERSHIP      1 Unit**

Non-degree applicable credit course.

May be taken 6 times for credit.

1 hour lecture.

Leadership or pedagogical styles appropriate for Physical Science, Mathematics and Engineering courses. Specific topics to be determined by instructor.

## PHYSICS

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**PHYS 2A GENERAL PHYSICS 5 Units**  
Prerequisite: MATH 51 or higher placement on the Foothill College Placement Exam.

4 hours lecture, 1 hour lecture-laboratory, 2 hours laboratory, 2 hours TBA.

Lectures, demonstrations, and problems in mechanics; properties of matter. [Foothill GE: Natural Sciences; Transferability: UC/CSU]

**PHYS 2B GENERAL PHYSICS 5 Units**  
Prerequisite: PHYS 2A.

4 hours lecture, 1 hour lecture-laboratory, 2 hours laboratory, 2 hours TBA.

Lectures, demonstrations, and problems in thermal physics; electricity and magnetism. [Transferability: UC/CSU]

**PHYS 2C GENERAL PHYSICS 5 Units**  
Prerequisite: PHYS 2B.

4 hours lecture, 1 hour lecture-laboratory, 2 hours laboratory, 2 hours TBA. Lectures, demonstrations, and problems in waves; optics; introductory quantum mechanics; atomic physics; and nuclear physics. [Transferability: UC/CSU]

**PHYS 4A GENERAL PHYSICS (CALCULUS) 6 Units**  
Prerequisite: High school physics or PHYS 6 (highly recommended), or PHYS 2A.

Corequisite: Completion of or concurrent enrollment in MATH 1B. 5 hours lecture, 1 hour lecture-laboratory, 2 hours laboratory, 2 hours TBA.

Mathematics-physics interrelationships, classical Newtonian mechanics. [Foothill GE: Natural Sciences; Transferability: UC/CSU]

**PHYS 4B GENERAL PHYSICS (CALCULUS) 6 Units**  
Prerequisite: PHYS 4A.

Corequisite: Completion of or concurrent enrollment in MATH 1C. 5 hours lecture, 1 hour lecture-laboratory, 2 hours laboratory, 2 hours TBA.

Classical electricity and magnetism. [Transferability: UC/CSU]

**PHYS 4C GENERAL PHYSICS (CALCULUS) 6 Units**  
Prerequisite: PHYS 4A.

Corequisite: Completion of or concurrent enrollment in MATH 1C. 5 hours lecture, 1 hour lecture-laboratory, 2 hours laboratory, 2 hours TBA.

Thermodynamics; mechanical, acoustical, and electromagnetic waves; optics. [Transferability: UC/CSU]

**PHYS 4D GENERAL PHYSICS (CALCULUS) 6 Units**  
Prerequisite: PHYS 4B and 4C.

Corequisite: Completion of or concurrent enrollment in MATH 2A. 5 hours lecture, 1 hour lecture-laboratory, 2 hours laboratory, 2 hours TBA.

Special relativity, statistical mechanics, quantum mechanics, atomic physics, nuclear physics, particle physics. [Transferability: UC/CSU]

**PHYS 6 INTRODUCTORY PHYSICS 5 Units**  
Prerequisite: MATH 49.

Corequisite: Completion of or concurrent enrollment in MATH 1A. 5 hours lecture.

Lectures, demonstrations, and problems in mechanics, electricity and magnetism. [Transferability: UC/CSU]

**PHYS 12 INTRODUCTION TO MODERN PHYSICS 5 Units**

5 hours lecture. Non-mathematical introduction to the ideas of modern physics designed for those not majoring in the physical sciences. After a brief introduction to the history and ideas of physics in general, the course focuses on three areas of modern physics which have revolutionized our understanding

of nature: thermodynamics and the concept of entropy, Einstein's special and general theories of relativity, and quantum mechanics. The key ideas in these areas are explained using demonstrations, analogies, and examples drawn, whenever possible, from the student's own experience. We also examine (briefly) the impact these physics ideas have had on other fields, such as poetry, literature and music. No background in science or math is assumed. [Transferability: UC/CSU]

**PHYS 34H HONORS INSTITUTE SEMINAR IN PHYSICS 1 Unit**

Formerly: PHYS 34

Prerequisite: Honors Institute participant.

Advisory: Not open to students with credit in PHYS 34.

May be taken 3 times for credit.

1 hour lecture.

A seminar in directed readings, discussions and projects in physics. Specific topics to be determined by the instructor. [Transferability: CSU; UC credit may be granted after transfer and upon portfolio review.]

**PHYS 36 SPECIAL PROJECTS IN PHYSICS 1 Unit**  
**PHYS 36X 2 Units**  
**PHYS 36Y 3 Units**

Advisory: Previous experience in physics.

Any combination of PHYS 36–36Y may be taken 6 times for credit, however, no single course may be taken more than 6 times for credit. 3 hours laboratory for each unit of credit.

Advanced readings and projects in physics. Specific projects determined on consultation with instructor. Written reports required. Enrollment generally limited to those students enrolled in the PHYS 4 sequence. [Transferability: CSU]

**PHYS 100 PHYSICS STUDENT ASSISTANCE .5 Unit**  
**PHYS 100X 1 Unit**  
**PHYS 100Y 2 Units**

Advisory: Pass/No Pass.

Corequisites: Concurrent enrollment in any physics course.

Any combination of PHYS 100–100Y may be taken 6 times for credit, however, no single course may be taken more than 6 times for credit. 1.5 hours laboratory for each .5 unit of credit.

Individual study and/or guidance provided for students who desire or require additional assistance in any of the Physics courses.

## POLITICAL SCIENCE

Business & Social Sciences (650) 949-7322  
www.foothill.edu/bss/

**POLI 1 POLITICAL SCIENCE: INTRODUCTION TO AMERICAN GOVERNMENT & POLITICS 5 Units**

Advisory: Eligibility for ENGL 1A or ESLL 26.

5 hours lecture.

Contemporary analysis of the structure and function of American Government, its constitutional and political systems at the federal, state and local levels. Focus on the following topics: paradigms in the social sciences, models of justice and models of democracy, evolution of American elites and American constitutionalism, role of media in American political culture, political parties and political socialization, concept of the separation of powers: legislative, executive and judiciary branches, protest and protest movements, Civil Rights Acts of 1964 and 1991. [Foothill GE: Social & Behavioral Sciences; Transferability: UC/CSU]

**POLI 2 COMPARATIVE GOVERNMENT & POLITICS 4 Units**

Advisory: Eligibility for ENGL 1A or ESLL 26; not open to students with credit in POLI 2H.

4 hours lecture.

Introductory analysis of comparative governmental systems and politics emphasizing a variety of political forms, theory of political differentiation and development, and patterns, processes and regularities among political systems in developing and developed world. [Foothill GE: Social & Behavioral Sciences; Transferability: UC/CSU]

**POLI 2H HONORS COMPARATIVE GOVERNMENT & POLITICS 4 Units**  
**Prerequisite:** Eligibility for ENGL 1A or ESLL 26; Honors Institute participant.  
**Advisory:** Not open to students with credit in POLI 2.  
**4 hours lecture.**  
 Introductory analysis of comparative governmental systems and politics emphasizing a variety of political forms, theory of political differentiation and development, and patterns, processes and regularities among political systems in developing and developed world. As an honors course, it is a full seminar with advanced teaching methods focusing on major writing, reading, and research assignments, student class presentations, group discussions and interactions. [Foothill GE: Social & Behavioral Sciences; Transferability: UC/CSU]

**POLI 3 INTRODUCTION TO POLITICAL PHILOSOPHY/POLITICAL THEORY 5 Units**  
**Advisory:** Eligibility for ENGL 1A or ESLL 26; not open to students with credit in POLI 3H.  
**5 hours lecture.**  
 Analysis of the history of political thought, the development of forms of political ideologies and their manifestation in forms of the state. Philosophical formulations of concepts of state of nature, natural law, natural rights, civil and political society explored as integral parts of philosophies of: Plato and Aristotle, Augustine and Aquinas, Machiavelli and Hobbes, Locke and Rousseau, Bentham and Mill, Hegel, Marx, and Antonio Gramsci. [Foothill GE: Social & Behavioral Sciences; Transferability: UC/CSU]

**POLI 3H HONORS INTRODUCTION TO POLITICAL PHILOSOPHY/POLITICAL THEORY 5 Units**  
**Prerequisite:** Eligibility for ENGL 1A or ESLL 26; Honors Institute participant.  
**Advisory:** Not open to students with credit in POLI 3.  
**5 hours lecture.**  
 Analysis of the history of political thought, the development of various forms of political ideologies and their manifestation in forms of the state. Philosophical formulations of concepts of state of nature, natural law, natural rights, civil and political society explored as integral parts of political philosophies of: Plato and Aristotle, Augustine and Aquinas, Machiavelli and Hobbes, Locke and Rosseau, Bentham and Mill, Hegel, Marx and Gramsci. As an Honors Course, it is a full seminar with advanced teaching methods focusing on major writing, reading, and research assignments, student class presentations, group discussions and interactions. [Foothill GE: Social & Behavioral Sciences; Transferability: UC/CSU]

**POLI 9 POLITICAL ECONOMY 4 Units**  
**Advisory:** Not open to students with credit in ECON 9, 9H or POLI 9H.  
**4 hours lecture.**  
 Overview of political economy emphasizing the interplay between economics and politics in the formulation of public policy. Policy issues of current significance emphasized. [Foothill GE: Social & Behavioral Sciences; Transferability: UC/CSU]

**POLI 9H HONORS POLITICAL ECONOMY 4 Units**  
**Prerequisite:** Honors Institute participant.  
**Advisory:** Not open to students with credit in ECON 9, 9H or POLI 9; eligibility for ENGL 1A or ESLL 26.  
**4 hours lecture.**  
 Overview of political economy emphasizing the interplay between Economics and politics in the formulation of public policy. Policy issues of current significance emphasized. As an honors course, it is a full thematic seminar with advanced teaching methods focusing on extensive writing, reading, and research assignments, student lectures, group discussions and interactions. Distinguishing features include: heightened focus on and evaluation of global objectives and components of developed and developing nations, increased depth of analysis and breadth of examination, higher level of student critical thinking. Expanded learning outcomes and fuller description of these focused elements. [Transferability: UC/CSU]

**POLI 15 INTERNATIONAL RELATIONS/ WORLD POLITICS 4 Units**  
**Advisory:** Eligibility for ENGL 1A or ESLL 26; not open to students with credit in POLI 15H.  
**4 hours lecture.**  
 Analysis of the basic elements of international relations, including the factors of sovereignty, nationalism, and national policies. The international struggle for hegemony and the impact of terrorism on world politics are systematically examined in the context of an increasingly unipolar world. [Foothill GE: Social & Behavioral Sciences; Transferability: UC/CSU]

**POLI 15H HONORS INTERNATIONAL RELATIONS/WORLD POLITICS 4 Units**  
**Prerequisite:** Eligibility for ENGL 1A or ESLL 26; Honors Institute participant.  
**Advisory:** Not open to students with credit in POLI 15.  
**4 hours lecture.**  
 Analysis of the theoretical formulations of international relations including factors of sovereignty and nationalism. Systematic evaluation of the contending perspectives of the international political economy, international relations theory, and the struggle for global hegemony in world politics within a unipolar world. As an Honors Course, it is a full seminar with advanced teaching methods focusing on major writing, reading, and research assignments, student class presentations, group discussions and interactions. [Foothill GE: Social & Behavioral Sciences; Transferability: UC/CSU]

**POLI 34H HONORS INSTITUTE SEMINAR IN POLITICAL SCIENCE 1 Unit**  
**Formerly: POLI 34**  
**Prerequisite:** Honors Institute participant.  
**Advisory:** Not open to students with credit in POLI 34.  
**1 hour lecture.**  
 A seminar in directed readings, discussions and projects in political science. Specific topics to be determined by the instructor. [Transferability: CSU; UC credit may be granted after transfer and upon portfolio review]

**POLI 35 DEPARTMENT HONORS PROJECTS IN POLITICAL SCIENCE 1 Unit**  
**May be taken 6 times for credit.**  
**1 hour lecture.**  
 Seminar in readings, research, critical techniques and practice. Specific topics vary. [Transferability: CSU]

**POLI 36 SPECIAL PROJECTS IN POLITICAL SCIENCE 1 Unit**  
**POLI 36X 2 Units**  
**POLI 36Y 3 Units**  
**POLI 36Z 4 Units**  
**Any combination of POLI 36–36Z may be taken 6 times for credit, however, no single course may be taken more than 6 times for credit.**  
**1 hour lecture for each unit of credit.**  
 Advanced readings, research and/or project in political science. Specific topics determined in consultation with instructor. [Transferability: CSU]

**PRIMARY CARE ASSOCIATE**

**Biological & Health Sciences (650) 725-6959**  
[www.foothill.edu/bio/programs/primary/](http://www.foothill.edu/bio/programs/primary/)

**P C 80 FAMILY MEDICINE DIDACTIC 14 Units**  
**Prerequisite:** Admission to the Primary Care Associate Program.  
**9 hours lecture, 10 hours lecture-laboratory, 2 hours collaborative learning.**  
 Introduction to concepts of family medicine, including the recognition of signs, symptoms, and the management of common medical problems. [Transferability: CSU]

**P C 80P FAMILY MEDICINE CLINICAL 5 Units**  
**Prerequisite:** Admission to the Primary Care Associate Program.  
**10 hours laboratory, 12 hours clinic.**

Clinical experience in taking a comprehensive patient history, performing a complete physical examination, ordering and interpreting the significance of pertinent laboratory studies and appropriately recording the information in the patient's medical record. [Transferability: CSU]

**P C 81 FAMILY MEDICINE DIDACTIC 8 Units**  
**Prerequisite:** P C 80.

**8 hours lecture, 2 hours collaborative learning.**  
 Expansion of medical concepts presented in PC 80 with a particular focus on the impact of disease on family functions, women's health care, and diseases related to cardiovascular and neurological systems. [Transferability: CSU]

**P C 81P FAMILY MEDICINE CLINICAL 8 Units**  
**Prerequisite:** P C 80P.

**27 hours clinic, 12 hours laboratory, 2 hours field study.**  
 Clinical experience through which the student develops clinical skills of a PA or NP: Taking medical histories, performing physical examinations, ordering and performing laboratory studies, interpreting findings, recording patient information, and reporting findings to the physician preceptor. [Transferability: CSU]

**P C 82 FAMILY MEDICINE DIDACTIC 8 Units**  
**Prerequisite:** P C 81.

**8 hours lecture, 2 hours collaborative learning.**  
 Expansion of medical concepts presented in PC 81 with a particular focus on common problems related to geriatrics, chronic disease management, outpatient care, occupational health, oncology, human immunodeficiency virus, musculoskeletal problems, and approaches to these conditions. [Transferability: CSU]

**P C 82P FAMILY MEDICINE CLINICAL 9 Units**  
**Prerequisite:** P C 81P.

**32 hours preceptor-clinic, 12 hours laboratory, 2 hours field study.**  
 This is a continuation of PC 81P. [Transferability: CSU]

**P C 83 FAMILY MEDICINE DIDACTIC 6 Units**  
**Prerequisite:** P C 82.

**6 hours lecture, 2 hours collaborative learning.**  
 Integration of medical concepts presented in previous didactic courses and the skills needed to develop a differential diagnosis, assessment, and plan for diseases or problems related to emergency medicine/surgery, psychiatry, musculoskeletal problems, genitourinary, human sexuality, pediatrics. [Transferability: CSU]

**P C 83P FAMILY MEDICINE CLINICAL 9 Units**  
**Prerequisite:** P C 82P.

**32 hours preceptor-clinic, 12 hours laboratory, 2 hours field study.**  
 Continuation of PC 82P. [Transferability: CSU]

**P C 84 FAMILY MEDICINE DIDACTIC 8 Units**  
**Prerequisite:** P C 83.

**8 hours lecture, 2 hours collaborative learning.**  
 Integration of medical concepts presented in previous didactic courses and clinical instruction. Emphasis will be placed on synthesis and application of medical knowledge in the management of common clinical conditions encountered in primary care and family practice settings. [Transferability: CSU]

**P C 84P FAMILY MEDICINE CLINICAL 9 Units**  
**Prerequisite:** P C 83P.

**32 hours preceptor-clinic, 12 hours laboratory, 2 hours field study.**  
 This is a continuation of P C 83P. [Transferability: CSU]

**P C 85 SPECIAL CLINICAL PROJECTS IN 4 Units**  
**P C 85X PRIMARY CARE MEDICINE 5 Units**  
**P C 85Y 6 Units**

**5 hours clinical practicum for each unit of credit.**  
 A clinical preceptorship designed to provide experience in selected medical settings. [Transferability: CSU]

**P C 86 SPECIAL DIDACTIC PROJECTS IN 4 Units**  
**P C 86X PRIMARY CARE MEDICINE 5 Units**  
**P C 86Y 6 Units**

**Prerequisite:** Admissions to the Primary Care Associate Program.  
**May be taken 6 times for credit.**  
**5 hours didactic for each unit of credit.**  
 Projects in selected medical topics in primary care medicine. [Transferability: CSU]

**P C 87 EXTENDED CLINICAL INTERNSHIP 1 Unit**  
**May be taken 6 times for credit.**

**5 hours laboratory.**  
 Extended clinical internship. Offers additional period of clinical exposure for students needing further clinical time to develop requisite skills. [Transferability: CSU]

**P C 88 EXTENDED CLINICAL INTERNSHIP 2 Units**  
**May be taken 6 times for credit.**

**10 hours laboratory.**  
 Extended clinical internship. Offers additional period of clinical exposure for students needing further clinical time to develop requisite skills. Offered each quarter. [Transferability: CSU]

**P C 89 EXTENDED CLINICAL INTERNSHIP 3 Units**  
**May be taken 6 times for credit.**

**15 hours laboratory.**  
 Extended clinical internship. Offers additional period of clinical exposure for students needing further clinical time to develop requisite skills. [Transferability: CSU]

**P C 190 DIRECTED STUDY IN PRIMARY .5 Unit**  
**P C 190X CARE MEDICINE 1 Unit**  
**P C 190Y 1.5 Units**  
**P C 190Z 2 Units**

**Advisory:** Pass / No Pass  
 Any combination of P C 190–190Z may be taken 6 times for credit, however, no single course may be taken more than 6 times for credit.  
**.5 hour lecture, 1.5 hour laboratory for each unit of credit.**  
 For students who desire or require additional help in attaining comprehension and competency in learning skills.

## PSYCHOLOGY

**Business & Social Sciences**

**(650) 949-7322**  
**www.foothill.edu/bss/**

**PSYC 1 GENERAL PSYCHOLOGY 5 Units**  
**5 hours lecture.**

Exploration of primary areas, problems and concepts of psychology. Factors influencing human behavior and experience. Methodology, physiological basis, learning cognitive processes, perception, motivation and emotion, personality, pathology, treatment, and social processes. Area overview and emphasis on experimental, personality, developmental and humanistic psychology. [Foothill GE: Social & Behavioral Sciences; Transferability: UC/CSU]

**PSYC 4 INTRODUCTION TO PSYCHOBIOLOGY 4 Units**

**4 hours lecture.**  
 Central and peripheral nervous system processes underlying the behavior of humans and animals. Examines anatomical and physiological components of behavior and consciousness, basic methods of biopsychology, and neural mechanism and sensory processes associated with learning, perception, motivation, emotion and speech. [Foothill GE: Social & Behavioral Sciences; Transferability: UC/CSU]

**PSYC 10 INTRODUCTION TO SOCIAL RESEARCH 4 Units**

**Advisory: Not open to students with credit in SOC 10. 4 hours lecture.**

Introduction to the most common types of research on human behavior: experimentation, survey research, and field research. Examination of the logic of each technique, applications of techniques using actual research studies; limitations of studying human behavior. [Foothill GE: Social & Behavioral Sciences; Transferability: UC/CSU]

**PSYC 14 CHILDHOOD & ADOLESCENCE 4 Units**

**4 hours lecture.**

Intellectual, social, and personality development during childhood and adolescence. [Foothill GE: Social & Behavioral Sciences; Transferability: UC/CSU]

**PSYC 21 PSYCHOLOGY OF WOMEN: SEX & GENDER DIFFERENCES 4 Units**

**Advisory: Not open to students with credit in SOC 21 or WMN 21. 4 hours lecture.**

Survey of gender issues based upon psychological and sociological theories and research. Examination of sex role stereotyping and differences. Developmental considerations. [Foothill GE: Social & Behavioral Sciences; Transferability: UC/CSU]

**PSYC 22 PSYCHOLOGY OF PREJUDICE 4 Units**

**4 hours lecture.**

Psychological aspects of group interaction. The complex psychological patterns that develop among different majority and non-majority ethnic and racial groups resulting from the effects of overt and covert discrimination. [Foothill GE: United States Cultures & Communities, Social & Behavioral Sciences; Transferability: UC/CSU]

**PSYC 25 INTRODUCTION TO ABNORMAL PSYCHOLOGY 4 Units**

**4 hours lecture.**

Principles of general psychology applied to the field of psychopathology. Survey of neurotic and psychotic behavior disorders and their major causes and treatment. [Foothill GE: Social & Behavioral Sciences; Transferability: UC/CSU]

**PSYC 30 SOCIAL PSYCHOLOGY 4 Units**

**Advisory: Not open to students with credit in SOC 30. 4 hours lecture.**

Survey of sociological and psychological theories and research studies examining the influence of society and social groups on the individual and the influence of the individual on society and social groups. Examination of overlapping and differing contents, level of analysis and methodologies. Focus on human interaction and the shaping of diverse and commonly-shared attitudes, beliefs and world views by society, culture and social groups. Assessment of classic and current social psychological studies. [Foothill GE: Social & Behavioral Sciences; Transferability: UC/CSU]

**PSYC 33 INTRODUCTION TO THE CONCEPTS OF PERSONALITY 4 Units**

**4 hours lecture.**

Introduction to the determinants of personality and the dynamics of personality as manifested in personal and social behavior. [Foothill GE: Social & Behavioral Sciences; Transferability: UC/CSU]

**PSYC 34H HONORS INSTITUTE SEMINAR IN PSYCHOLOGY 1 Unit**

**Formerly: PSYC 34**

**Prerequisite: Honors Institute participant.**

**Advisory: Not open to students with credit in PSYC 34.**

**1 hour lecture.**

A seminar in directed readings, discussions and projects in psychology. Specific topics to be determined by the instructor. [Transferability: CSU; UC credit may be granted after transfer and upon portfolio review.]

**PSYC 35 DEPARTMENT HONORS PROJECTS IN PSYCHOLOGY 1 Unit**

**May be taken 6 times for credit.**

**1 hour lecture.**

Seminar in readings, research, critical techniques and practice. Specific topics vary. [Transferability: CSU]

**PSYC 36 SPECIAL PROJECTS IN PSYCHOLOGY 1 Unit**

**PSYC 36X 2 Units**

**PSYC 36Y 3 Units**

**PSYC 36Z 4 Units**

**Any combination of PSYC 36–36Z may be taken 6 times for credit, however, no single course may be taken more than 6 times for credit. 1 hour lecture for each unit of credit.**

Advanced readings, research and/or project in psychology. Specific topics determined in consultation with instructor. [Transferability: CSU]

**PSYC 40 HUMAN DEVELOPMENT 4 Units**

**4 hours lecture.**

Intellectual, social and personality development through the life span. [Foothill GE: Social & Behavioral Sciences; Transferability: UC/CSU]

**PSYC 49 HUMAN SEXUALITY 4 Units**

**4 hours lecture.**

Current factual analysis of and information on sexual functioning and sexuality. Basic questions regarding sexual behavior, sexual roles, anatomy and physiology of sexual response, social patterns of sexual behavior, sexual adjustment and maladjustment. Includes treatment of sexual dysfunction, sex variance, the reproductive span of contraception-pregnancy-birth, sexual disease. Legal, political and cultural aspects of sexual behavior. [Foothill GE: Social & Behavioral Sciences; Transferability: UC/CSU]

**PSYC 50 PSYCHOLOGY OF CRISIS 5 Units**

**Advisory: PSYC 1.**

**4 hours lecture, 3 hours laboratory.**

An Introduction to theory and strategies of crisis intervention, including exploration of ethical and multicultural issues. Models of disaster response and crisis intervention examined. Guidelines and role play of how crisis workers may react to victims of trauma, safety issues, as well as coping with provider burnout. Discussion and demonstration of critical incident debriefing. Observation and role play of appropriate crisis intervention techniques for different field conditions. Students participate in training or working with local crisis management agencies, as part of required field experience. [Transferability: CSU]

**PSYC 55 PSYCHOLOGY OF SPORTS 4 Units**

**4 hours lecture.**

Basis and catalyst for peak sports performance. Body/mind relationship, particularly the area of peak performance in sports. Focus on relaxation, visualization, hypnosis, neuropsychology, physiology, left vs. right brain hemisphere specialization, concentration techniques, motivation, emotion and attitude improvement. [Foothill GE: Social & Behavioral Sciences; Transferability: CSU]

**RADIO**

**Fine Arts & Communication**

**(650) 949-7555**

**[www.kfjc.org/](http://www.kfjc.org/) & [www.foothill.edu/fa/](http://www.foothill.edu/fa/)**

**RAD 70 SPECIAL PROJECTS IN RADIO 1 Unit**

**RAD 70X 2 Units**

**RAD 70Y 3 Units**

**RAD 70Z 4 Units**

**Any combination of RAD 70–70Z may be taken 6 times for credit, however, no single course may be taken more than 6 times for credit. 3 hours of laboratory for each unit of credit.**

Individual projects in creative, technical or applied work in radio at KFJC or in commercial broadcasting and related industries. Enrollment is available in the Fine Arts & Communications Division office. [Transferability: CSU]

<p><b>RAD 80</b>            <b>FUNDAMENTALS OF RADIO PRODUCTION &amp; STATION OPERATION</b>            <b>3 Units</b></p> <p><b>2 hours lecture, 3.5 hours laboratory.</b> Fundamentals of radio directing and production, and the related fields of news, public affairs, sales, promotions, and management. Practical equipment use, basic studio operations and FCC regulations; entry-level terminology and industry standards. [Transferability: CSU]</p>	<p><b>RAD 91C</b>            <b>RADIO STATION SALES &amp; MARKETING III</b>            <b>3 Units</b></p> <p><b>Advisory: RAD 90A.</b> <b>1 hour lecture, 6 hours laboratory.</b> Intermediate radio sales training, marketing, promotions and publicity, and departmental operations at the Foothill College FM station. [Transferability: CSU]</p>
<p><b>RAD 81</b>            <b>HISTORY OF RADIO 1920–PRESENT</b>            <b>4 Units</b></p> <p><b>4 hours lecture.</b> A comprehensive study of the radio broadcasting industry, its origin, development, operation, regulation, and influences. [Transferability: CSU]</p>	<p><b>RAD 91D</b>            <b>RADIO STATION SALES &amp; MARKETING IV</b>            <b>3 Units</b></p> <p><b>Advisory: RAD 90A.</b> <b>1 hour lecture, 6 hours laboratory.</b> Advanced radio sales training, marketing, promotions and publicity, and departmental operations at the Foothill College FM station. [Transferability: CSU]</p>
<p><b>RAD 90A</b>            <b>NEWS &amp; INFORMATION PRODUCTION I</b>            <b>3 Units</b></p> <p><b>Advisory: Concurrent enrollment in RAD 80.</b> <b>1 hour lecture, 6 hours laboratory.</b> Beginning scripting, voicing, and recording of information programming. Introduction to news, public affairs, sports, and public service announcement production and department operations at the Foothill College FM station. [Transferability: CSU]</p>	<p><b>RAD 92A</b>            <b>RADIO PROGRAMMING &amp; PRODUCTION I</b>            <b>3 Units</b></p> <p><b>Advisory: RAD 90A.</b> <b>1 hour lecture, 6 hours laboratory.</b> Basic production studio and master control room operation. Practical experience in planning, announcing, and engineering of live on-air shifts and pre-recorded announcements and programs. [Transferability: CSU]</p>
<p><b>RAD 90B</b>            <b>NEWS &amp; INFORMATION PRODUCTION II</b>            <b>3 Units</b></p> <p><b>Prerequisite: RAD 90A.</b> <b>1 hour lecture, 6 hours laboratory.</b> Elementary scripting, voicing, and recording of informational programming. Advancement in news, public affairs, sports, public service announcement production and department operations at the Foothill College FM station. [Transferability: CSU]</p>	<p><b>RAD 92B</b>            <b>RADIO PROGRAMMING &amp; PRODUCTION II</b>            <b>3 Units</b></p> <p><b>Advisory: RAD 90A.</b> <b>1 hour lecture, 6 hours laboratory.</b> Elementary production studio and control room operation. Practical experience in the planning, announcing, and engineering of live on-air shifts and pre-recorded announcements and programs and departmental operations at the Foothill College FM station. [Transferability: CSU]</p>
<p><b>RAD 90C</b>            <b>NEWS &amp; INFORMATION PRODUCTION III</b>            <b>3 Units</b></p> <p><b>Prerequisite: RAD 90A.</b> <b>1 hour lecture, 6 hours laboratory.</b> Intermediate scripting, voicing, and recording of informational programming. Advancement in news, public affairs, sports, and public service announcement production and department operations at the Foothill College FM station. [Transferability: CSU]</p>	<p><b>RAD 92C</b>            <b>RADIO PROGRAMMING &amp; PRODUCTION III</b>            <b>3 Units</b></p> <p><b>Advisory: RAD 90A.</b> <b>1 hour lecture, 6 hours laboratory.</b> Intermediate production studio and control room operation. Practical experience in the planning, announcing, and engineering of live on-air shifts and pre-recorded announcements and programs, and departmental operations in the Foothill College FM station. [Transferability: CSU]</p>
<p><b>RAD 90D</b>            <b>NEWS &amp; INFORMATION PRODUCTION IV</b>            <b>3 Units</b></p> <p><b>Prerequisite: RAD 90A.</b> <b>1 hour lecture, 6 hours laboratory.</b> Advanced scripting, voicing, and recording of informational programming. Advancement in news, public affairs, sports, and public service announcement production and department operations at the Foothill College FM station. [Transferability: CSU]</p>	<p><b>RAD 92D</b>            <b>RADIO PROGRAMMING &amp; PRODUCTION IV</b>            <b>3 Units</b></p> <p><b>Advisory: RAD 90A.</b> <b>1 hour lecture, 6 hours laboratory.</b> Advanced production studio and control room operation. Practical experience in the planning, announcing, and engineering of live on-air shifts and pre-recorded announcements and programs, and departmental operations in the Foothill College FM station. [Transferability: CSU]</p>
<p><b>RAD 91A</b>            <b>RADIO STATION SALES &amp; MARKETING I</b>            <b>3 Units</b></p> <p><b>Advisory: RAD 90A.</b> <b>1 hour lecture, 6 hours laboratory.</b> Fundamentals of radio sales training, marketing, promotions and publicity, and departmental operations at the Foothill College FM station. [Transferability: CSU]</p>	<p><b>RAD 93A</b>            <b>MUSIC INDUSTRY RELATIONS &amp; ENGINEERING I</b>            <b>3 Units</b></p> <p><b>Advisory: RAD 90A.</b> <b>1 hour lecture, 6 hours laboratory.</b> Beginning music industry relations and engineering. Solicitation of product service, reporting to industry trade journals, producing live music performance broadcast mixes and mobile DJ appearances, and departmental operations at the Foothill College FM station. [Transferability: CSU]</p>
<p><b>RAD 91B</b>            <b>RADIO STATION SALES &amp; MARKETING II</b>            <b>3 Units</b></p> <p><b>Advisory: RAD 90.</b> <b>1 hour lecture, 6 hours laboratory.</b> Elementary radio sales training, marketing, publicity and promotions, and departmental operations at the Foothill College FM station. [Transferability: CSU]</p>	<p><b>RAD 93B</b>            <b>MUSIC INDUSTRY RELATIONS &amp; ENGINEERING II</b>            <b>3 Units</b></p> <p><b>Advisory: RAD 90A.</b> <b>1 hour lecture, 6 hours laboratory.</b> Elementary music industry relations and engineering. Soliciting product service, reporting to industry trade journals, producing live music performance broadcast mixes and mobile DJ appearances, and departmental operations at the Foothill College FM station. [Transferability: CSU]</p>

**RAD 93C MUSIC INDUSTRY RELATIONS & ENGINEERING III 3 Units**

**Advisory: RAD 90A.**  
**1 hour lecture, 6 hours laboratory.**  
 Intermediate music industry relations and engineering. Soliciting product service, reporting to industry trade journals, producing live music performance broadcast mixes and mobile DJ appearances, and departmental operations at the Foothill College FM station. [Transferability: CSU]

**RAD 93D MUSIC INDUSTRY RELATIONS & ENGINEERING IV 3 Units**

**Advisory: RAD 90A.**  
**1 hour lecture, 6 hours laboratory.**  
 Advanced music industry relations and engineering. Soliciting product service, reporting to industry trade journals, producing live music performance broadcast mixes and mobile DJ appearances, and departmental operations at the Foothill College FM station. [Transferability: CSU]

**RAD 190 DIRECTED STUDY .5 Unit**  
**RAD 190X 1 Unit**  
**RAD 190Y 1.5 Units**  
**RAD 190Z 2 Units**

**Advisory: Pass/No Pass.**  
**Any combination of RAD 190–190Z may be taken 6 times for credit, however, no single course may be taken more than 6 times for credit. .5 hour lecture, 1.5 hours laboratory for each .5 unit of credit.**  
 For students who desire or require additional help in attaining comprehension and competency in learning skills.

**RADIOLOGIC TECHNOLOGY**

**Biological & Health Sciences (650) 949-7538**  
[www.foothill.edu/bio/programs/radtech/](http://www.foothill.edu/bio/programs/radtech/)

**R T 50 ORIENTATION TO RADIATION SCIENCE TECHNOLOGIES 2 Units**

**Prerequisite: BIOL 40A, 40B and 40C or equivalent; admission to Radiologic Technology Program.**  
**2 hours lecture.**

Overview of Radiologic Technology as a career. Radiographic terminology, positioning for abdomen, vital sign assessment, introduction to x-ray protection and production, radiographic image formation, patient care, basic computer operation and Internet application. Overview of program structure and student services. [Transferability: CSU]

**R T 51A FUNDAMENTALS OF RADIOLOGIC TECHNOLOGY I 3 Units**

**Prerequisite: Admission to Radiologic Technology Program.**  
**3 hours lecture.**

Medical and Radiographic terms. Basic positioning and anatomy related to chest, abdomen, upper extremities, lower extremities, pelvis and hips. [Transferability: CSU]

**R T 51B FUNDAMENTALS OF RADIOLOGIC TECHNOLOGY II 3 Units**

**Prerequisite: R T 51A.**  
**3 hours lecture.**

Continuation of R T 51A; radiographic anatomy, positioning and procedures related to the gastrointestinal tract, urinary system and biliary system. [Transferability: CSU]

**R T 51C FUNDAMENTALS OF RADIOLOGIC TECHNOLOGY III 3 Units**

**Prerequisite: R T 51B.**  
**3 hours lecture.**

Continuation of R T 51B; radiographic anatomy, positioning and terminology, related to the skull, vertebral column, bony thorax, myelography and arthrography. [Transferability: CSU]

**R T 52A PRINCIPLES OF RADIOLOGIC TECHNOLOGY I 3 Units**

**Prerequisite: Admission to Radiologic Technology program.**  
**3 hours lecture.**

Elementary principles of X-ray physics, technique and radiation protection. [Transferability: CSU]

**R T 52B PRINCIPLES OF RADIOLOGIC TECHNOLOGY II 3 Units**

**Prerequisite: R T 52A.**  
**3 hours lecture.**

Continuation of R T 52A, including physics, technique, processing and protection. [Transferability: CSU]

**R T 52C PRINCIPLES OF RADIOLOGIC TECHNOLOGY III 3 Units**

**Prerequisite: R T 52B.**  
**3 hours lecture.**

Continuation of R T 52B. Expansion of principles of X-ray physics, technique and protection. [Transferability: CSU]

**R T 52D DIGITAL IMAGE ACQUISITION & DISPLAY 3 Units**

**Prerequisite: R T 52C.**  
**2.5 hours lecture, 1.5 hour laboratory.**

Content is designed to impart an understanding of the components, principles and operation of digital imaging systems found in diagnostic radiology. Factors that impart image acquisition, display, archiving and retrieval are discussed. Guidelines for selecting exposure factors and evaluating images within a digital system assist students to bridge between film-based and digital imaging systems. Principles of digital system quality assurance and maintenance are presented. [Transferability: CSU]

**R T 53 ORIENTATION TO RADIOLOGIC TECHNOLOGY 1 Unit**

**Prerequisite: Admission to Radiologic Technology Program.**  
**4 hours clinical laboratory.**

Orientation to radiation sciences, with emphasis on clinical participation. [Transferability: CSU]

**R T 53A APPLIED RADIOGRAPHIC TECHNOLOGY I 3 Units**

**Prerequisite: Admission to Radiologic Technology Program.**  
**16 hours clinical laboratory, 2 hours case study research.**

Clinical participation and application of basic positioning, patient care, equipment manipulation, radiation protection and image analysis. [Transferability: CSU]

**R T 53AL APPLIED RADIOGRAPHIC TECHNOLOGY LABORATORY I 1 Unit**

**Prerequisite: Admission to Radiologic Technology Program.**  
**3 hours laboratory.**

Applied radiography; includes structured lab activities in processing, film analysis, basic positioning, patient care, equipment and radiographic experiment. [Transferability: CSU]

**R T 53B APPLIED RADIOGRAPHIC TECHNOLOGY II 3 Units**

**Prerequisite: R T 53A.**  
**16 hours clinical laboratory, 2 hours case study research.**

Clinical participation and application of basic positioning, patient care, equipment manipulation, radiation protection and image analysis. [Transferability: CSU]

**R T 53BL APPLIED RADIOGRAPHIC TECHNOLOGY LABORATORY II 1 Unit**

**Prerequisite: R T 53A.**  
**3 hours laboratory.**

Continuation of structured laboratory activities in applied radiography with emphasis on clinical skill development for positioning, processing, principles of exposure, film analysis, and radiographic experiments. [Transferability: CSU]

<b>RT 53C</b>	<b>APPLIED RADIOGRAPHIC TECHNOLOGY III</b>	<b>3 Units</b>	<b>RT 62B</b>	<b>SPECIAL PROCEDURES &amp; EQUIPMENT</b>	<b>3 Units</b>
<p><b>Prerequisite:</b> R T 53B.  <b>16 hours clinical laboratory, 2 hours case study research.</b>            Clinical participation and application of basic positioning, patient care, equipment manipulation, radiation protection and image analysis. [Transferability: CSU]</p>			<p><b>Prerequisite:</b> R T 62A and 63A.  <b>3 hours lecture.</b>            Continuation of R T 62A with emphasis on radiography of the skull, facial bones, mandible, and sinuses. Advanced radiographic procedures with emphasis on angiographic, cerebral, heart and interventional procedures, angiographic equipment, radiographic anatomy and pathology. [Transferability: CSU]</p>		
<b>RT 53CL</b>	<b>APPLIED RADIOGRAPHIC TECHNOLOGY LABORATORY III</b>	<b>1 Unit</b>	<b>RT 62C</b>	<b>ADVANCED RADIOGRAPHIC POSITIONING</b>	<b>3 Units</b>
<p><b>Prerequisite:</b> R T 53B.  <b>3 hours laboratory.</b>            Continuation of structured lab skill development in positioning, technique selection, protection, clinical observation and practicum. [Transferability: CSU]</p>			<p><b>Prerequisite:</b> R T 62B and 63B.  <b>3 hours lecture.</b>            Continuation of R T 62B with emphasis in professional development, continuing education, quality control and quality assurance, non-routine positioning of the osseous system, sonography, cardiopulmonary resuscitation, and pediatric radiology. [Transferability: CSU]</p>		
<b>RT 53D</b>	<b>APPLIED RADIOLOGIC TECHNOLOGY IV</b>	<b>8 Units</b>	<b>RT 62D</b>	<b>APPLIED RADIOLOGIC TECHNOLOGY</b>	<b>1 Unit</b>
<p><b>Prerequisite:</b> R T 51C, 52C and 53C.  <b>27 hours clinical laboratory, 2 hours case study research.</b>            Clinical participation and application of basic positioning, patient care, equipment manipulation, radiation protection and image analysis. [Transferability: CSU]</p>			<p><b>Prerequisite:</b> R T 62C.  <b>6 hours clinical laboratory.</b>            Clinical experience in advanced positioning of the skull, facial bones, mastoids and sinuses with emphasis on computed tomography. [Transferability: CSU]</p>		
<b>RT 54A</b>	<b>BASIC PATIENT CARE FOR IMAGING TECHNOLOGY</b>	<b>2 Units</b>	<b>RT 63</b>	<b>ADVANCED RADIOGRAPHIC PRINCIPLES</b>	<b>3 Units</b>
<p><b>Formerly:</b> R T 50B  <b>Prerequisite:</b> R T 50.  <b>2 hours lecture.</b>            Basic concepts of patient care, including consideration for the physical and psychological needs of the patient and family. Routine and emergency patient care procedures and techniques as well as infection control protocols. [Transferability: CSU]</p>			<p><b>Prerequisite:</b> R T 62B.  <b>3 hours lecture.</b>            Special emphasis on advanced radiographic physics, technique, protection and positioning for registry examination preparation. Continued clinical experience and film analysis. [Transferability: CSU]</p>		
<b>RT 54B</b>	<b>LAW &amp; ETHICS IN MEDICAL IMAGING</b>	<b>2 Units</b>	<b>RT 63A</b>	<b>RADIOGRAPHIC CLINICAL PRACTICUM I</b>	<b>7.5 Units</b>
<p><b>Formerly:</b> R T 50A  <b>Prerequisite:</b> R T 54A.  <b>2 hours lecture.</b>            A fundamental background in ethics. The historical and philosophical basis of ethics, as well as the elements of ethical behavior in regards to clinical practice. Misconduct, malpractice, legal and professional standards and the ASRT scope of practice. [Transferability: CSU]</p>			<p><b>Prerequisite:</b> R T 52C and 53D.  <b>32 hours clinical laboratory, 2 hours case study research.</b>            Advanced radiographic positioning with emphasis on radiography of skull, facial bones, mandible, sinuses, mastoids. Special radiographic procedures related to the cranium. Pathology related to the cranium. Related clinical experience. [Transferability: CSU]</p>		
<b>RT 54C</b>	<b>RADIOGRAPHIC PATHOLOGY</b>	<b>3 Units</b>	<b>RT 63B</b>	<b>RADIOGRAPHIC CLINICAL PRACTICUM II</b>	<b>7.5 Units</b>
<p><b>Formerly:</b> R T 51D  <b>Prerequisite:</b> R T 54B.  <b>Advisory:</b> Not open to students with credit in R T 51D.  <b>3 hours lecture.</b>            Radiographic Pathology of the respiratory, osseous, fractures, urinary, gastrointestinal, hepatobiliary, central nervous, hemopoietic and endocrine systems, HSG's and associated pathologies. [Transferability: CSU]</p>			<p><b>Prerequisite:</b> R T 62A and 63A.  <b>32 hours clinical laboratory, 2 hours case study research.</b>            Special radiographic equipment, imaging modalities, and special radiographic procedures. Radiographic anatomy and pathology. Related clinical experience. [Transferability: CSU]</p>		
<b>RT 61B</b>	<b>RADIOLOGY RESEARCH PROJECT</b>	<b>1 Unit</b>	<b>RT 63C</b>	<b>RADIOGRAPHIC CLINICAL PRACTICUM III</b>	<b>7.5 Units</b>
<p><b>Prerequisite:</b> R T 62A and 63A.  <b>1 hour lecture, 2 hours case study research.</b>            Research project on a highly specialized area of radiography or other imaging modality. Individual display/research paper required. Specific topics to be determined by the instructor. [Transferability: CSU]</p>			<p><b>Prerequisite:</b> R T 62B and 63B.  <b>32 hours clinical laboratory.</b>            Continuation of R T 62B with emphasis on pediatric skull radiography, facial bone radiography, non-routine positioning of the osseous system. Quality control practices. Advanced clinical experience. [Transferability: CSU]</p>		
<b>RT 62A</b>	<b>RADIOGRAPHIC POSITIONING</b>	<b>3 Units</b>	<b>RT 63D</b>	<b>RADIOGRAPHIC CLINICAL PRACTICUM</b>	<b>7.5 Units</b>
<p><b>Prerequisite:</b> R T 52C and 53D.  <b>3 hours lecture.</b>            Specialized radiographic procedures related to Magnetic Resonance Imaging and Computerized Tomography. Computer applications related to image capture, display, storage, and distribution. Sectional anatomy of the head, neck, thorax, abdomen, pelvis, vertebral column, and extremities. [Transferability: CSU]</p>			<p><b>Prerequisite:</b> R T 62C and 63C.  <b>32 hours clinical laboratory.</b>            Special emphasis on advanced radiographic physics, technique, protection and positioning for registry examination preparation. Continued clinical experience and film analysis. [Transferability: CSU]</p>		

**RT 64 FLUOROSCOPY 4.5 Units**  
**Prerequisite:** R T 52C or current certification in Radiologic Technology or Radiation Therapy Technology.  
**May be taken 3 times for credit.**  
**4 hours lecture, 1.5 hours laboratory for a 10 week session.**  
 The fluoroscopy course includes the principles of radiation protection and fluoroscopic equipment, application of special equipment, illumination and photometry, anatomy and physiology of the eye and relationship of internal organs. [Transferability: CSU]

**RT 65 MAMMOGRAPHY 3 Units**  
**Prerequisite:** R T 63 or current certification in Radiologic Technology.  
**May be taken 3 times for credit.**  
**2.5 hours lecture, 1.5 hours laboratory.**  
 Technical and procedural aspects of mammography including radiation protection and quality assurance aspects, breast anatomy, pathology, positioning and mass localization. Successful completion of this course entitles the student to a Certificate of Completion of a 40 hour course in mammography education. [Transferability: CSU]

**RT 71 ADVANCED CLINICAL EXPERIENCE: 8 Units**  
**MAGNETIC RESONANCE IMAGING**  
**Prerequisite:** ARRT and CRT Certification; Foothill sectional anatomy course; current CPR certification.  
**40 hours clinical laboratory.**  
 Designed as a practicum in a magnetic resonance department. Practical experience is implemented to expose the student to the principles of MRI with emphasis on mastery of the knowledge, insight, and skills required to perform MRI procedures. [Transferability: CSU]

**RT 72 VENIPUNCTURE 2 Units**  
**Prerequisite:** R T 51C or current Certification in Radiologic Technology; current Health Care Provider CPR card.  
**1.5 hour lecture, 1.5 hours laboratory.**  
 Principles and practices of intravenous injection. Includes theory, demonstration and application of venipuncture equipment and solutions, puncture techniques, complications, and post-puncture care. Meets state of California qualifications for didactic certification in venipuncture for radiologic technologists. [Transferability: CSU]

**RT 74 ADVANCED CLINICAL EXPERIENCE: 8 Units**  
**COMPUTED TOMOGRAPHY**  
**40 hours clinical laboratory.**  
 Designed as a practicum in a computed tomography department. Practical experience is implemented to expose the post-graduate radiologic technology student to the principles of CT with emphasis on mastery of the knowledge, insight and skills required to perform CT procedures. [Transferability: CSU]

**RT 200L RADIOLOGIC TECHNOLOGY AS 1 Unit**  
**A CAREER**  
**Non-degree applicable credit course.**  
**2 hours lecture-laboratory.**  
 Introduction to the radiological sciences and their role in health care. Focus on the use of ionizing radiation in the diagnosis and treatment of disease and on the health professionals responsible for providing this medical specialty. Discussion of requirements for the Radiologic Technology Program. (6 hours hospital observation included).

## REAL ESTATE

**Business & Social Sciences (650) 949-7322**  
**www.foothill.edu/bss/**

**RE 50 REAL ESTATE PRINCIPLES 4 Units**  
**4 hours lecture.**  
 Fundamental principles, economics, law, working concepts, forms, and terminology. California real estate law as preparation for the salesman and broker examinations. [Transferability: CSU]

**RE 51 REAL ESTATE PRACTICES 4 Units**  
**Advisory:** R E 50 or a current California Real Estate sales or broker's license.  
**4 hours lecture.**  
 Emphasizes day-to-day practical knowledge needed by persons engaged in the real estate business; procedures, forms, contracts; licensing laws; State of California Code of Professional Responsibility; and NAR Code of Ethics. [Transferability: CSU]

**RE 52A LEGAL ASPECTS OF REAL ESTATE I 4 Units**  
**Advisory:** R E 50.  
**4 hours lecture.**  
 California real property laws with emphasis on practical application. Illustrative California court cases and examples used for class discussions. Subjects covered include sources of real estate law; classes of property; fixtures; easements; estates or interests in real property; contracts of sale; covenants; conditions and restrictions. Mandatory for all real estate broker applicants. [Transferability: CSU]

**RE 53 REAL ESTATE FINANCE 4 Units**  
**4 hours lecture.**  
 Regulations and procedures for financing real estate; types of lenders; methods of qualifying for loans; uses of mortgages, trust deeds, leases, common stock, bonds; financial analysis of real properties. [Transferability: CSU]

**RE 54 REAL ESTATE ECONOMICS 4 Units**  
**4 hours lecture.**  
 Economic factors affecting real estate; urban development, renewal and regulation of land uses; business fluctuations and real estate cycles; mortgage market; commercial, industrial and residential income properties and trends; rural and special purposes properties and trends. [Transferability: CSU]

**RE 56A REAL ESTATE APPRAISAL I 4 Units**  
**Advisory:** R E 50.  
**4 hours lecture.**  
 Introduction to principles of real estate valuation. Appraisal profession and process: data collection, methods, statistical analysis, the appraisal report, ethics. Emphasis on residential construction. Qualifies for California Appraiser Certification licensing requirements and broker's licenses. [Transferability: CSU]

**RE 56B REAL ESTATE APPRAISAL II 4 Units**  
**Prerequisite:** R E 56A.  
**4 hours lecture.**  
 Advanced principles and practices of real estate valuation. Emphasis on appraising income property. Data collection, analysis, and reporting for commercial, apartment house, industrial, and vacant land. Qualifies for California Appraisal Certification licensing requirements and for broker's license requirements. [Transferability: CSU]

**RE 59 SURVEY OF REAL ESTATE 4 Units**  
**PROPERTY MANAGEMENT**  
**Advisory:** R E 50.  
**4 hours lecture.**  
 Successful techniques and practices in the management of income property from acquisition to disposal; neighborhood analyses, rent schedules, renting, credit, collections, evictions, maintenance and rehabilitation; insurance, tax considerations, depreciation schedules, pitfalls in purchase of income property. [Transferability: CSU]

**RE 61 INTRODUCTION TO REAL 4 Units**  
**ESTATE INVESTMENTS**  
**4 hours lecture.**  
 Basic concepts and ideas concerning real estate investment for the beginning investor. How to evaluate an investment in terms of personal goals, return of investment, return on investment, tax advantages, and long-range trends. Methods of financing and managing real estate investments. [Transferability: CSU]

**RE 73 COMMERCIAL REAL ESTATE FINANCE & INVESTMENT 4 Units**  
 4 hours lecture.  
 Fundamental principles of finance and investment in local and regional commercial real estate, emphasizing banking, loans, underwriting, appraisal, lease preparation and renting. [Transferability: CSU]

## RESPIRATORY THERAPY TECHNOLOGY

**Biological & Health Sciences (650) 949-7538**  
[www.foothill.edu/bio/programs/respther/](http://www.foothill.edu/bio/programs/respther/)

**RSPT 50A RESPIRATORY THERAPY PROCEDURES 4.5 Units**

**Prerequisite:** Admission to the Respiratory Therapy Program.  
**Advisory:** Eligibility for ESLL 26 or ENGL 1A.  
**Corequisite:** RSPT 52.

3 hours lecture, 5 hours laboratory  
 Basic hospital and respiratory therapy procedures. Vital signs, compressed gas equipment, oxygen therapy, medical asepsis, bedside pulmonary function testing, disaster and emergency procedures, back safety. [Transferability: CSU]

**RSPT 50B INTRODUCTION TO PROCEDURES & HOSPITAL ORIENTATION 6 Units**

**Prerequisite:** RSPT 50A and 54; CPR certification (Health Provider C).  
**Advisory:** RSPT 51A.

3 hours lecture, 4.5 hours laboratory, 5 hours clinic, 2.5 hours skill development.

Introduction to hospital and patient care, administration of hyperinflation therapy, humidity and aerosol therapy, chest physiotherapy techniques, use of bag/mask unit, infection control procedures. [Transferability: CSU]

**RSPT 50C THERAPEUTICS & INTRODUCTION TO MECHANICAL VENTILATION 4.5 Units**

**Prerequisite:** RSPT 50B and 53A.  
 2 hours lecture, 2 hours laboratory, 10 hours clinic, 1.5 hours lecture-laboratory.

Practice of skills in the clinic setting. Topics to be covered include IPPB, IPV, as well as introduction to invasive and non-invasive mechanical ventilation. [Transferability: CSU]

**RSPT 51A INTRODUCTION TO RESPIRATORY ANATOMY & PHYSIOLOGY 2 Units**

**Prerequisite:** Admission to the Respiratory Therapy Program.  
 2 hours lecture.

Anatomy of the respiratory system, ventilation, diffusion of pulmonary gases, circulatory system, and oxygen transport. [Transferability: CSU]

**RSPT 51B RESPIRATORY PHYSIOLOGY 3 Units**

**Prerequisite:** RSPT 51A or equivalent.

3 hours lecture.  
 Respiratory physiology; normal and altered lung physiology; ventilation-perfusion relationships; control of ventilation; renal, aging, exercise, altitude, high pressure effects on physiology; and arterial blood gas interpretation and acid-base physiology. [Transferability: CSU]

**RSPT 51C PATIENT ASSESSMENT & PULMONARY DISEASE 4.5 Units**

**Prerequisite:** BIOL 41.  
**Corequisite:** RSPT 51B.

4 hours lecture, 1 hour laboratory, .5 hour lecture-laboratory.  
 Physiological approach to the etiology, management, and prognosis of the various respiratory diseases. Utilization of physical examination, chest X-ray and basic clinical laboratory tests in the diagnosis and treatment of pulmonary disease. [Transferability: CSU]

**RSPT 51X CARDIOPULMONARY ANATOMY, PHYSIOLOGY & PATHOLOGY 4 Units**

**Prerequisite:** Admission to the Upgrade Respiratory Therapy Program.  
 May be taken 3 times for credit.

4 hours lecture.  
 Cardiopulmonary anatomy; respiratory physiology; respiratory lung mechanics; normal and altered lung physiology; ventilation-perfusion relationships; arterial blood gas interpretation and acid base balance; clinical laboratory tests; and cardiopulmonary disease. [Transferability: CSU]

**RSPT 52 APPLIED SCIENCE FOR RESPIRATORY THERAPY 3 Units**

**Prerequisite:** CHEM 25 or 30A; MATH 220, or high school chemistry or equivalent.

3 hours lecture.  
 Basic mathematics and science principles applicable to Respiratory Therapy. Includes algebra review, metric system, behavior of matter, forces, acids and bases, and electrical safety. [Transferability: CSU]

**RSPT 53A INTRODUCTION TO RESPIRATORY THERAPY PHARMACOLOGY 2 Units**

**Prerequisite:** MATH 220.  
**Advisory:** Concurrent enrollment in RSPT 50B.

2 hours lecture.  
 An in-depth study of drug groups commonly used in the treatment of airway obstruction. [Transferability: CSU]

**RSPT 53B ADVANCED RESPIRATORY THERAPY PHARMACOLOGY 2 Units**

**Prerequisite:** RSPT 53A.  
**Corequisite:** RSPT 60A.

2 hours lecture.  
 An in-depth study of drug groups commonly encountered in intensive respiratory care. [Transferability: CSU]

**RSPT 54 ORIENTATION TO RESPIRATORY CARE 1.5 Units**

**Prerequisite:** Admission to Respiratory Therapy Program.  
 1 hour lecture, 2 hours laboratory, 1 hour field experience.  
 Orientation to health care with specific emphasis on respiratory care. Orientation to Respiratory Therapy Program. Current issues in American medical care. Professionalism; ethics; legal issues; death, dying and loss; communication skills; medical terminology; cultural diversity. [Transferability: CSU]

**RSPT 55A-G DIRECTED STUDIES IN RESPIRATORY THERAPY I .5 Unit**

2 hours laboratory.  
 Media instruction and evaluation in topics paralleling content taught in courses in the Respiratory Therapy Program. Offered each quarter. [Transferability: CSU]

**RSPT 60A CARDIOLOGY FOR RESPIRATORY THERAPISTS 2 Units**

**Prerequisite:** RSPT 61A.  
 2 hours lecture.  
 Electrocardiogram and rhythm recognition. Invasive and non-invasive hemodynamic monitoring. Cardiac diagnostic and therapeutic procedures. Fluid balance. [Transferability: CSU]

**RSPT 60B ADVANCED CARDIAC LIFE SUPPORT 2 Units**

**Prerequisite:** RSPT 53B and 60A.  
 2 hours lecture.  
 Preparation for Advanced Cardiac Life Support Certification. Case studies. [Transferability: CSU]

**RSPT 60C PULMONARY DIAGNOSTICS 3 Units**

**Prerequisite:** RSPT 51C.  
 2.5 hours lecture, 1.5 hours laboratory, 1 hour skills development.  
 Course covers selection, performance, and interpretation of tests used to diagnose cardiopulmonary abnormalities. [Transferability: CSU]

**RSPT 61A ADULT MECHANICAL VENTILATION 4 Units**  
**Prerequisite:** RSPT 50C and 51C.  
**3 hours lecture, 3 hours lecture-laboratory, 1 hour skills development.**  
 Develops the concepts and skills essential to meeting the needs of patients placed on artificial ventilation. Includes laboratory exercises of commonly used ventilators and patient-ventilator simulations. For continuing education purposes, new ventilators and state-of-the-art theories on ventilation will be presented based upon current research. [Transferability: CSU]

**RSPT 61B NEONATAL & PEDIATRIC INTENSIVE CARE 4 Units**  
**Prerequisite:** RSPT 61A.  
**3 hours lecture, 3 hours laboratory, 2 hours field experience.**  
 Neonatal and pediatric respiratory intensive care. [Transferability: CSU]

**RSPT 61C HOME & REHABILITATIVE RESPIRATORY CARE 2 Units**  
**Prerequisite:** RSPT 61B.  
**2 hours lecture, 1 hour field study.**  
 Introduction to rehabilitative respiratory care. Discussion of respiratory therapy procedures and equipment used in the treatment of home care patients. [Transferability: CSU]

**RSPT 62 MANAGEMENT, RESUME & NATIONAL BOARD EXAMINATION 1 Unit**  
**Prerequisite:** RSPT 61B.  
**1 hour lecture, 1 hour skills development, 1 hour field experience.**  
 A review of the concepts of management theory and good communication skills. Developing a multicultural organization, current health care economics and resume preparation are covered. Students take the National Board for Respiratory Care Mock Entry-Level Examination. [Transferability: CSU]

**RSPT 63A ADVANCED PATHOPHYSIOLOGY & PATIENT MANAGEMENT 3 Units**  
**Prerequisite:** RSPT 61A or Respiratory Care Practitioner status.  
**May be taken 3 times for credit.**  
**3 hours lecture, 1 hour skills development.**  
 The assessment and treatment of patients with Respiratory Disease through the use of case studies that illustrate key concepts. Emphasis on information gathering and decision making for respiratory care patients. Helpful for NBRC Clinical Simulation Examination preparation [Transferability: CSU]

**RSPT 65 COMPUTER PATIENT SIMULATIONS .5 Unit**  
**Prerequisite:** RSPT 61A.  
**2 hours laboratory.**  
 Information gathering and decision making in the management of patients with acute and chronic respiratory conditions. [Transferability: CSU]

**RSPT 70A CLINICAL ROTATION I 2 Units**  
**Prerequisite:** RSPT 50C and 51C.  
**10 hours laboratory.**  
 Exposure to hospital departments. Clinical application of respiratory therapy procedures. Interpretation of basic diagnostic data and correlation to applied therapies. [Transferability: CSU]

**RSPT 70B CLINICAL ROTATION II 6 Units**  
**Prerequisite:** RSPT 61A and 70A.  
**30 hours laboratory.**  
 Continuation of RSPT 70A with performance of more advanced respiratory therapy techniques. Interpretation of increasing amounts of clinical data and a correlation to applied therapies. Participation in cardiopulmonary resuscitations. [Transferability: CSU]

**RSPT 70C CLINICAL ROTATION III 6 Units**  
**Prerequisite:** RSPT 61B and 70B.  
**30 hours laboratory.**  
 Continuation of RSPT 70B. Clinical application of theory relating to monitoring and management of neonate, pediatric, and adult intensive care unit patient. [Transferability: CSU]

**RSPT 70D CLINICAL ROTATION IV 6 Units**  
**Prerequisite:** RSPT 70C.  
**30 hours laboratory.**  
 Continuation of RSPT 70C. Further clinical experience with ventilation and special procedures of surgical, medical, neonatal, and pediatric intensive care, offered as options for remediation. Assignment dependent upon demonstrated student needs. Mini-rotations offered to qualified students, depending on interest. [Transferability: CSU]

**RSPT 200L INTRODUCTION TO RESPIRATORY THERAPY 1 Unit**  
**Non-degree applicable credit course.**  
**2 hours lecture-laboratory.**  
 Introduction to the career of respiratory therapy. Role of the respiratory therapist, areas of specialization in the field, educational requirements and future outlook. Clinical tasks will also be introduced.

## ROTC

Foothill College participates in the Reserve Officer Training Corps (ROTC) programs at area universities so that students who want to earn ROTC credit while attending Foothill College may do so. Foothill College students can enroll in lower-division ROTC coursework which can ultimately result in a commission as an officer. Students who enroll in these programs should contact a Foothill counselor for credit and certification. For more information, call one of the following representatives:

Air Force: San Jose State University, (408) 924-2960  
 Army: Santa Clara University, (408) 554-4781  
 Navy: UC Berkeley, (510) 642-3351.

## SOCIOLOGY

**Business & Social Sciences (650) 949-7322**  
**www.foothill.edu/bss/**

**SOC 1 INTRODUCTION TO SOCIOLOGY 5 Units**  
**5 hours lecture.**  
 Introduction to the field of sociology; the scientific study of human society and the contemporary world, and the interaction of individuals and groups in society. Analysis of major theories, concepts, methods, social institutions, and social processes. Development of a sociological imagination and social context analysis. Society in its social class, racial and gendered dynamics. [Foothill GE: Social & Behavioral Sciences; Transferability: UC/CSU]

**SOC 8 POPULAR CULTURE 4 Units**  
**4 hours lecture.**  
 Theoretical and methodological overview of American popular culture. A critical examination of the socio-historical development and contemporary forms of popular culture in America. The relationship of popular culture to individual, group and mass identity formation. Analysis of popular culture and its racial and class dimensions. [Foothill GE: United States Cultures & Communities; Transferability: UC/CSU]

**SOC 10 INTRODUCTION TO SOCIAL RESEARCH 4 Units**  
**Advisory: Not open to students with credit in PSYC 10.**  
**4 hours lecture.**  
 Introduction to the most common types of research on human behavior: experimentation, survey research and field research. Examination of the logic of each technique, applicability of techniques using actual research studies; limitations of studying human behavior emphasized. [Foothill GE: Social & Behavioral Sciences; Transferability: UC/CSU]

**SOC 11 INTRODUCTION TO SOCIAL WELFARE 5 Units**  
**5 hours lecture.**  
 Sociological perspective of social welfare and the social services system as a field of study and profession. Historical overview of social problems and development of the professional fields. Focus on range of sociological

theory to explain development of social services systems, their core concepts, value systems and methods. [Foothill GE: Social & Behavioral Sciences; Transferability: UC/CSU]

**SOC 15 LAW & SOCIETY 4 Units**  
4 hours lecture.

Introduction to the relationship of law, society and the individual. Institutional analysis of factors underlying the creation, maintenance, and change of legal systems. Theories of jurisprudence and practical problems of law enforcement and the administration of justice. [Foothill GE: Social & Behavioral Sciences; Transferability: UC/CSU]

**SOC 19 ALCOHOL & DRUG ABUSE 4 Units**  
4 hours lecture.

Introduction to problems of substance abuse. History and classification of alcohol and drug abuse. Equips human service workers and general public with knowledge about issues involved in alcohol and drug abuse. Intervention and rehabilitation programs as well as public policy paradigms are examined. [Foothill GE: Lifelong Understanding, Social & Behavioral Sciences; Transferability: UC/CSU]

**SOC 20 MAJOR SOCIAL PROBLEMS 4 Units**  
4 hours lecture.

Nature and origins of the principal social problems of our time. Consequences of industrialization, rapid technological change, and resultant tensions of changing roles and status in groups and individuals. Types of remedial social action applicable in each situation. Institutional or deviance approaches acceptable. Research methodology and techniques reviewed. [Foothill GE: Social & Behavioral Sciences; Transferability: UC/CSU]

**SOC 21 PSYCHOLOGY OF WOMEN: SEX & GENDER DIFFERENCES 4 Units**

**Advisory: Not open to students with credit in PSYC 21 or WMN 21.**  
4 hours lecture.

Survey of gender issues based upon psychological and sociological theories and research. Examination of sex roles stereotyping and differences. Developmental considerations. [Foothill GE: Social & Behavioral Sciences; Transferability: UC/CSU]

**SOC 23 RACE & ETHNIC RELATIONS 4 Units**  
4 hours lecture.

Focus on the meaning of race and ethnicity as it relates to intergroup relations in the USA. Inclusive analysis of concepts, theories, socio-legal effects of the Civil Rights Movement, public policy and its impact on diverse racial and ethnic populations in the USA. Historical and sociological assessment of majority-minority relations with emphasis on the perspectives of African-Americans, Hispanic/Latino-Americans, Asian-Americans and the indigenous Native American tribes. Demographic implications of race and ethnic relations on USA's economic, political and educational institutions. Relationship among race, ethnicity and poverty. [Foothill GE: United States Cultures & Communities, Social & Behavioral Sciences; Transferability: UC/CSU]

**SOC 30 SOCIAL PSYCHOLOGY 4 Units**

**Advisory: Not open to students with credit in PSYC 30.**  
4 hours lecture.

Survey of sociological and psychological theories and research studies examining the influence of society and social groups on the individual and the influence of the individual on society and social groups. Examination of overlapping and differing contents, level of analysis and methodologies. Focus on human interaction and the shaping of diverse and commonly-shared attitudes, beliefs and world views by society, culture and social groups. Assessment of classic and current social psychological studies. [Foothill GE: Social & Behavioral Sciences; Transferability: UC/CSU]

**SOC 34H HONORS INSTITUTE SEMINAR IN SOCIOLOGY 1 Unit**

**Formerly: SOC 34**

**Prerequisite: Honors Institute participant.**

**Advisory: Not open to students with credit in SOC 34.**  
1 hour lecture.

A seminar in directed readings, discussions and projects in Sociology. Specific topics to be determined by the instructor. [Transferability: CSU; UC credit may be granted after transfer and upon portfolio review.]

**SOC 35 DEPARTMENT HONORS PROJECTS 1 Unit**  
**SOC 35X IN SOCIOLOGY 2 Units**  
**SOC 35Y 3 Units**  
**SOC 35Z 4 Units**

**Any combination of SOC 35-35Z may be taken 6 times for credit, however, no single course may be taken more than 6 times for credit.**  
1 hour lecture for each unit of credit.

Seminar in readings, research, critical techniques and practice. Specific topics vary. [Transferability: CSU]

**SOC 36 SPECIAL PROJECTS IN SOCIOLOGY 1 Unit**  
**SOC 36X 2 Units**  
**SOC 36Y 3 Units**  
**SOC 36Z 4 Units**

**Any combination of SOC 36-36Z may be taken 6 times for credit, however, no single course may be taken more than 6 times for credit.**  
1 hour lecture for each unit of credit.

Advanced readings, research and/or project in sociology. Specific topics determined in consultation with instructor. [Transferability: CSU]

**SOC 40 ASPECTS OF MARRIAGE & FAMILY 4 Units**  
4 hours lecture.

Survey of empirical studies conducted by family sociologists from varied theoretical orientations. Focus on social influences affecting the American expressions of intimate life styles related to relationships, marriage and family systems. Exposure to the methods of social research. [Foothill GE: Lifelong Understanding, Social & Behavioral Sciences; Transferability: UC/CSU]

**SOC 57 CHILD ADVOCACY 4 Units**  
4 hours lecture.

Explores the socio-historical context of child welfare systems. Uses a variety of different theoretical explanations for the existence of child abuse and/or neglect. Examines child welfare and advocacy in its race, class and gender perspectives. Explains relationships between the child, the child welfare system and the larger society. Analyzes the impact of child advocacy policy and various issues in child welfare on children. Explores the influence of child advocacy on children in contemporary society and its impact on their life outcomes. [Transferability: CSU]

**SOCIAL SCIENCE**

**Business & Social Sciences**

**(650) 949-7322**  
**www.foothill.edu/bss/**

**SOSC 20 CROSS-CULTURAL PERSPECTIVES FOR A MULTICULTURAL SOCIETY 4 Units**

4 hours lecture.

Analysis of the multiethnic forms of cultural domination and its diverse manifestation in society, emphasizing European and Third World cultures. Examination of the values and practices of democratic participation in social institutions in those cultures. Review theories, concepts and research applicable to majority-minority issues. [Foothill GE: United States Cultures & Communities, Lifelong, Social & Behavioral Sciences; Transferability: UC/CSU]

**SOSC 34H HONORS INSTITUTE SEMINAR IN SOCIAL SCIENCE 1 Unit**

**Formerly: SOSC 34**  
**Prerequisite:** Honors Institute participant.  
**Advisory:** Not open to students with credit in SOSC 34.  
**1 hour lecture.**  
 A seminar in directed readings, discussions and projects in social science. Specific topics to be determined by the instructor. [Transferability: CSU; UC credit may be granted after transfer and upon portfolio review.]

**SOSC 35 DEPARTMENT HONORS PROJECT IN SOCIAL SCIENCE 1 Unit**  
**SOSC 35X 2 Units**  
**SOSC 35Y 3 Units**  
**SOSC 35Z 4 Units**

Any combination of SOSC 35–35Z may be taken 6 times for credit, however, no single course may be taken more than 6 times for credit.  
**1 hour lecture for each unit of credit.**  
 Seminar in social science readings, research, critical techniques and analysis. Specific topics vary. [Transferability: CSU]

**SOSC 36 SPECIAL PROJECTS IN SOCIAL SCIENCE 1 Unit**  
**SOSC 36W .5 Unit**  
**SOSC 36X 2 Units**  
**SOSC 36Y 3 Units**  
**SOSC 36Z 4 Units**

Any combination of SOSC 36–36Z may be taken 6 times for credit, however, no single course may be taken more than 6 times for credit.  
**1 hour lecture for each unit of credit.**  
 Advanced readings, research, and/or project in social science. Specific topics determined in consultation with instructor. [Transferability: CSU]

**SOSC 37 INTRODUCTION TO CULTURAL PROGRAM 1 Unit**

May be taken 4 times for credit.  
**3 hours laboratory.**  
 practical field experience for students in cultural heritage month leadership positions. [Transferability: CSU]

**SOSC 79 INTRODUCTION TO COMMUNITY SERVICE 1 Unit**

May be taken 3 times for credit.  
**3 hours laboratory.**  
 Introduction to theories and methods of effective volunteer participation in community service, including assessing community needs, role of the volunteer, relationship with public agencies. [Transferability: CSU]

**SOSC 155 STANDARDIZED TEST PREPARATION .5 Unit**

**Advisory:** Pass/No Pass.  
 May be taken 6 times for credit.  
**.5 hour lecture for each .5 unit of credit.**  
 Test-taking strategies for standardized college entrance tests. Analysis of test structure and content. Identification of areas of weakness; practice with those areas.

**SOSC 175 TUTOR TRAINING METHODS .5 Unit**

**Prerequisite:** Employment as a tutor; grade of "A" in courses in which the student will be tutoring; letter of recommendation from Foothill instructor in corresponding course.  
 May be taken 3 times for credit.  
**.5 hour lecture.**  
 Introduction to theories and methods of effective tutoring, including role of a tutor, relationship of tutor to students and faculty. [Transferability: CSU]

## SPANISH

### Language Arts

(650) 949-7131  
[www.foothill.edu/la/](http://www.foothill.edu/la/)

**SPAN 1 ELEMENTARY SPANISH I 5 Units**  
**5 hours lecture.**

Development and practice of elementary speaking, listening, reading and writing skills in everyday language functions, with Spanish as the primary language of instruction. Language laboratory practice to reinforce pronunciation, grammar and syntax. Study of basic geographical, historical and cultural aspects of Spanish-speaking world areas. [Foothill GE: Humanities; Transferability: UC/CSU]

**SPAN 2 ELEMENTARY SPANISH II 5 Units**  
**Prerequisite:** SPAN 1 or 1 year of high school Spanish.  
**5 hours lecture.**

Further development and practice of elementary speaking, listening, reading and writing skills in everyday language function, with Spanish as the primary language of instruction. Language laboratory practice to reinforce pronunciation, grammar and syntax. Study of basic geographical, historical and cultural aspects of Spanish-speaking world areas. [Foothill GE: Humanities; Transferability: UC/CSU]

**SPAN 3 ELEMENTARY SPANISH III 5 Units**  
**Prerequisite:** SPAN 2 or two years of high school Spanish.  
**5 hours lecture.**

Further development and practice of elementary speaking, listening, reading and writing skills in everyday language functions, with focus on greater structural accuracy and communicative competence, and with Spanish as the language of instruction. Language laboratory practice to reinforce pronunciation, grammar and syntax. Study of basic geographical, historical and cultural aspects of Spanish-speaking world areas. [Foothill GE: Humanities; Transferability: UC/CSU]

**SPAN 4 INTERMEDIATE SPANISH I 5 Units**  
**Prerequisite:** SPAN 3 or 3 years of high school Spanish.  
**5 hours lecture.**

Reading and discussion of texts dealing with the literature, arts, geography, history and culture of the Spanish-speaking world. Review and further development of the grammatical structures of first-year Spanish with emphasis on building communicative competence and expanding vocabulary about familiar topics and idiomatic usage. Writing and reading assignments based upon topics discussed in class. [Foothill GE: Humanities; Transferability: UC/CSU]

**SPAN 5 INTERMEDIATE SPANISH II 5 Units**  
**Prerequisite:** SPAN 4 or four years of high school Spanish.  
**5 hours lecture.**

Reading and discussion of texts dealing with the literature, arts, geography, history and culture of the Spanish-speaking world. Review and further development of the grammatical structures of first-year Spanish with emphasis on building communicative competence and expanding concrete vocabulary about new topics, and idiomatic usage. Writing and reading assignments based upon topics discussed in class. [Foothill GE: Humanities; Transferability: UC/CSU]

**SPAN 6 INTERMEDIATE SPANISH III 5 Units**  
**Prerequisite:** SPAN 5.  
**5 hours lecture.**

Reading and discussion of texts dealing with the literature, arts, geography, history and culture of the Spanish-speaking world. Review and further development of the grammatical structures of first-year Spanish with emphasis on building communicative competence and expanding abstract vocabulary, and idiomatic usage. Writing and reading assignments based upon topics discussed in class. [Foothill GE: Humanities; Transferability: UC/CSU]

**SPAN 13A INTERMEDIATE CONVERSATION I 4 Units**  
**Prerequisite:** SPAN 3.  
**Advisory:** May be taken concurrently with SPAN 4.  
**May be taken 6 times for credit.**  
**4 hours lecture.**  
 Review and development of oral and listening communication skills in the targeted functions studied in first-year Spanish with attention to fluency, vocabulary, idiom, and pronunciation. Emphasis on the difference between spoken and literary Spanish as well as the variation in language depending upon the topic, the setting, and the country. Discussion and analysis of cultural and historical issues based on authentic texts, current news broadcasts, and/or films. [Foothill GE: Humanities; Transferability: UC/CSU]

**SPAN 13B INTERMEDIATE CONVERSATION II 4 Units**  
**Prerequisite:** SPAN 13A.  
**Advisory:** May be taken concurrently with SPAN 5.  
**May be taken 6 times for credit.**  
**4 hours lecture.**  
 Continuation of SPAN 13 A. Review and development of oral and listening communication skills in the targeted functions studied in first-year Spanish with attention to fluency, vocabulary, idiom, and pronunciation. Emphasis on the difference between spoken and literary Spanish as well as the variation in language depending upon the topic, the setting, and the country. Discussion and analysis of cultural historical and political issues based on authentic texts, current news broadcasts, and/or films. Develop critical thinking skills by comparing different viewpoints and different values of diverse cultures. [Foothill GE: Humanities; Transferability: UC/CSU]

**SPAN 14A ADVANCED CONVERSATION I 4 Units**  
**Prerequisite:** SPAN 13B.  
**Advisory:** May be taken concurrently with SPAN 5.  
**May be taken 6 times for credit.**  
**4 hours lecture.**  
 Continuation of SPAN 13B. Designed to give students practice in oral/ aural communication skills in an environment of increasingly challenging language situations. Practice on idioms and vocabulary as different from the usage of formal, written and literary language. Work on differentiating and choosing the culturally appropriate register for a given situation. Discussion of the cultural manifestations and history of the Spanish-speaking world, including that of the Latino population of the U.S. [Foothill GE: Humanities; Transferability: UC/CSU]

**SPAN 14B ADVANCED CONVERSATION II 4 Units**  
**Prerequisite:** SPAN 14A.  
**Advisory:** May be taken concurrently with SPAN 6.  
**May be taken 6 times for credit.**  
**4 hours lecture.**  
 Continuation of SPAN 14A. Designed to give students practice in aural/ oral communication skills in an environment of increasingly challenging language situations. Evaluation and response to real, current material: politics, literature, art, music, film. Critical analysis of the cultural manifestations and history of the Spanish-speaking world, including the Latino population of the U.S. Evaluation of the cultural values inherent in conversation. Integration of cultural competency into conversation skills: what's appropriate in a given culture (in terms of register, vocabulary and values) and in a given setting within that culture. [Foothill GE: Humanities; Transferability: UC/CSU]

**SPAN 25A ADVANCED COMPOSITION & READING I 4 Units**  
**Prerequisite:** SPAN 6.  
**4 hours lecture.**  
 Extensive reading and analysis of original Spanish literary and non-literary sources from Spanish speaking countries and the Hispanic communities in the US, such as newspapers, reports, films and music. Intensive discussion and writing based on these readings to promote a critical appreciation of Hispanic culture, society and history. Understanding of the use of advanced grammar in writing communication. Instruction in Spanish. [Foothill GE: Humanities; Transferability: UC/CSU]

**SPAN 25B ADVANCED COMPOSITION & READING II 4 Units**  
**Prerequisite:** SPAN 25A.  
**4 hours lecture.**  
 Continuation of SPAN 25A. Extensive reading and analysis of texts with emphasis on literary works such as short stories, essays and poems. Critical analysis of the major political, historical and social issues exposed in these texts. Writing of extended term papers and compositions using advanced grammar. Understanding and appreciating the ambiguities, vagaries and value inherent in the target language. Instruction in Spanish. [Foothill GE: Humanities; Transferability: UC/CSU]

**SPAN 236 SPECIAL PROJECTS IN SPANISH 1 Unit**  
**SPAN 236Y 3 Units**  
**SPAN 236Z 4 Units**  
**Formerly:** SPAN 36  
**Prerequisite:** SPAN 5.  
**Advisory:** Enrollment for this course is available in the Language Arts Division Office.  
**1 hour lecture for each unit of credit.**  
 A study oriented toward spoken and/or written practice in Spanish. Development of research and critical techniques adapted to individual writing and/or oral presentation projects under instructor supervision. Not to be substituted for departmental requirements. [Foothill GE: Humanities; Transferability: This course does not transfer.]

## THEATRE ARTS

**Fine Arts & Communication (650) 949-7262**

**THTR 1 THEATRE ARTS APPRECIATION 4 Units**  
**Formerly:** DRAM 1  
**Advisory:** Not open to students with credit in DRAM 1.  
**4 hours lecture, 1 hour laboratory.**  
 Live performance in an electronic age - an overview of the status of live theatre including its historical, cultural and spiritual roots. [Foothill GE: Humanities; Transferability: UC/CSU]

**THTR 2A INTRODUCTION TO DRAMATIC LITERATURE 4 Units**  
**Formerly:** DRAM 2A  
**Prerequisite:** Eligibility for ENGL 1A.  
**Advisory:** Not open to students with credit in ENGL 42A or DRAM 2A.  
**4 hours lecture.**  
 Analysis of representative masterpieces of dramatic literature from Aeschylus to the English Renaissance Period and including Asian Theatre. [Foothill GE: Humanities; Transferability: UC/CSU]

**THTR 2B INTRODUCTION TO DRAMATIC LITERATURE 4 Units**  
**Formerly:** DRAM 2B  
**Prerequisite:** Eligibility for ENGL 1A.  
**Advisory:** Not open to students with credit in ENGL 42B or DRAM 2B.  
**4 hours lecture.**  
 Analysis of representative masterpieces of dramatic literature from the Elizabethan Period to the end of the 19<sup>th</sup> Century. [Foothill GE: Humanities; Transferability: UC/CSU]

**THTR 2C INTRODUCTION TO DRAMATIC LITERATURE 4 Units**  
**Formerly:** DRAM 2C  
**Prerequisite:** Eligibility for ENGL 1A.  
**Advisory:** Not open to students with credit in ENGL 42C or DRAM 2C.  
**4 hours lecture.**  
 Analysis of representative masterpieces of dramatic literature from the beginning of the 20<sup>th</sup> Century to the present. [Foothill GE: Humanities; Transferability: UC/CSU]



<p><b>THTR 21A</b>      <b>SCENERY &amp; PROPERTY CONSTRUCTION</b>      <b>3 Units</b></p> <p><i>Formerly: DRAM 21A</i>  <b>Advisory: Not open to students with credit in DRAM 21A.</b>  <b>Corequisites: THTR 21.</b>  <b>6 hours lecture-laboratory.</b>            Practical experience in creating and using scenery and properties for department dramatic presentations. Safe use of basic hand and power tools used in the construction of scenery and properties for the stage. [Transferability: UC/CSU]</p>	<p><b>THTR 40A</b>      <b>BASIC THEATRICAL MAKE-UP</b>      <b>4 Units</b></p> <p><i>Formerly: DRAM 40A</i>  <b>Advisory: Not open to students with credit in DRAM 40A.</b>  <b>3 hours lecture, 3 hours laboratory.</b>            A practical introduction to the techniques of applying theatrical make-up for the stage. [Transferability: UC/CSU]</p>
<p><b>THTR 21B</b>      <b>INTERMEDIATE SCENERY &amp; PROPERTY CONSTRUCTION</b>      <b>3 Units</b></p> <p><i>Formerly: DRAM 21B</i>  <b>Prerequisite: THTR 21A.</b>  <b>Advisory: Not open to students with credit in DRAM 21B.</b>  <b>6 hours lecture-laboratory.</b>            Continuation of THTR 21A. Practical experience in creating and using scenery and properties for department dramatic presentations. Safe use of basic hand and power tools used in the construction of scenery and properties for the stage. [Transferability: UC/CSU]</p>	<p><b>THTR 40AL</b>      <b>THEATRICAL MAKE-UP LABORATORY</b>      <b>1 Unit</b></p> <p><i>Formerly: DRAM 40AL</i>  <b>Advisory: Not open to students with credit in DRAM 40AL.</b>  <b>Corequisite: THTR 40A.</b>  <b>3 hours laboratory.</b>            Supervised study and practice in stage make-up and application techniques. [Transferability: UC/CSU]</p>
<p><b>THTR 21C</b>      <b>ADVANCED SCENERY &amp; PROPERTIES CONSTRUCTION</b>      <b>3 Units</b></p> <p><i>Formerly: DRAM 21C</i>  <b>Prerequisite: THTR 21B.</b>  <b>Advisory: Not open to students with credit in DRAM 21C.</b>  <b>May be taken 4 times for credit.</b>  <b>6 hours lecture-laboratory.</b>            Continuation of THTR 21B. Practical experience in creating and using scenery and properties for department dramatic presentations. Safe use of tools, materials, rigging and construction techniques used in the construction of scenery and properties for the stage. [Transferability: UC/CSU]</p>	<p><b>THTR 40B</b>      <b>THEATRICAL MAKE-UP FOR PRODUCTION</b>      <b>4 Units</b></p> <p><i>Formerly: DRAM 40B</i>  <b>Prerequisite: THTR 40A.</b>  <b>May be taken 2 times for credit.</b>  <b>3 hours lecture, 3 hours laboratory.</b>            Continuation of work in THTR 40A with emphasis in more advanced techniques and practical application experience for the stage. [Transferability: UC/CSU]</p>
<p><b>THTR 34H</b>      <b>HONORS INSTITUTE SEMINAR IN THEATRE ARTS</b>      <b>1 Unit</b></p> <p><i>Formerly: DRAM 34</i>  <b>Prerequisite: Honors Institute participant.</b>  <b>Advisory: Not open to students with credit in DRAM 34.</b>  <b>1 hour lecture.</b>            A seminar in directed readings, discussions and projects in theatre arts. [Transferability: CSU; UC credit may be granted after transfer and upon portfolio review.]</p>	<p><b>THTR 40BL</b>      <b>THEATRICAL MAKE-UP LABORATORY</b>      <b>1 Unit</b></p> <p><i>Formerly: DRAM 40BL</i>  <b>Advisory: Not open to students with credit in DRAM 40B.</b>  <b>Corequisite: THTR 40B.</b>  <b>May be taken 2 times for credit.</b>  <b>3 hours laboratory.</b>            Supervised study and practice in advanced stage make-up and application techniques. [Transferability: UC/CSU]</p>
<p><b>THTR 35</b>      <b>DEPARTMENT HONORS PROJECTS IN DRAMA</b>      <b>2 Units</b></p> <p><i>Formerly: DRAM 35</i>  <b>Prerequisite: Enrollment subject to audition.</b>  <b>May be taken 6 times for credit.</b>  <b>7 hours laboratory.</b>            Individual advanced projects in acting, theatre production, stage craft, design or theatre research. [Transferability: CSU]</p>	<p><b>THTR 42A</b>      <b>INTRODUCTION TO SCENE DESIGN</b>      <b>4 Units</b></p> <p><i>Formerly: DRAM 42A</i>  <b>Prerequisite: THTR 72 or equivalent.</b>  <b>Advisory: Not open to students with credit in DRAM 42A.</b>  <b>3 hours lecture, 3 hours laboratory.</b>            Theory and practice of three dimensional scene design and scenic painting using traditional and digital tools. Includes research and analysis; two-dimensional and three-dimensional set design; theatrical sketching, drafting, rendering and model making and the use of computer graphics software and equipment to create three-dimensional design for Performing Arts, Film, TV and Multimedia CD ROM and WWW. [Transferability: UC/CSU]</p>
<p><b>THTR 38</b>      <b>MOVEMENT PRACTICUM FOR THE ACTOR</b>      <b>2 Units</b></p> <p><i>Formerly: DRAM 38</i>  <b>Corequisite: Completion of, or concurrent enrollment in the Foothill Theatre Conservatory.</b>  <b>May be taken 6 times for credit.</b>  <b>1.5 hours lecture, 1.5 hours laboratory.</b>            A one quarter, intensive investigation of one or more of the following areas of stage movement for the actor: Body awareness, flexibility, alignment, balance, muscle isolation and coordination; stress reduction and relaxation on stage; breath control; recognized theories of movement; stage combat; historical styles of movement; characterization through movement; mask technique; dance for the actor; physical safety. The application of these skills to the performance of dramatic literature from a wide range of ethnic, social and historical sources. [Transferability: UC/CSU]</p>	<p><b>THTR 44</b>      <b>PRODUCTION PROJECTS</b>      <b>4 Units</b></p> <p><i>Formerly: DRAM 44</i>  <b>Prerequisite: THTR 20A.</b>  <b>May be taken 6 times for credit.</b>  <b>6 hours lecture-laboratory, 3 hours laboratory.</b>            An intensive training experience in all areas of theatre, culminating in a practical theatre production. Areas of study and investigation include acting techniques, voice and diction, oral interpretation, movement and dance, theatre literature and history, stage management and other technologies related to production. Culminates in a full-scale public performance, with students taking charge of all areas of production. [Transferability: UC/CSU]</p>
	<p><b>THTR 46</b>      <b>VOICE &amp; DICTION</b>      <b>4 Units</b></p> <p><i>Formerly: DRAM 46</i>  <b>Advisory: Not open to students with credit in COMM 46 or DRAM 46.</b>  <b>3 hours lecture, 3 hours laboratory.</b>            An introductory study of the anatomy and physiology of the vocal mechanism. Development of voice and articulation with an emphasis on standard American speech for the stage. [Transferability: UC/CSU]</p>

THTR 47	MUSIC THEATRE	3 Units	THTR 54	ACTOR'S WORKSHOP	3 Units
THTR 47X	PRODUCTION WORKSHOP	6 Units	<i>Formerly: DRAM 54</i>		
THTR 47Y		10 Units	Prerequisite: THTR 20C.		
<i>Formerly: DRAM 47</i>			May be taken 6 times for credit.		
Advisory: Admittance by instructor approval.			2 hours lecture, 2 hours lecture-laboratory.		
Any combination of THTR 47–47Y may be taken 6 times for credit, however, no single course may be taken more than 6 times for credit.			Further development of concepts introduced in THTR 20A, 20B and 20C through incorporating extensive participation in the performance of selected scenes from plays of various types and periods or advanced improvisational techniques. [Transferability: UC/CSU]		
9 hours laboratory.					
A laboratory course in musical theatre stage production. Acting, singing, dance, lighting, costuming, scene design, properties, set-construction, make-up, publicity and promotion will be studied in the production of a full-scale major musical play for public performance. [Transferability: UC/CSU]					
THTR 48	VOICE PRACTICUM FOR THE ACTOR	2 Units	THTR 58	MOVEMENT FOR THE ACTOR: STAGE COMBAT	1 Unit
<i>Formerly: DRAM 48</i>			<i>Formerly: DRAM 58</i>		
Prerequisite: Completion of or concurrent enrollment in the Foothill Theatre Conservatory.			May be taken 2 times for credit.		
May be taken 6 times for credit.			.75 hour lecture, .75 hour laboratory.		
1.5 hours lecture, 1.5 hours laboratory.			Introduction to the concepts and practice of choreographed combat for stage and camera. Emphasis on safety concepts required for all stage combat circumstances. Techniques introduced include hand to hand maneuvers and small weapons. [Transferability: UC/CSU]		
A one quarter, intensive investigation of one or more of the following areas of voice study for the actor: principles of vocal production; breathing techniques; vocal work adapted to a variety of performance settings; employment of International Phonetic Alphabet; dialects; voice-over, on-camera and other voice-amplified experiences; singing techniques for the actor. The application of these skills to the performance of dramatic literature from a wide range of ethnic, social and historical sources. [Transferability: UC/CSU]					
THTR 49	REHEARSAL & PERFORMANCE	2 Units	THTR 61	THE THEATRE LIVE ON-STAGE	2 Units
THTR 49X		4 Units	<i>Formerly: DRAM 61</i>		
THTR 49Y		6 Units	May be taken 6 times for credit.		
THTR 49Z		8 Units	1 hour lecture, 3 hours laboratory.		
<i>Formerly: DRAM 49</i>			A directed, systematic examination of selected works of dramatic literature presented on the living stage, with particular emphasis on the contributing production values that make up their presentation. Attendance at outstanding Bay Area or other geographically specific regional theatre companies, discussion and analysis of works seen, presentations by contributing artists. Costs of theatre admission and responsibility for transportation are borne by the student. [Transferability: UC/CSU]		
Prerequisite: Enrollment subject to audition.					
Any combination of THTR 49–49Y may be taken 6 times for credit, however, no single course may be taken more than 6 times for credit.					
3 hours lecture-laboratory, 2 hours laboratory for 2 units of credit.					
Supervised participation in scheduled productions of the Theatre Arts Department, in cast or crew. Enrollment in each course is for the duration of the production. [Transferability: UC/CSU]					
THTR 50	PRODUCTION PROJECTS IN THEATRE	2 Units	THTR 62	ACTING FOR FILM & TELEVISION	2 Units
<i>Formerly: DRAM 50</i>			THTR 62X		4 Units
May be taken 6 times for credit.			<i>Formerly: DRAM 62</i>		
1 hour lecture-laboratory, 5 hours laboratory.			Prerequisite: THTR 20A.		
This course teaches the full development of an organic, original production from inception to performance. Under the guidance and supervision of the instructor who initiates the process, students will be entirely charged to produce a full-length production consisting of several student-generated short plays. Student responsibilities will extend to the areas of writing, acting, directing, lighting design, costume design, scenery and properties design, sound design, make-up design and publicity. The quarter culminates with several public performances. [Transferability: CSU; UC approval is pending.]			May be taken 6 times for credit.		
			1.5 hours lecture, 1.5 hours laboratory.		
			Application of concepts introduced in THTR 20A with the necessary adaptations required for film and television performance. Work with the commercial, dramatic, documentary and industrial styles currently used in film and television. [Transferability: CSU; UC approval is pending for THTR 62X.]		
THTR 53	AUDITIONING FOR THEATRE	2 Units	THTR 71	FUNDAMENTALS OF	4 Units
THTR 53X		4 Units	THTR 71X	STAGE MANAGEMENT	2 Units
<i>Formerly: DRAM 53</i>			<i>Formerly: DRAM 71</i>		
Advisory: THTR 20A or equivalent.			Advisory: THTR 20A or concurrent enrollment in THTR 21A, 21B, or 21C; not open to students with credit in DRAM 71.		
May be taken 6 times for credit.			2 hours lecture for each unit of credit.		
1.5 hours lecture, 1.5 hours laboratory.			An introduction to stage management techniques in form and function for the theatre. Fundamentals of stage management procedures related to the rehearsal process. Practices in production administration through the use of stage management forms. [Transferability: CSU; UC approval is pending for THTR 71X.]		
Students will be introduced to a variety of different possible auditioning scenarios and strategies. With a focus on stage techniques, the class will be largely oriented towards a theory into practical practice approach which will include such topics as monologues for general auditions, building a repertoire, circumstances for cold readings and possible improvisation situations. Additionally, students will be introduced to theories of preparation and etiquette as well as informational resources. [Transferability: CSU; UC approval is pending for THTR 53X.]					
			THTR 72	DRAFTING FOR THE THEATRE, FILM & TELEVISION	4 Units
			<i>Formerly: DRAM 72</i>		
			May be taken 3 times for credit.		
			3 hours lecture, 3 hours laboratory		
			Survey of drafting techniques for the theatre, film and television. Introduction to the basic elements of graphic expression and techniques used in presenting stage designs for designers and technicians working in the performing arts. Use of instruments, lettering, geometric construction, orthographic projection and technical sketching to present ground plans, elevations and working drawings. Use of computers to draft theatre designs. [Transferability: CSU]		

**THTR 72B BEGINNING CAD DRAFTING FOR THE THEATRE, FILM & TELEVISION 4 Units**

**Formerly: DRAM 72**

**Advisory: Not open to students with credit in DRAM 72.**

**3 hours lecture, 3 hours laboratory.**

Survey of computer drafting techniques for the theatre, film and television. Introduction to the basic elements of graphic expression and techniques used in presenting stage designs for designers and technicians working in the performing arts. Use of computer technology to present ground plans, elevations and working drawings for theatre designs. [Transferability: UC/CSU]

**THTR 74 THEATRE SOUND DESIGN 4 Units**

**Formerly: DRAM 74**

**Corerequisite: Completion of or concurrent enrollment in THTR 21A, B, or C.**

**Advisory: Not open to students with credit in DRAM 74.**

**3 hours lecture, 3 hours laboratory.**

A survey of sound design and technology for the theatre. Use of recording and playback equipment. Exploration of sound design as an artistic element in stage productions. Research in sound control, amplification, acoustics, preparation of sound tracks, use of reinforcement systems, and intercommunication systems. [Transferability: UC/CSU]

**THTR 75 INTRODUCTION TO FASHION & COSTUME CONSTRUCTION 4 Units**

**Formerly: DRAM 75**

**Advisory: Completion of, or concurrent enrollment in THTR 21A, 21B or 21C recommended.**

**May be taken 6 times for credit.**

**2 hours lecture, 4 hours lecture-laboratory.**

An introduction to sewing techniques, pattern cutting, costume room equipment and the design and fabrication of clothing and costumes for the theatre and stage. [Transferability: UC/CSU]

**THTR 76 INTRODUCTION TO FASHION HISTORY & COSTUME DESIGN 4 Units**

**Formerly: DRAM 76**

**Advisory: Not open to students with credit in DRAM 76.**

**4 hours lecture.**

A survey of western historic fashion and costume for women and men from ancient times to the present, including the cultural and political events that shaped each era and its clothing. An introduction to the design elements: color, line, form texture and silhouette and a brief introduction to the use of graphic techniques in the presentation of fashion and costume designs. Analysis of the artistic styles of each era as they relate to understanding costume detail and stylization. [Transferability: UC/CSU]

**THTR 77 INTRODUCTION TO LIGHTING DESIGN & TECHNOLOGY 4 Units**

**Formerly: DRAM 77**

**Corerequisite: Completion of, or concurrent enrollment in THTR 21A, B, or C.**

**May be taken 3 times for credit.**

**3 hours lecture, 3 hours laboratory.**

A survey of lighting design for the theatre, film and television. An introduction to the basic elements of electrical wiring, lighting instruments, lighting control devices, and lighting special effects. Use of computer to design stage lighting. [Transferability: UC/CSU]

**THTR 79 MODEL BUILDING FOR THEATRE, FILM & TELEVISION 4 Units**

**Formerly: DRAM 79**

**Advisory: Not open to students with credit in DRAM 79.**

**3 hours lecture, 3 hours laboratory.**

A survey of model building techniques for the theatre, film and television. Introduction to the basic tools and materials used to construct and present preliminary and finished design models. [Transferability: CSU; UC approval is pending.]

**THTR 80 RECORDING ARTS I: SOUND REINFORCEMENT 4 Units**

**Formerly: DRAM 80**

**Advisory: Not open to students with credit in DRAM 80 or MUS 80 or 80A.**

**2 hours lecture, 2 hours lecture-laboratory, 3 hours laboratory.**

Introduction to fundamental concepts and techniques of mixing boards, amplifiers, microphones, signal processors and their application to both live and studio sound reinforcement. Basic introduction to computer based recording with Digidesign's Pro Tools®. Microphone placement, physics of sound as it relates to recording, sound reinforcement and studio setup techniques. [Transferability: CSU]

**THTR 81 CONTEMPORARY ISSUES IN PERFORMANCE SEMINAR 1 Unit**

**Formerly: DRAM 81**

**Corequisites: Enrollment in the Foothill Theatre Conservatory.**

**May be taken 6 times for credit.**

**1 hour lecture, .5 hour laboratory.**

A seminar in directed readings, discussions, performance analysis and projects encompassing contemporary performance trends and the business of the entertainment industry. Specific topics to be determined by the instructor. [Transferability: CSU]

**THTR 85 DIRECTED FIELD STUDY IN THEATRE 1 Unit**

**THTR 85X 2 Units**

**THTR 85Y 3 Units**

**THTR 85Z 4 Units**

**Formerly: DRAM 85**

**Any combination of THTR 85, 85X, 85Y, 85Z may be taken 6 times for credit, however, no single course may be taken more than 6 times for credit.**

**.5 hour lecture, 2 hours laboratory for each unit of credit.**

In-depth, intensive field study experience in a selected major center of theatrical production, such as London or New York. Attendance at professional theatre productions; meeting with playwrights, directors, designers, choreographers, actors and critics; touring backstage facilities, costume and scenic studios, and theatrical history museums and exhibits. All costs are borne by the student. [Transferability: CSU]

**THTR 95 THEATRE SUMMER STOCK WORKSHOP 3 Units**  
**THTR 95X 6 Units**

**Formerly: DRAM 95**

**Prerequisite: Enrollment subject to audition.**

**Any combination of THTR 95 & 95X may be taken 6 times for credit, however, no single course may be taken more than 6 times for credit. 12 hours laboratory for each three units of credit.**

A laboratory course in Summer Stock stage production. Acting, lighting, costuming, scene design, set construction, properties, make-up will be investigated in a practical setting. Students will experience the public performance of several plays presented within a demanding schedule. [Transferability: UC/CSU]

**THTR 97 ACTORS' ENSEMBLE 1 Unit**

**THTR 97X 2 Units**

**THTR 97Y 4 Units**

**THTR 97Z 6 Units**

**Formerly: DRAM 97**

**Prerequisite: Enrollment subject to audition.**

**Advisory: Pass/No Pass.**

**Any combination of THTR 97-97Z may be taken 6 times for credit, however, no single course may be taken more than 6 times for credit. 1 hour lecture-laboratory, 2 hour laboratory for each unit of credit.**

A course in performance and/or rehearsal of varied dramatic forms designed for public performance of original, established or touring works. All aspects of theatre may be covered, including acting, directing, playwriting, lighting, costuming, scene design, set construction and make-up for the theatre. Students will prepare for staged productions for public performance in potentially differing spaces. [Transferability: UC/CSU]

**THTR 99 THEATRE WORKSHOP 3 Units**  
**THTR 99X 6 Units**  
**THTR 99Y 9 Units**

**Formerly: DRAM 99**

**Prerequisite:** Enrollment subject to audition.

**Advisory:** Pass/No Pass.

Any combination of THTR 99–99Y may be taken 6 times for credit, however, no single course may be taken more than 6 times for credit. 1.5 hours lecture-laboratory, 7.5 hours laboratory.

A laboratory course in stage production, culminating in a practical theatre production. Areas of study and investigation include acting voice and diction, movement, dance, theatre styles, stage management and stage crafts. Culminates in a full-scale production performed for a public audience. [Transferability: UC/CSU]

**THTR 190 DIRECTED STUDY .5 Unit**  
**THTR 190X 1 Unit**  
**THTR 190Y 2 Units**  
**THTR 190Z 4 Units**

**Formerly: DRAM 190**

Any combination of THTR 190–190Z may be taken 6 times for credit, however, no single course may be taken more than 6 times for credit. .5 hour lecture, 1 hour laboratory

Directed study for students who desire advanced study in specific theatrical projects. Areas of possibility include: scenic, costume, lighting design, playwriting, dramaturgy, or acting challenges.

**THTR 191 THEATRE REPERTOIRE PRACTICUM 2 Units**  
**THTR 191X 3 Units**  
**THTR 191Y 4 Units**  
**THTR 191Z 6 Units**

**Formerly: DRAM 191**

Any combination of THTR 191–191Z may be taken 6 times for credit, however, no single course may be taken more than 6 times for credit. 7 hours laboratory for 2 units of credit.

Study, rehearsal and performance of theatre repertoire. Designed as an advanced performance course for actors and theatre technicians wishing to explore the vast theatre repertoire more fully, including works from Greek to contemporary, non-musical and musical theatre, and Western and non-Western theatre. Performances both on and/or off campus. Attendance at all performances required.

## VETERINARY TECHNOLOGY

**Biological & Health Sciences (650) 949-7538**  
[www.foothill.edu/bio/programs/vettech/](http://www.foothill.edu/bio/programs/vettech/)

**VT 50 CURRENT TOPICS IN VETERINARY TECHNOLOGY .5 Unit**

**Advisory:** Pass/No Pass

May be taken 6 times for credit.

1 hour lecture-laboratory.

A series of three-hour lectures, lecture-demonstrations, multimedia presentations, live demonstrations or hands-on workshops presented once monthly (3 times per quarter) by the instructor, professionals in veterinary medicine or the animal health-related fields. A variety of content is presented in order to provide current topical and practical information in the animal care field. Guest presenters will include veterinarians, specialists, veterinary technicians, animal handlers, administrative professionals and educators. All veterinary technology students are required to enroll each quarter, but the seminar may be taken by any student for personal interest. Unregistered veterinary assistants, and other members of the veterinary paraprofessional staff may also enroll. [Transferability: CSU]

**VT 51 INTRODUCTION TO VETERINARY TECHNOLOGY 1.5 Units**

1 hour lecture, 2 hours lecture-laboratory.

A prerequisite for admission to the Veterinary Technology Program. Orientation to the program, and a survey of the role of the veterinary technician in the workplace. Survey of employment opportunities and

areas of specialization. Ethics and professionalism. Laws and regulations governing veterinary technicians. Introduction to basic animal care skills and clinical procedures. [Transferability: CSU]

**VT 52A VETERINARY ASSISTING I 5 Units**  
 5 hours lecture.

First in a two-course series in the theory and practice of Veterinary Assisting focusing on the knowledge, skills, and attitudes required for competent paraprofessional support to the Veterinarian (DVM) and to the Registered Veterinary Technician (RVT.) You will prepare for an exciting new career as a veterinary assistant by learning the essential knowledge and hands-on skills of the Veterinary Assistant. Emphasis is on the practical aspects of front office management, working as part of the veterinary health care team, basic animal care, and basic aspects of patient management under direct supervision. The course is entirely on-line and may be taken as a stand-alone class or may be combined with VT 52B and a Clinical Preceptorship (VT 87A & B) to earn a Veterinary Assisting Program Certificate of Completion. [Transferability: CSU]

**VT 52B VETERINARY ASSISTING II 5 Units**  
 5 hours lecture.

Second in a two-course series in the theory and practice of Veterinary Assisting focusing on the knowledge, skills, and attitudes required for competent paraprofessional support to the Veterinarian (DVM) and to the Registered Veterinary Technician (RVT). You will prepare for an exciting new career as a veterinary assistant by learning the essential knowledge and hands-on skills of the Veterinary Assistant. Emphasis is on basic clinical skills and common procedures. Assisting with routine exam room, treatment room; clinical laboratory and radiologic procedures; administration of medication, animal grooming, instrument cleaning and care; surgical preparation and operating room assisting; patient record keeping and client communication. The course is entirely on-line and may be taken as a stand-alone class or may be combined with VT 52A and a Clinical Preceptorship (VT 87A & B) to earn a Veterinary Assisting Program Certificate of Completion. [Transferability: CSU]

**VT 53A MEDICAL TERMINOLOGY 1 Unit**  
 2 hours lecture-laboratory.

A guided self-study of medical terminology as a fundamental communication skill. Basic word parts and rules of word construction. A review of common medical terms pertaining to the different body systems, with emphasis on those terms peculiar to veterinary medicine. [Transferability: CSU]

**VT 53B MEDICAL CALCULATIONS 1 Unit**  
 2 hours lecture-laboratory.

Applied mathematics as a fundamental communication and technical skill. Review of calculations involving fractions, decimals, ratios and proportions, unit conversions, and algebraic equations. Clinical medical calculations utilized in preparation and administration of drugs, dosage determinations, intravenous fluid infusion, and prescription dispensing. [Transferability: CSU]

**VT 53C INTRODUCTION TO LARGE ANIMAL CARE 1 Unit**

2 hours lecture-laboratory, 1 hour case study.

Introduction to principles of husbandry and medical care of common domestic large animal species. Breed identification; housing and restraint; nutrition and feeding; common infectious diseases and vaccinations; equine physical exam and common lameness; equine colic; common large animal clinical procedures. [Transferability: CSU]

**VT 53D INTRODUCTION TO DAIRY CATTLE HEALTH MANAGEMENT 2 Units**

**Advisory:** Must be a student in good standing in the Veterinary Technology Program or a current Hidden Villa Farm Intern.

1 hour lecture, 2 hours lecture-laboratory.

A series of 1 hour lectures, live demonstrations, and hands-on practical experiences. All instruction will take place on the farm at Hidden Villa. Introduction to the principles of the husbandry and health management of sheep and dairy goats. Breed identification; housing and restraint; nutrition and feeding; common infectious disease; and vaccinations;

common internal and external parasite management; common veterinary treatments and food animal drug restrictions; breeding, gestation, and parturition. [Transferability: CSU]

**VT 53E INTRODUCTION TO SMALL RUMINANT HEALTH MANAGEMENT 2 Units**

**Advisory:** Must be a student in good standing in the Veterinary Technology Program or a current Hidden Villa Farm Intern. 1 hour lecture, 2 hours lecture-laboratory.

A series of lectures, live demonstrations, and hands-on sessions. All instruction will take place on the farm at Hidden Villa. Introduction to the principles of husbandry and health management of sheep and dairy goats. Breed identification; housing and restraint; nutrition and feeding; common infectious disease and vaccinations; common internal and external parasite management; common veterinary medicines and food animal restrictions; breeding, gestation, and parturition. [Transferability: CSU]

**VT 53F INTRODUCTION TO SWINE HEALTH MANAGEMENT 2 Units**

**Advisory:** Must be a student in good standing in the Veterinary Technology Program or a current Hidden Villa Farm Intern. 1 hour lecture, 2 hour lecture-laboratory.

A series of lectures, live demonstrations, and hands-on experiences All instruction will take place on the farm at Hidden Villa. Introduction to the principles of husbandry and health management of swine. Breed identification; housing and restraint; nutrition and feeding; common infectious disease and vaccinations; common internal and external parasite management; common veterinary medicines and food animal restrictions; breeding, gestation, and parturition. [Transferability: CSU]

**VT 54A COMPARATIVE VETERINARY ANATOMY & PHYSIOLOGY FOR THE VETERINARY TECHNICIAN 5 Units**

**Prerequisite:** Admission to the Veterinary Technology Program; V T 51 or equivalent. Non V T students will be allowed to enroll with the permission of the V T Director.

**Advisory:** V T 54A and 54B must be taken in sequence; ENGL 1A, ESLL 26 or equivalent; CHEM 30A or equivalent.

4 hours lecture, 1 hour lecture-laboratory, 2 hours laboratory. Comparative veterinary anatomy and physiology for veterinary technicians. This course covers the clinically relevant veterinary anatomy and physiology including a discussion of the similarities and differences among the major domestic species. Emphasis is placed on the normal structure and function of the major organ systems as the foundation for understanding pathology and the pathophysiology of disease. [Transferability: CSU]

**VT 54B COMPARATIVE VETERINARY ANATOMY & PHYSIOLOGY FOR THE VETERINARY TECHNICIAN 5 Units**

**Prerequisite:** Admission to the Veterinary Technology Program; V T 51 or equivalent; V T 54A. Non-V T students permitted to enroll with the permission of the V T director.

**Advisory:** V T 54A and 54B must be taken in sequence; ENGL 1A, ESLL 26 or equivalent; CHEM 30A or equivalent.

4 hours lecture, 1 hour lecture-laboratory, 2 hours laboratory. Comparative anatomy and physiology for veterinary technicians. This course covers the clinically relevant anatomy and physiology of the major domestic animals and includes a discussion of the similarities and differences among the species. Emphasis is placed on the normal structure and function of the major organ systems as the foundation for understanding pathology and pathophysiology of disease. [Transferability: CSU]

**VT 55 ANIMAL MANAGEMENT & CLINICAL SKILLS I 4 Units**

3 hours lecture, 3 hours laboratory, 1 hour internet research, 1 hour open skills laboratory.

Intended for the pre-clinical training of veterinary technology students and unregistered veterinary assistants. Orientation to the Veterinary Technology Program. Occupational health and safety. Animal handling and restraint. Administration of medication. Assessing dehydration and basic fluid administration. Introduction to anesthetic equipment,

procedures and recovery. Principles of aseptic technique, sanitation, disinfection and sterilization. Principles of surgical nursing and instrumentation. Euthanasia, grief and pet loss support. Principles of animal behavior, socialization, basic obedience and common behavior problems. Wound healing and suture material. [Transferability: CSU]

**VT 56 ANIMAL MANAGEMENT & CLINICAL SKILLS II 4 Units**

3 hours lecture, 3 hours laboratory, 1 hour internet research, 1 hour open skills laboratory.

Intended for the pre-clinical training of veterinary technology students and unregistered veterinary assistants. Survey of basic responsibilities and technical duties of veterinary technicians. Clinical nutrition and feeding of the dog and cat. Reproductive anatomy and physiology of the dog and cat including common reproductive disorders. Companion animal grooming. First aid. Instruction and practical experience in the basic principles and techniques of radiography, electrocardiography; venipuncture and blood collection technique; insertion and troubleshooting of intravenous catheters. Patient examination and assessment. Bandaging, casting, and splinting. Hands-on experience performing and assisting with routine clinical diagnostic and therapeutic procedures, including dermatologic and ophthalmologic procedures, blood and urine collection and other routine veterinary clinical procedures. [Transferability: CSU]

**VT 60 VETERINARY OFFICE PRACTICE 2 Units**

2 hours lecture, 1 hour case study. Principles and practice of veterinary office management for veterinary technology students. Client relations, receptionist skills, telephone techniques and personnel management. Generation and maintenance of correspondence, medical records, legal forms and hospital logs. Basic bookkeeping, accounting and financial management principles. Marketing and public relations. Professional ethics and professionalism. Use of computers for data entry, patient record management and inventory control. Use of practice management software. State and federal laws as they apply to the veterinary practice. [Transferability: CSU]

**VT 61 ANIMAL DISEASES 5 Units**

4 hours lecture, 2 hours lecture-laboratory, 1 hour internet research. Advanced study of the common diseases of domestic animals with emphasis on the dog and cat for the veterinary technician student. Practical medical microbiology, clinical immunology. Mechanisms of disease; the host-parasite relationship and adaptive and maladaptive responses of the host. Etiology, pathogenesis, clinical signs and clinical management of selected immunological, viral, bacterial, fungal, and parasitic diseases. Principles of vaccination, disease prevention, and zoonosis. Diagnostic techniques, including gross and microscopic identification of common veterinary pathogens. [Transferability: CSU]

**VT 66 EXOTIC ANIMAL CARE 1 Unit**

**Prerequisite:** Admission to the Veterinary Technology Program; V T 51 or equivalent; required sciences and first year V T curriculum. Non-V T students allowed to enroll with permission of instructor.

**Advisory:** ENGL 1A, ESLL 26 or equivalent.

2 hours lecture-laboratory.

Basic understanding of the care, husbandry, clinical procedures, and medical concerns of rabbits, ferrets, guinea pigs, chinchillas, small rodents, birds, snakes, lizards, turtles. Emphasis on clinically relevant materials and activities. Designed for senior students in the Veterinary Technology Program. [Transferability: CSU]

**VT 70 FUNDAMENTALS OF VETERINARY DIAGNOSTIC IMAGING 4 Units**

3 hours lecture, 3 hours laboratory, 1 hour internet research.

Introduction to the principles of veterinary radiography for veterinary technician students, including radiographic terminology, physics of X-ray production and interaction with matter, occupational safety and radiation protection, radiographic exposure factors and patient positioning required for production of diagnostic films, processing of radiographic film. Discussion of equipment materials and special radiographic studies common in veterinary practice. Introduction to state-of-the-art radiographic imaging, ultrasound and nuclear medicine. [Transferability: CSU]

- VT 72 PRINCIPLES OF VETERINARY DENTISTRY 2 Units**  
**1 hour lecture, 2 hours lecture-laboratory.**  
 Basic principles of veterinary dentistry for the veterinary technology student. Includes dental anatomy, physiology, pathophysiology, charting and instrumentation. Techniques of routine prophylaxis, discussion of periodontal disease, modes of therapy and prevention. Introduction to common dental disorders, endodontic technique, simple extractions and dental radiography. Course includes hands-on laboratory sessions using veterinary dental equipment and models, and includes the care and use of common instruments and equipment, the routine prophylaxis and dental assisting. [Transferability: CSU]
- VT 75A ANIMAL CARE SKILLS 1 Unit**  
**3 hours laboratory.**  
 Practical application of animal care skills and principles of animal care and management using techniques and knowledge learned in the veterinary technology program. Opportunity to participate in the health care team involved in the care, management and husbandry of program livestock, companion animals and laboratory animals. Emphasis will be on the basic principles and application of clinical facility management, care of resident teaching animals, and routine maintenance duties. [Transferability: CSU]
- VT 75B ANIMAL CARE SKILLS 1 Unit**  
**3 hours laboratory.**  
 Continuation of VT 75A. Practical application of animal care skills and principles of animal care and management using techniques and knowledge learned in the veterinary technology classroom. Opportunity to participate in the health care team involved in the care, management and husbandry of livestock, companion animals and laboratory animals. Emphasis will be on the basic principles and application of clinical facility management, care of resident teaching animals, and routine maintenance duties. Responsibilities will expand to include medical record keeping. [Transferability: CSU]
- VT 75C ANIMAL CARE SKILLS 1 Unit**  
**3 hours laboratory.**  
 Continuation of VT 75B. Practical application of animal care skills and principles of animal care and management using techniques and knowledge learned in the veterinary technology classroom. Opportunity to participate in the health care team involved in the care, management and husbandry of livestock, companion animals and laboratory animals. Responsibilities include medical record keeping, inventory control, and care of clinical equipment. Emphasis will be on the basic principles and application of clinical facility management, care of resident teaching animals, and routine maintenance duties Level of responsibility increases as the student prepares to enter the second year of the program and take over lead nurse responsibilities. [Transferability: CSU]
- VT 75D ANIMAL CARE SKILLS .5 Unit**  
**1.5 hours lecture.**  
 Continuation of VT 75C. Practical application of animal care skills and principles of animal care and management using techniques and knowledge learned in the veterinary technology classroom. Opportunity to participate in the health care team involved in the care, management and husbandry of livestock, companion animals and laboratory animals. Responsibilities include medical record keeping, inventory control, and care of clinical equipment. Emphasis will be on the basic principles and application of clinical facility management, care of resident teaching animals, and routine maintenance duties Level of responsibility increases as the student prepares to enter the second year of the program and take over lead nurse responsibilities. [Transferability: CSU]
- VT 81 CLINICAL PATHOLOGY METHODS 5 Units**  
**4 hours lecture, 3 hours laboratory, 1 hour case study.**  
 Fundamental studies of laboratory techniques and procedures involved in evaluating veterinary clinical samples. Areas of study include hematology, urinalysis, hemostasis, blood biochemistry and enzymology, serology, and cytology. The veterinary technician's role in sample collection, sample storage and handling, and performance of analytic procedures will be emphasized. Skills are developed in the use of laboratory equipment, laboratory safety and management, and quality control. [Transferability: CSU]
- VT 83 PHARMACOLOGY FOR TECHNICIANS 4 Units**  
**4 hours lecture, 1 hour case study.**  
 Introduction to the basic principles of veterinary pharmacology. Preparation and dispensing of medications. Overview of the actions and interactions of the major classes of drugs, with emphasis on common veterinary uses of specific drugs. [Transferability: CSU]
- VT 84 ANESTHESIOLOGY FOR TECHNICIANS 5 Units**  
**Prerequisite: VT 83.**  
**3 hours lecture, 6 hours laboratory, 1 hour case study.**  
 Principles and practice of veterinary anesthesia. The physiology of the respiratory, cardiovascular, and nervous systems relevant to anesthesia. The pharmacology and uses of common pre-anesthetic and anesthetic agents. The veterinary technician's role in patient preparation, induction and maintenance of anesthesia, surgical assistance, and post-anesthetic nursing will be practiced in the laboratory. [Transferability: CSU]
- VT 85 VETERINARY EMERGENCY & CRITICAL CARE 4 Units**  
**3 hours lecture, 3 hours laboratory, 1 hour case study.**  
 Theoretical and practical aspects of assisting the veterinarian in the management of medical and traumatic emergencies. Recognition and assessment of cardiovascular shock, respiratory crisis, gastrointestinal emergency, and musculoskeletal trauma. Principles and techniques of fluid therapy and administration of emergency drugs. Application of treatment protocols for shock, cardiopulmonary arrest, gastrointestinal crisis, wounds and fractures, toxicoses, and dystocia. Nutrition of critical care patients. Maintenance of emergency medical equipment and supplies. [Transferability: CSU]
- VT 86 LABORATORY ANIMAL TECHNOLOGY 4 Units**  
**4 hours lecture, 1 hour case study.**  
 An orientation to the use of animals in research and to the role of the veterinary technician and the biotechnologist in a biomedical research animal facility. Regulations affecting the use of animals in research will be discussed. Proper methods of restraint, daily care, feeding and nutrition, nursing techniques, and housing needs for the common species of laboratory animals (i.e. rodents, rabbits, nonhuman primates, reptiles and amphibians, etc.). Introduction to diagnostic and therapeutic techniques and common diseases of laboratory animals. Appropriate anesthesia, analgesia and euthanasia methods will be discussed. [Transferability: CSU]
- VT 86L LABORATORY ANIMAL METHODS 1 Unit**  
**1 hour lecture-laboratory, 2 hours laboratory.**  
 An orientation to basic laboratory animal procedures used in a research animal facility for the veterinary technology student, biotechnology student or those already employed in the biomedical field. Animal identification. Appropriate and humane protocols, methods and procedures commonly encountered in biomedical facilities will be discussed, demonstrated and performed. Animal handling and restraint for commonly encountered laboratory animals (mice, rats, rabbits, guinea pigs). Introduction to basic husbandry practices and breeding procedures used to maintain rodent colonies. Diagnostic sampling techniques and methods of administration of medication. Routine hematology, clinical chemistry, and immunoassay techniques. Students will be required to participate in several mandatory field trips to local biotechnology institutions during regular school hours. [Transferability: CSU]
- VT 87A ADVANCED ANIMAL CARE SKILLS 1 Unit**  
**3 hours laboratory.**  
 Practical application of animal care skills and principles of animal care and management, integrating advanced techniques and knowledge gained through classroom instruction. Opportunity to participate in the health care team in a supervisory role with increased organizational responsibility. Emphasis on instruction of first-year students in basic principles of facilities management and maintenance care of resident animals. [Transferability: CSU]

**VT 87B      ADVANCED ANIMAL CARE SKILLS      1 Unit**  
**3 hours laboratory.**  
 Continuation of VT 87A. Continuing instruction of first-year students in basic principles of facilities management and maintenance care of resident animals. Supervisory responsibilities will expand to include the formulation of work schedules, performing diagnostic and therapeutic procedures on resident animals, and performance evaluations of first-year students. The student will be involved in open lab sessions training first-year students in technical procedures. [Transferability: CSU]

**VT 87C      ADVANCED ANIMAL CARE SKILLS      1 Unit**  
**3 hours laboratory.**  
 Continuation of VT 87B. Continuing instruction of first-year students in basic principles of facilities management and maintenance care of resident animals. Supervisory responsibilities include the formulation of work schedules, performing diagnostic and therapeutic procedures on resident animals, performance evaluations of first-year students, and staffing open lab sessions. Facilitate transition of primary animal care responsibility to first-year students. [Transferability: CSU]

**VT 88A      CLINICAL PRECEPTORSHIP I      1.5 Units**  
**Corequisite: VT 52A.**  
**7.5 hours clinic.**  
 Formal, structured off-campus clinical experience in licensed veterinary facilities, which serve as a means of instructing the student in practical, hands-on, clinical skills in all aspects of veterinary assisting. The student is under the direct supervision of one or more licensed veterinarians and/or credentialed veterinary technicians. The site of the preceptorship is approved by the veterinary technology program in consultation with the student and the veterinary professionals Opportunity for learning and practical application of the knowledge, skills and attitudes required of a veterinary assistant. Exposure to varied methodologies and practice philosophies in a variety of clinical settings. Emphasis is on the role of the veterinary assistant in the veterinary health care team. [Transferability: CSU]

**VT 88B      CLINICAL PRECEPTORSHIP II      1.5 Units**  
**Corequisite: VT 52B.**  
**7.5 hours clinic.**  
 Formal, structured off-campus clinical experience in licensed veterinary facilities, which serve as a means of instructing the student in practical, hands-on, clinical skills in all aspects of veterinary assisting. The student is under the direct supervision of one or more licensed veterinarians and/or credentialed veterinary technicians. The site of the preceptorship is approved by the veterinary technology program in consultation with the student and the veterinary professionals Opportunity for learning and practical application of the knowledge, skills and attitudes required of a veterinary assistant. Exposure to varied methodologies and practice philosophies in a variety of clinical settings. Emphasis is on the role of the veterinary assistant in the veterinary health care team. [Transferability: CSU]

**VT 89      CLINICAL INTERNSHIP      3 Units**  
**15 hours laboratory.**  
 Off-campus clinical experience for Veterinary Technology Program students in veterinary facilities. Opportunity for practical application of knowledge, skills and abilities acquired in program course work. Opportunity for additional hands-on training in all aspects of veterinary technology. Exposure to varied methodologies and practice philosophies in a variety of clinical settings. [Transferability: CSU]

**VT 91      CLINICAL INTERNSHIP      3 Units**  
**15 hours laboratory.**  
 Off-campus clinical experience for Veterinary Technology Program students in veterinary facilities. Opportunity for practical application of knowledge, skills and abilities acquired in program course work. Opportunity for additional hands-on training in all aspects of veterinary technology. Exposure to varied methodologies and practice philosophies in a variety of clinical settings. [Transferability: CSU]

**VT 92      CLINICAL INTERNSHIP      3 Units**  
**15 hours laboratory.**  
 Off-campus clinical experience for Veterinary Technology Program students in veterinary facilities. Opportunity for practical application of knowledge, skills and abilities acquired in program course work. Opportunity for additional hands-on training in all aspects of veterinary technology. Exposure to varied methodologies and practice philosophies in a variety of clinical settings. [Transferability: CSU]

**VT 93      CLINICAL INTERNSHIP      4 Units**  
**20 hours laboratory.**  
 Off-campus clinical experience for Veterinary Technology Program students in veterinary facilities. Opportunity for practical application of knowledge, skills and abilities acquired in program course work. Opportunity for additional hands-on training in all aspects of veterinary technology. Exposure to varied methodologies and practice philosophies in a variety of clinical settings. [Transferability: CSU]

**VT 95      VETERINARY TECHNICIAN PROFICIENCY      2 Units**  
**2 hours lecture, 1 hour group study.**  
 Review of pertinent subject matter in preparation for the California State Veterinary Technician Examination. [Transferability: CSU]

**VT 95L      VETERINARY TECHNICIAN PROFICIENCY LABORATORY      1 Unit**  
**3 hours laboratory.**  
 Review of pertinent subject matter in preparation for the California State Registered Veterinary Technician Examination. Provides opportunity for developing proficiency in practical clinical skills required of the graduate veterinary technician. [Transferability: CSU]

**VT 190      DIRECTED STUDY      .5 Unit**  
**VT 190X      1 Unit**  
**VT 190Y      1.5 Units**  
**VT 190Z      1.5 Units**  
**Advisory: Pass/No Pass.**  
**Any combination of V T 190–190Z may be taken 6 times for credit, however, no single course may be taken more than 6 times for credit.**  
**.5 hour lecture, 1.5 hour laboratory for each .5 unit of credit.**  
 For students in the Veterinary Technology Program who desire or require additional help in attaining comprehension and proficiency in learning skills and/or additional practical training to achieve technical skills competency.

## VIDEO ARTS

**Fine Arts & Communication      (650) 949-7262**  
**www.foothill.edu/fa/**

**VART 1      INTRODUCTION TO FILM STUDIES      4 Units**  
**Advisory: Not open to students with credit in F TV 1.**  
**4 hours lecture, 1 hour laboratory.**  
 A survey of the language, technology, theory and aesthetics of the moving image as an art form. The course emphasizes an introduction to the critical analysis of the film and video. Includes weekly readings, film viewing, and discussion. [Transferability: UC/CSU]

**VART 2A      HISTORY OF FILM 1895–1945      4 Units**  
**Advisory: Not open to students with credit in F TV 2A.**  
**4 hours lecture, 1 hour laboratory.**  
 Survey of the development of motion pictures from beginning to the 1940s. Emphasis on understanding evolution of international filmmaking. [Foothill GE: Humanities; Transferability: UC/CSU]

**VART 2B      HISTORY OF FILM 1945–CURRENT      4 Units**  
**Advisory: Not open to students with credit in F TV 2B.**  
**4 hours lecture, 1 hour laboratory.**  
 Critical analysis of film as an art form with emphasis on film evolution from the 1940s to the present. [Foothill GE: Humanities; Transferability: UC/CSU]

<p><b>VART 2C</b>      <b>CURRENT TRENDS IN FILM, TV &amp; THE INTERNET</b>      <b>4 Units</b>  <b>Advisory:</b> Not open to students with credit in F TV 2C.  <b>4 hour lecture, 1 hour laboratory.</b>            Current trends of film, video, television, and internet media. Critical analysis of time based linear and non-linear visual media. Emphasis on the visual experience of communicating ideas, stories, and events. Includes weekly readings, media screenings, and discussion. [Foothill GE: Humanities; Transferability: UC/CSU]</p>	<p><b>VART 30</b>      <b>DIGITAL VIDEO EDITING I</b>      <b>4 Units</b>  <b>Formerly:</b> F TV 84, VART 84  <b>Advisory:</b> Not open to students with credit in F TV 84 or VART 84; must demonstrate basic computer proficiency; students who use editing facilities outside of class times must register for VART 150X.  <b>May be taken 3 times for credit.</b>  <b>3 hours lecture, 2.5 hours lecture-laboratory.</b>            Basic instruction on the use of the computer for video and film editing using AVID Media Composer and/or Final Cut Pro software. The theory and practice of cinematic editing which is explored through projects, screenings, class exercises, and demonstration. Topics include montage, pace and rhythm, openings, cutting dialogue, use of sound. [Transferability: UC/CSU]</p>
<p><b>VART 3</b>      <b>AMERICAN CINEMA</b>      <b>4 Units</b>  <b>Advisory:</b> Not open to students with credit in F TV 3.  <b>4 hours lecture, 1 hour laboratory.</b>            Introduction to American Film as a component of art, history, culture and business. How Hollywood has shaped an industry that has come to reflect many aspects of the American experience. American cinematic history, terminology, economic structure and cultural importance. Skills and insight into watching films critically. Development of analysis and writing skills. [Transferability: UC/CSU]</p>	<p><b>VART 31</b>      <b>DIGITAL VIDEO EDITING II</b>      <b>4 Units</b>  <b>Formerly:</b> F TV 85, VART 85  <b>Prerequisite:</b> VART 30 or 86.  <b>Advisory:</b> Not open to students with credit in F TV 85 or VART 85; must demonstrate basic computer proficiency; students who use editing facilities outside of class times must register for VART 150X.  <b>May be taken 3 times for credit.</b>  <b>3 hours lecture, 2.5 hours lecture-laboratory.</b>            Continuation of VART 30. Further exploration of technical and aesthetic considerations in film and video editing. The course will address advanced topics in digital post-production using AVID Media Composer and/or Final Cut Pro software. Software topics include sync, audio mixing, color correction, and compositing. [Transferability: UC/CSU]</p>
<p><b>VART 4</b>      <b>SCRIPTWRITING FOR FILM &amp; VIDEO</b>      <b>4 Units</b>  <b>3 hours lecture, 2 hours lecture-laboratory.</b>            An introductory course in scriptwriting for film and video which covers the basic skills needed in scripting for the media. Emphasis will be on the development of visual sensitivity, the examination of sample scripts and experience in progressing from concept to finished script. The role of the script in media production and the appropriate formats for fiction and non-fiction scripts will also be examined. [Transferability: CSU]</p>	<p><b>VART 50</b>      <b>CAREERS IN THE VISUAL ARTS</b>      <b>2 Units</b>  <b>Advisory:</b> Not open to students with credit in GID 60.  <b>2 hours lecture.</b>            Exploring the field of visual arts including fine arts, design, graphic design, photography, video arts, new media, and theatre arts. Survey of transfer schools, art studios, company art departments, advertising agencies and job opportunities for creative services professionals. [Transferability: CSU]</p>
<p><b>VART 8</b>      <b>GLOBAL MEDIA</b>      <b>4 Units</b>  <b>4 hours lecture, 1 hour laboratory.</b>            This course examines the economic, political and cultural dynamics that shape the international media environment, its central actors and institutions. [Transferability: UC/CSU]</p>	<p><b>VART 60</b>      <b>CAREERS IN THE VIDEO ARTS</b>      <b>2 Units</b>  <b>2 hours lecture.</b>            Exploring the field of visual arts including fine arts, design, graphic design, photography, video arts, new media, and theatre arts. Survey of transfer schools, art studios, company art departments, advertising agencies and job opportunities for creative services professionals. [Transferability: CSU]</p>
<p><b>VART 15</b>      <b>WEB VIDEO</b>      <b>4 Units</b>  <b>May be taken 3 times for credit.</b>  <b>3 hours lecture, 2.5 hours lecture-laboratory.</b>            An introduction to new developments in the use of video on the internet. The course covers a variety of internet media concepts such as compression, streaming, podcasting, and RSS feeds. Students study both technical and aesthetic considerations for web video. [Transferability: UC/CSU]</p>	<p><b>VART 80</b>      <b>SPECIAL PROJECTS IN VIDEO</b>      <b>1 Unit</b>  <b>VART 80X</b>      <b>2 Units</b>  <b>VART 80Y</b>      <b>4 Units</b>  <b>Advisory:</b> Not open to students with credit in F TV 80.  <b>Any combination of VART 80–80Y may be taken 6 times for credit, however, no single course may be taken more than 6 times for credit.</b>  <b>3 hours laboratory for each unit of credit.</b>            Individual projects in creative, technical or applied work in video or film by arrangement with the instructor. A limited area is explored at length. [Transferability: CSU]</p>
<p><b>VART 20</b>      <b>DIGITAL VIDEO PRODUCTION I</b>      <b>4 Units</b>  <b>Advisory:</b> Not open to students with credit in GID 20 or F TV 20; students must register for VART 150X for facility access outside of class times.  <b>May be taken 3 times for credit.</b>  <b>3 hours lecture, 2.5 hours lecture-laboratory.</b>            Basic instruction in concepts, techniques, and strategies of digital video production. Basic camera, lighting and sound recording will be covered through technical workshops. Emphasis on video story telling and creative problem solving. [Transferability: UC/CSU]</p>	<p><b>VART 81B</b>      <b>SOUND DESIGN FOR FILM &amp; VIDEO</b>      <b>3.5 Units</b>  <b>May be taken 4 times for credit.</b>  <b>3 hours lecture, 1.5 hours laboratory.</b>            Creating and editing soundtracks and audio for digital video, music video and film. Recording live sound, and integrating sound effects from a digital library. Dialogue editing and re-recording (looping), and musical soundtrack creation. Synchronization of audio to video using timecode, aesthetic quality of sound and music as it relates to video content, and the production of video/audio projects using Final Cut Pro/ Avid Media Composer and Pro Tools. [Transferability: CSU; UC approval is pending.]</p>
<p><b>VART 21</b>      <b>DIGITAL VIDEO PRODUCTION II</b>      <b>4 Units</b>  <b>Prerequisite:</b> VART 20 or GID 20.  <b>Advisory:</b> Not open to students with credit in F TV 21; students must register for VART 150X for facility access outside of class time.  <b>May be taken 3 times for credit.</b>  <b>3 hours lecture, 2.5 hours lecture-laboratory.</b>            Continuation of VART 20. Further exploration of video production with an emphasis advanced topics in videography, lighting, and sound. Emphasis on pre-production and scripting methods. [Transferability: UC/CSU]</p>	<p><b>VART 25</b>      <b>LIGHTING FOR DIGITAL VIDEO &amp; FILM</b>      <b>4 Units</b>  <b>Advisory:</b> VART 20 or PHOT 5.  <b>3 hours lecture, 2.5 hours lecture-laboratory.</b>            An introduction to the technical and aesthetic principles of lighting for digital video and film. Students will explore basic lighting instruments and their characteristics and use in the art of lighting. Topics include color, composition, exposure, light and shadow, three-point lighting, basic electricity, and grip equipment. [Transferability: CSU]</p>

**VART 86 INTRODUCTION TO DIGITAL SOUND, VIDEO & ANIMATION 4 Units**  
**Advisory:** Not open to students with credit in ART 88, DRAM 86, F TV 86, GID 80, MUS 86 or THTR 86 .  
 2 hours lecture, 2 hours lecture-laboratory, 3 hours laboratory.  
 Basic instruction using the computer for emerging media technologies; digital sound, video editing, and animation. Emphasis on time based media and creative problem solving. [Transferability: UC/CSU]

**VART 87 MOTION GRAPHICS 4 Units**  
**Advisory:** ART 88 or DRAM 86 or GID 80 or MUS 86 or VART 86. Not open to students with credit in GID 84.  
 2 hours lecture, 2 hours lecture-laboratory, 3 hours laboratory.  
 Basic instruction using the computer for motion graphic design and composite digital video production. Emphasis on time based media and its application to creative problem solving and communication solutions. [Transferability: CSU]

**VART 150 VIDEO ARTS LABORATORY .5 Unit**  
**VART 150X 1 Unit**  
**VART 150Y 1.5 Units**  
**VART 150Z 2 Units**  
 Non-degree applicable non-credit course.  
 Any combination of VART 150–150Z may be taken 6 times for credit, however, no single course may be taken more than 6 times for credit. 1.5 hours laboratory for each .5 unit of credit.  
 Supervised activities in Video Arts, related to skills and materials of film and video production and study in Video Arts courses in which students are currently enrolled.

## VITICULTURE

**Biological & Health Sciences (650) 949-7249**

**VITI 51 APPLIED PLANT SCIENCE 4 Units**  
**3 hours lecture, 3 hours laboratory.**  
 Applied plant sciences including grape plant anatomy, physiology, and environmental responses such as frost free days, degree-day calculations for sugar build up, water utilization, plant nutrition, and leaf area indexing related to canopy management. Environmental factors such as climate and soil conditions effecting varietals and rootstocks best adapted to an area. European varietals are emphasized and American varietals are covered. Introduction to the major wine grape diseases and pests common to this region. [Transferability: CSU]

**VITI 52 FALL PRACTICES 4 Units**  
**3 hours lecture, 3 hours laboratory.**  
 Fall practices for wine grape production in the Santa Clara County region, including grape maturity monitoring, harvesting, post harvest vineyard management, and plant winterization, shoot management, late season irrigation and fertilization strategies. [Transferability: CSU; UC approval is pending.]

**VITI 53 WINTER PRACTICES 4 Units**  
**Advisory:** Strongly advise completion of VITI 51 and 52.  
**3 hours lecture, 3 hours laboratory.**  
 Winter practices typical of Santa Clara County including pruning, of established plants, cold protection, and dormant season disease and pest control. Establishing a vineyard including a review of varietals selection, planting, training, budding/grafting, pruning of young plants, and trellising options. [Transferability: CSU; UC approval is pending.]

**VITI 55 SPRING PRACTICES 4 Units**  
**3 hours lecture, 3 hours laboratory.**  
 Viticulture practices for springtime including continued steps for vineyard establishment. Mature plant canopy management, cane training, disease & pest control, soils and fertilizers, late season frost protection, irrigation practices, quality control measures and vineyard equipment use. Alternative or organic vineyard management strategies will be discussed. [Transferability: CSU; UC approval is pending.]

**VITI 61A INTRODUCTION TO WINEMAKING 4 Units**  
**Advisory:** Must be at least 21 years of age to participate in wine tasting; proof of identity required.  
**3 hours lecture, 3 hour laboratory.**  
 Fall activities in basics of winemaking from grape harvest through wine bottling. Field sugar/acid level measurement, when to harvest, what to harvest or not, and picking, and grape handling from field to winery. Steps in wine making including: primary fermentation, stemmer/crusher, fermentation tanks, sanitation requirements, sulfide treatment, yeast inoculation, temperature level, punching, sugar level monitoring, and pressing. [Transferability: CSU; UC approval is pending.]

**VITI 61B INTERMEDIATE WINEMAKING 4 Units**  
**Prerequisite:** VITI 61A.  
**Advisory:** CHEM 31A, 31B or equivalent; must be at least 21 years of age to participate in wine tasting; proof of identity required.  
**3 hours lecture, 3 hour laboratory.**  
 Winter wine production procedures. Extension of 61A topics with an emphasis on wine chemistry and the analytical process. Secondary fermentation aspects including alcohol to acid balance, malolactic acid conversion, sanitation requirements, racking, barrel aging, topping, juice monitoring, and adjusting balance based on lab analysis. Trouble sugar to acid imbalances including stuck fermentation, dealing with contaminations, inducing malolactic acid conversion, filtration/fining, and blending during the aging process. [Transferability: CSU; UC approval is pending.]

**VITI 61C ADVANCED WINEMAKING 4 Units**  
**Prerequisite:** VITI 61B.  
**Advisory:** BIOL 41 or equivalent; must be at least 21 years of age to participate in wine tasting; proof of identity required.  
**3 hours lecture, 3 hour laboratory.**  
 Spring wine production procedures. Extension of 61B topics including racking, barrel tasting, blending, and influence of cooperage. Emphasis will be placed on the microbiology, cooperage selection and alternative approaches and techniques used in winemaking. Identification, physiology, and biochemistry of bacteria, fungi, and yeast involved in winemaking and spoilage of wines. Examination of sensory based descriptions commonly found in wine tasting. Lab analysis data analysis will be utilized but students will experiment with a variety of responses to reach desired outcomes prior to bottling. [Transferability: CSU; UC approval is pending.]

**VITI 63 CONTEMPORARY ISSUES IN WINE MAKING 4 Units**  
**Prerequisite:** VITI 61C or equivalent field experience.  
**Advisory:** Must be at least 21 years of age to participate in wine tasting; proof of identity required.  
**4 hours lecture.**  
 Review of the latest trends and methods for California wine production. Examination of alternative approaches to similar circumstances employed by various winemakers will be explored. Topics include degree Brix vs. grape maturity for desired wine type. Feeding the Juice, malolactic induction and the time of crush, delayed fermentation, color extraction, advanced clarification/filtration, blending and fresh juice introduction. Variation of methods for specialty wine production. Students will be responsible for researching a contemporary issue in enology and present their research findings before the class and invited guests. [Transferability: CSU]

**VITI 65 WINE & CULTURE 4 Units**  
**4 hours lecture.**  
 The historic interrelationship of wine and various cultures of the world. Wine production regions of the world are reviewed and the wines of note are covered. History of California wine regions and emerging trends. [Transferability: UC/CSU]

**VITI 67 RETAIL WINERY MANAGEMENT 4 Units**  
**4 hours lecture.**  
 Establishing a small commercial winery. Topics covered include legal regulations, marketing and sale, tasting room management, health and safety issues, and marketing and sales. Retail sales in the wine a food culture. [Transferability: CSU]

**VITI 90A WINE APPRECIATION 1 Unit**

**Advisory: Must be at least 21 years of age to participate in wine tasting; proof of identity required.**

**May be taken 5 times for credit.**

**1 hour lecture.**

Trace the lineage of wines as they developed around the world, how certain cultures are defined by particular grape varieties or wine types. The development of each region and the wine types associated will be culminated at the end of each session with a sampling of wines. Reading wine labels will be demystified, reducing the confusion and minimizing risk when selecting a bottle of wine. Grape growing and wine making techniques throughout history and around the world are examined. Guest speakers, including sommelier, chef, vendor, and critic guide the wine tastings as they impart their specialized skills. [Transferability: CSU]

**VITI 90B VINEYARD ESTABLISHMENT 2 Units**

**May be taken 5 times for credit.**

**2 hours lecture.**

Buying grapevines at a nursery and planting them is but one step in the integrated process of establishing a vineyard. Regional differences, vine growing theories, and historical development are presented, along with variety selection and a discussion of how grapevines grow. The establishment process begins with site evaluation, soil preparation and physical layout. Trellis systems, drip irrigation, cover crops, and deer fences are illustrated. Various types of controls for potential pests and diseases are revealed. And, of course, the vines themselves are described from planting, through training, and into harvest. [Transferability: CSU]

**VITI 90C VINEYARD MANAGEMENT 2 Units**

**May be taken 5 times for credit.**

**2 hours lecture.**

Fertilization needs, irrigation practices, frost protection systems, ground cover requirements, and grape harvest are detailed. Pests, diseases, and other disorders are illustrated to facilitate troubleshooting problematic vineyards. Integrated pest management, organic, and biodynamic practices are forms of control presented. Cultural operations designed to reduce potential problems and the use of pesticides are discussed. License and certificate holders may receive continuing education hours from the California Department of Agriculture. [Transferability: CSU]

**VITI 90D VINE PRUNING 1 Unit**

**May be taken 5 times for credit.**

**1 hour lecture.**

The annual growth cycle and growth habits of grapevines are detailed and applied to vineyard practices specific to the vines themselves. Follow the 3 year process from planting and through the training process until the vines are mature. Students will travel to a local vineyard to prune actual grapevines under supervision. Bring a pair of pruning shears. Work clothes and boots are recommended. [Transferability: CSU]

**VITI 90E BASIC WINEMAKING 2 Units**

**Advisory: Must be at least 21 years of age to participate in wine tasting; proof of identity required; a fee may be assessed.**

**May be taken 5 times for credit.**

**2 hours lecture.**

The ancient art of winemaking is revealed beginning with grape harvest and through the factors that influence wine quality and potential. The steps of red and white winemaking are presented on both small and large scales, with emphasis on types of equipment and sanitation requirements. Crushing, fermentation, cap management, and pressing take students through the initial processing phase. Methods of wine aging and storage considerations are discussed. Manipulations such as chemical adjustments, stabilization, blending, filtration, fining, and lab tests expose the winemaker's secrets. Bottling, whether by hand or mechanized, is the final step in this one-day experience from grapes on the vine to finished wine in the glass. [Transferability: CSU]

**WOMEN'S STUDIES**

**Business & Social Sciences**

**(650) 949-7322**

**www.foothill.edu/bss/**

**WMN 5 INTRODUCTION TO WOMEN'S STUDIES 4 Units**

**4 hours lecture.**

Examination and development of the goals, major documents, history, achievements, and evolution of the current women's movement in light of the impact and contributions of women, in comparison to those of men, of various cultural and ethnic heritage. Includes appraisal of the effects of multiculturalism and the women's movement on politics, jobs, education, science, family structure, and the arts. [Foothill GE: United States Cultures & Communities, Social & Behavioral Sciences; Transferability: UC/CSU]

**WMN 11 WOMEN IN GLOBAL PERSPECTIVE 4 Units**

**4 hours lecture.**

Examination and analysis of the historical roles of women globally and the impact and influence of these historical developments on modern society internationally and domestically. [Foothill GE: United States Cultures & Communities, Social & Behavioral Sciences; Transferability: UC/CSU]

**WMN 15 A HISTORY OF WOMEN IN ART 4.5 Units**

**Advisory: Not open to students with credit in ART 2E.**

**4 hours lecture, 1.5 hours laboratory.**

A cross-cultural examination of art works and gender issues concerning women artists from the early Middle Ages to the 21<sup>st</sup> century. [Foothill GE: Humanities; Transferability: UC/CSU]

**WMN 21 PSYCHOLOGY OF WOMEN: SEX & GENDER DIFFERENCES 4 Units**

**Advisory: Not open to students with credit in PSYC 21 or SOC 21.**

**4 hours lecture.**

Survey of gender issues based upon psychological and sociological theories and research. Examination of sex role stereotyping and differences. Developmental considerations. [Foothill GE: Social & Behavioral Sciences; Transferability: UC/CSU]

**WMN 34H HONORS INSTITUTE SEMINAR IN WOMEN'S STUDIES 1 Unit**

**Formerly: WMN 34**

**Prerequisite: Honors Institute participant.**

**Advisory: Not open to students with credit in WMN 34.**

**1 hour lecture.**

A seminar in directed reading and discussion in women's studies. Specific topics to be determined by instructor. [Transferability: CSU; UC credit may be granted after transfer and upon portfolio review.]

**WMN 35 DEPARTMENT HONORS PROJECTS IN WOMEN'S STUDIES 1 Unit**

**May be taken 6 times for credit.**

**1 hour lecture.**

Seminar in directed reading and discussion in women's studies. Specific topics are determined in consultation with instructor. [Transferability: CSU]

**WMN 36 SPECIAL PROJECTS IN 1 Unit****WMN 36X WOMEN'S STUDIES 2 Units****WMN 36Y 3 Units****WMN 36Z 4 Units**

**Any combination of WMN 36–36Z may be taken 6 times for credit, however, no single course may be taken more than 6 times for credit. 1 hour lecture for each unit of credit.**

Advanced readings, research and/or project in women's studies. Specific topics determined in consultation with instructor. [Transferability: CSU]

**OTHER APPROVED COURSES (COURSES THAT ARE INFREQUENTLY OFFERED)**

ALAP 105	Adaptive Fitness Directed Study	ALPS 212,X,Y	Emergency Household Procedures for the Disabled	APRT 111X-Z	Computer Literacy for Trade Apprentices
ALAP 65,X	Stretching & Flexibility for the Physically Limited	ALPS 213,X,Y	Cognitive Retraining for the Disabled	APRT 112	Residential Electrical Air Conditioning & Refrigeration; Telephone Systems
ALCA 202	Computer Keyboarding Skills for the Disabled	ALPS 214,X,Y	Management of Physical Aspects of Disabilities	APRT 113	Residential Electrical Systems: Basic Security, Solar Power, Home Automation & Life Safety
ALCA 203,X,Y	Computer Access Projects for the Disabled	ALPS 215,X,Y	Mobility in Sitting & Standing for the Disabled	APRT 120	Orientation to the Electrical Trade
ALCB 401,X,Y	Life Development: Goal Setting	ALPS 216,X,Y	Independent Access Skills for Post-Stroke	APRT 121	Electron Theory; Basic Blueprint Reading; DC Theory; National Electrical Code Introduction
ALCB 402,X,Y	Leisure Management	ALPS 217,X,Y	Special Projects in the Post-Stroke Program	APRT 122	Codeology; Test Equipment; Pipe Bending; Blueprints
ALCB 404,X,Y	Consumer Topics	ALPS 218	Transition Class for Post-Stroke Program	APRT 123	AC Theory; Transformers; Intermediate National Electrical Code
ALCB 405,X,Y	Independent Living Skills	ALPS 219,X	Post Traumatic Disability Training	APRT 124	DC/AC Theory Review; Electronics; Industrial Blueprints
ALCB 415	Healthy Aging	ALPS 220,X,Y	Caregiving: Learning Positive Coping Skills	APRT 125	NEC Grounding; Overcurrent Protection; Transformer Connections
ALCB 432,X,Y	Use of Community Resources	ALPS 221,X	Facial Exercises for the Acquired Brain Injury Student	APRT 126	Motors; Motor Control; Lighting Protection
ALCB 433,X-Z	Social Communication	ALPS 222,X	Speech/Language Skills for the Nonfluent ABI Student	APRT 127	Digital Electronics; Motor Speed Control; Advanced National Electrical Code
ALCB 453,X-Z	Clay Art	ALPS 223,X,Y	Cognitive Reorganization Skills for ABI Students	APRT 128	Programmable Logic Controllers; Low Voltage Systems & High Voltage Systems
ALCB 454,X,Y	Music & Song	ALPS 224,X	Upper Extremity Exercises for the Acquired Brain Injury Student	APRT 129	National Electrical Code Review
ALLD 201,X	Diagnosing Learning Disabilities	ALPS 225,X	Functional Skills of Daily Living for the Acquired Brain Injury Student	APRT 135	Residential Electrical Orientation; Safety, & Code Introduction
ALLD 202,X	Special Projects for Learning Disabled	ALPS 226,X	Basic Ambulation Skills for the ABI Student	APRT 136	Residential Electrical D/C Theory; Blueprint Reading
ALLD 203	Compensatory Techniques	ALPS 227,X	Functional Mobility Skills	APRT 137	Residential Electrical A/C Theory & Circuitry
ALLD 204,X	Technology-Based Writing for Students With Learning Differences	ALTW 227	Skills Laboratory for the Disabled Student	APRT 138	Residential Wiring Layout & Installation
ALLD 205,X	Reading Remediation	ALTW 228	Special Projects for the Disabled Student	APRT 139	Residential Piping Lay-Out & Installation; Residential Fixtures
ALLD 208,X	Mainstreaming for Success	APPR 191,X-Z	Introduction to Sheet Metal Fabrication	ARBC 1-3	Elementary Arabic
ALLD 209,X	Skill Building for the Disabled	APPR 192,X-Z	Advanced Sheet Metal Fabrication	ART 4L	Drawing Laboratory
ALLD 212	Strategic Learning for College Success	APPR 193,X-Z	Sheet Metal Layout & Pattern Development	ART 43	Mold Construction for Ceramic Art
ALPS 200,X	Orientation for the Disabled	APPR 194,X-Z	Sheet Metal Residential Heating & Air Conditioning	ART 43L	Ceramics Laboratory
ALPS 201,X	Assessment for the Acquired Brain Injured Student	APPR 195,X-Z	Advanced Sheet Metal Pattern Development; Tools & Equipment	ART 45D	Advanced Ceramics Decorating Techniques
ALPS 202	Language Assessment for the Disabled	APPR 196,X-Z	Sheet Metal Materials, Welding & Rigging	ART 45DL	Ceramics Laboratory
ALPS 203	Living Skills Assessment for the Disabled	APPR 197,X-Z	Blueprint Reading & Pattern Drafting	ART 66	The Art of Spain
ALPS 204	Mobility & Fitness Assessment for the Disabled	APPR 198,X-Z	Advanced Sheet Metal Drafting & Sketching		
ALPS 205,X,Y	Communication Skills for the Disabled	APPR 199A	Introduction to Sheet Metal Welding		
ALPS 206,X,Y	Adaption Skills for the Disabled	APPR 199B	Advanced Sheet Metal Welding		
ALPS 207,X,Y	Mobility & Fitness Skills for the Disabled				
ALPS 208,X,Y	Coping With Disability				
ALPS 209,X,Y	Functional Communication Skills for the Disabled				
ALPS 210,X,Y	Functional Skills of Daily Living for the Disabled				
ALPS 211,X,Y	Functional Strength, Balance & Conditioning Training for the Disabled				

ART 70	Kiln Design, Construction & Operation	BTEC 76	Introduction to Microarray Data Analysis	CNSL 200L	Introduction to College Laboratory
ASTR 105	Seminar in Hands-On Astronomy	BTEC 190,X-Z	Directed Study	CNSL 54	First-Year Experience: Leadership And Peer Support
ASTR 190,X-Z	Directed Study	BUSI 102	Practical Personal Finance	CNSL 60A	College Success: Wellness
B T 93U-W	B T Experiential Internship	CAST 50	Career Exploration Using the Internet	CNSL 60B	College Success: Competition
BIOL 1DL	Molecular Biology Laboratory	CAST 52P	Intermediate Flash: Projects	CNSL 60C	College Success: Time Management
BIOL 16	Ornithology	CAST 54A	Microsoft Visio	CNSL 80	Women's Issues
BIOL 35,H,HX	Honors Department Projects in Biology	CAST 55A	Introduction to Adobe Golive	CNSL 85G	Assertive Communication
BIOL 46	Fundamentals of Pharmacology	CAST 56B	Intermediate Filemaker Pro	CNSL 85GA	Advanced Assertive Communication
BIOL 64	Protein Electrophoretic Systems: Basic Laboratory Technique	CAST 58	Using XML Spy	CNSL 85P	Transfer Readiness for Academically Assisted Students
BIOL 65	Nucleic Acids Electrophoretic Systems: Basic Laboratory Technique	CAST 70J	Introduction to Adobe Premiere Elements	COIN 109	Selected Business Topics for the Web Administrator
BIOL 66	HPLC: Basic Laboratory Technique	CAST 89A	Introduction to Quarkxpress	COIN 181	Web Site Design for ATYP
BIOL 67	Immunological Assays	CAST 89B	Advanced Quarkxpress	COIN 209	Navigating the Internet
BIOL 69	Basic Mammalian Cell Culture Techniques	CAST 91A	Introduction to Painter	COIN 210L	World Wide Web Page Design
BIOL 72	HPLC: Basic Laboratory Technique II	CAST 91B	Advanced Painter	COIN 211A	Using Digital Images
BIOL 73	Histotechnology in Research	CHEM 10	Introductory Chemistry	COIN 212	Blogging, Syndication & Podcasting
BIOL 74	Overview of Regulatory Affairs	CHEM 190	Directed Study	COIN 53	Learning With Etudes
BIOL 78	Polymerase Chain Reaction: Basic Laboratory Technique	CHEM 190X	Directed Study	COIN 53A	Introduction to Etudes
BIOL 80	Monoclonal Antibody Production: Hybridoma Technology	CHEM 190Y	Directed Study	COIN 68	CGI Scripting Using Perl
BIOL 85	Immunobiotechnology Basic Laboratory Theory	CHEM 190Z	Directed Study	COIN 74	Web Publishing Tools: Dreamweaver
BIOL 86	Introduction to Microarray Data Analysis	CHIN 110	Chinese Language & Culture	COIN 74B	Web Publishing Tools: Dreamweaver Interactive
BIOL 190,Y,Z	Directed Study	CHIN 112	Chinese Language & Culture	COIN 74C	Web Publishing Tools: Dreamweaver Interactive II
BTEC 50	Careers in Biotechnology/ Bioinformatics	CHIN 120	Introduction to Reading & Writing Chinese	COIN 76	Web Publishing Tools: Multimedia
BTEC 55	Laboratory Safety	CHIN 190	Directed Study Lecture	COIN 79	XML for Bioinformatics
BTEC 56X-Z	Directed Study	CHIN 190X	Directed Study Lecture	COIN 84	Special Web Projects
BTEC 57A	Virology for Biotechnology	CHIN 190Y	Directed Study Lecture	COIN 86	Server-Side Programming With Javasever Pages (Jsp)
BTEC 58	Principles of Biotechnology/ Biomanufacturing	CHIN 190Z	Directed Study Lecture	COIN 88	Using UML for Web Application Development
BTEC 59	Business & Regulatory Practices in Biotechnology/ Biomanufacturing	CHIN 34H	Honors Institute Seminar in Chinese	COIN 91	Introduction to Database-Driven Web Sites
BTEC 62	Cell Culture & Protein Recovery/Biomanufacturing	CIS 19D	Developing Windows-Based Applications With C#	COIN 92	Database-Driven Web Sites: Step By Step
BTEC 63	Biotechnology Instrumentation: Quality Control Engineering	CIS 19M	Windows Presentation Foundation Introduction	COIN 93U-W	COIN Experiential Internship
BTEC 70	Monoclonal Antibody Production: Hybridoma Technology	CIS 19N	Deploying .Net Applications	COIN 94	Constructing Data-Driven Web Sites With PHP & MySQL
BTEC 72	HPLC: Basic Laboratory Technique II	CIS 19V	Using Visual Studio Tools for Office	COIN 96	Constructing Data Driven Web Sites With ASP.NET
BTEC 74	Overview of Regulatory Affairs	CIS 52L	Oracle New Features for Database Administrators	COMM 6	Political Rhetoric
		CIS 62B	Modeling & Simulation	CRLP 220A	Preparation for Radiologic Technology
		CIS 68J	Perl Programming for Bioinformatics	CRLP 220B	Preparation for Dental Hygiene
		CIS 93U-W	CIS Experiential Internship	CRLP 220C	Preparing for Respiratory Therapy
		CNET 51A	Microsoft Windows 2000 Professional		
		CNET 51H	Microsoft Windows 2000 Xp Professional		
		CNET 60E	Microsoft Windows 2003 Network Design		
		CNET 93V,W	CNET Experiential Internship		
		CNSL 100	Introduction to College for Health Science Student		
		CNSL 101	College Basics		

CRLP 220D	Preparation for Radiation Therapy Program	GERM 13A,B	Intermediate Conversation	JRYM 171A-D	Intelicad Electronic Coordination for Sheet Metal Journeypersons
CRLP 72	Interviewing for Career Information in the Community	GERM 14A,B	Advanced Conversation	JRYM 190A,B	Introduction to Air Conditioning Specialists
CRLP 78	Job Search Strategies	GERM 25A,B	Advanced Composition & Reading	JRYM 191A,B	Advanced Air Conditioning Specialists
CRLP 81	Preparation for Social Science Careers	GERM 34H	Honors Institute Seminar in German	LIBR 1	Principles of Library Research
CRLP 82	Preparation for Careers in the Humanities	HIST 19	History of Asia: China/ Japan	LIBR 36,X-Z	Special Projects in Library Science
CRLP 83	Preparation for Careers in the Arts	HIST 23A	Introduction to African History to 1800	LIBR 50	Introduction to Library Skills
CRLP 84	Preparation for Careers in the Sciences	HIST 24	20th Century American Foreign Policy	LIBR 60	Information Competency: Social Sciences
CRLP 85	Preparation for Engineering & Technology Careers	HIST 30	War & Peace in the 20th & 21st Century	LIBR 90A-D	Library Information Seminars
CRLP 86	Preparation for Business Careers	HIST 35,X-Z	Department Honors Projects in History	LIBR 190,X-Z	Directed Study
CRLP 87	Preparation for Careers in Security & Safety	HLTH 5	Emergency Response	LINC 56A,B	Workshop for New Physics Teachers
CRLP 90	High-Tech Career Exploration On the Internet	HORT 52D	Horticultural Practices: Biotechnology & Micro-Propagation	LINC 60D	Itools: Ilife & Mac Bundled Software
CRWR 120A,B	Creative Writers' Conference	HORT 90B	Environmental Horticulture Careers	LINC 67A	Hyperstudio
CRWR 36B	Playwriting	HORT 90D	Herbs: Identification, Use & Folklore	LINC 67B	Drawing K-5
CWE 53,X-Z	Occupational Work Experience	HORT 90J	Landscape Tools & Equipment	LINC 67C	Drawing 6-8
CWE 56	Occupational Work Experience: Community Service	HORT 90T	Gardens of the Renaissance	LINC 71B	Free Web Authoring Tools
CWE 70,X,Y	General Work Experience	HORT 90W	Water Features in European Gardens	LINC 72F	Macromedia Freehand
D A 190,X-Z	Directed Study	JAPN 34H	Honors Institute Seminar in Japanese	LINC 72G	Adobe Pagemaker
D A 61	Ultrasonic Scaling for the RDA	JAPN 190,X-Z	Directed Study	LINC 80C	Easy & Foolproof Design for Multimedia
D H 68B	Radiographic Interpretation B	JRYM 119,120	Uniform Plumbing Code for Journeypersons	LINC 82	Adobe Livemotion
D H 85	Special Topics in Dental Hygiene	JRYM 125,X-Z	Computer Literacy for Trade Journeypersons	LINC 83B	Macromedia Director
EDUC 100	You Can Teach Online	JRYM 138A	Electrician Journeyman Upgrade I	LINC 96A	Alphasarts
EDUC 101	Cyber Teachers Institute	JRYM 147A,B	Basic Air Conditioning Service for Journeymen Ii	LINC 98	Directed Studies in Digital Learning
EDUC 102	Advanced Cyber Teachers Institute	JRYM 148A,B	Beginning Welding for Sheet Metal Journeymen Ii	MATH 102	Elementary Plane Geometry
EDUC 103	Current Issues in Online Learning	JRYM 149A,B	Advanced Welding for Sheet Metal Journeymen I	MATH 103	Essentials of Intermediate Algebra I
ENGL 51A,B	Student Success in the English Classroom	JRYM 150,151	Drawing & Sheet Metal Detailing	MATH 104	Essentials of Intermediate Algebra Ii
ENGL 97A-H	Shakespeare Field Trip	JRYM 155B	Basic Electricity for Sheet Metal A/C Service Journeypersons Ii	MATH 127	Introduction to Mathematica
ENGR 6	Engineering Graphics	JRYM 156	Welding Certification Preparation for Sheet Metal Journeymen	MATH 200	Prealgebra
ENGR 27	Engineering Descriptive Geometry	JRYM 159A-D	Quickpen 3-D Computer-Aided Design for Sheet Metal Journeypersons	MATH 250	Arithmetic
ENGR 38	Semiconductor Devices & Circuits	JRYM 160	Advanced Welding Laboratory	MATH 250L	Basic College Mathematics
ENGR 76	Introduction to Nanotechnology	JRYM 167	Review of the Uniform Mechanical Code	MATH 34HX,HY	Honors Institute Seminar in Mathematics
ENGR 101	Basic Skills in the Workplace	JRYM 169B	Field Measurement & Layout for Sheet Metal Journeymen II	MATH 380Z	Math Student Assistance
F A 34H	Honors Institute Seminar in Fine Arts			MATH 46	Number Systems
F A 92	Community Service Learning Across the Curriculum for Fine Arts			MET 10	Weather Processes
GERM 4-6	Intermediate German			MET 10L	Meteorology Laboratory
				MET 34H	Honors Institute Seminar in Meteorology
				MET 36,X,Y	Special Projects in Meteorology
				MUS 10C	Music Fundamentals Through the Guitar
				MUS 14AL-CL	Classical Guitar Laboratory
				MUS 15AL-CL	Folk Guitar Laboratory

MUS 59	Music Publishing for Songwriters	PT 56,X,Y	Principles & Analysis of Flexibility	RSPT 50X	Respiratory Therapeutics
MUS 60	Audio Recording Techniques	PHED 7	Athletic Officiating	RSPT 60X	Cardiopulmonary Diagnostics
MUS 64A	Jazz & Swing	PHED 12A	Water Safety Instructor	RSPT 62X	Mechanical Ventilation & Advanced Pharmacology
MUS 64B	Funk, Fusion & Hip-Hop	PHED 12B	Lifeguard Training	RSPT 63X	Neonatal & Pediatric Intensive Care, Home Care & Management
MUS 64C	Salsa & Latin Jazz	PHED 18A	Self-Defense	RSPT 64X	Advanced Pathophysiology & Patient Management & NBRC Examinations
MUS 65	Careers in Music	PHED 26B	Doubles Tennis	RSPT 66A	Continuing Education for Respiratory Care: Advanced Patient Management
MUS 80	Recording Arts I: Sound Reinforcement	PHED 47A	Step Aerobics	RSPT 71A-G	Extended Clinical Internship in Respiratory Therapy
MUSP 19	Concert Choir	PHED 50B	Fitness Assessment	RSPT 72A-G	Extended Clinical Internship in Respiratory Therapy
MUSP 41A-F	Applied Music Training	PHED 51	Master's Swimming/Advanced Swim Training	RSPT 73A-G	Extended Clinical Internship in Respiratory Therapy
MUSP 42	Jazz Combo	PHED 101	Tournament Golf Travel Class	RSPT 80A	Respiratory Therapy National Board Exam Review
MUSP 44	Rhythm & Blues Ensemble	PHOT 1LX,2LX	General Photo Production Laboratory	RSPT 80B	ECG Interpretation
MUSP 45,V,W	Chamber Ensemble	PHOT 34H	Honors Institute Seminar in Photography	RSPT 190,X-Z	Directed Study
NCBS 600	Language & Life Skills Literacy	PHOT 53	Introduction to Color Slides	RTT 57	Orientation to Radiation Therapy Technology
NCOA 402	Healthy Living	PHOT 60	Photography & the New Technologies	RTT 58A,B	Fundamentals of Radiation Technology for Radiation Therapists
NCP 600	Strong Start for Children	PHOT 67	Careers in the Visual Arts	RTT 59A	Technical Radiation Oncology
NCP 601	Nurturing Healthy Choices	PHOT 68	Special Topics in Photography	RTT 59B	Radiation Oncology & Pathology
NCP 602	Children & Family Resources	PHOT 75	Introduction to Computer Graphics	RTT 60	Patient Care in Radiation Oncology
NCP 603	Building Bridges, Opening Doors, Raising Emotionally Healthy Children	PHOT 78	Field Study in Photography	RTT 61A,B	Radiation Therapy Physics
OAS 402,X-Z	Healthy Living	PHOT 83	Service Learning Projects	RTT 62B	Radiation Biology
OAS 403,X-Z	Creating Wellness	PHOT 125	Photographic Laboratory Management	RTT 63C	Radiation Oncology III
OAS 404,X-Z	Grow Strong Not Old	PHOT 130	Presenting, Preserving & Restoring Photographs	RTT 64A-C	Clinical Radiation Oncology
OAS 407,X-Z	Staying Mentally Healthy as We Age	PHYS 10	Concepts of Physics	RTT 71A-D	Clinical Practicum
OAS 410,X-Z	Easy Entrepreneurship	PHYS 32H	Honor Institute Seminar	RTT 72A-B	Dosimetry
OAS 412,X-Z	Fast Food Epidemic	PHYS 33H	Honor Institute Seminar	RTT 73A-D	Clinical Practicum
OAS 413,X-Z	Writing to A Healthier You	PHYS 190,X-Z	Directed Study	RTT 80,X,Y	Additional Clinical Practicum
OAS 414,X-Z	Classic Films On the Big Screen	POLI 5	Russian & East European Politics	RTT 190,X-Z	Directed Study
OAS 415,X-Z	Language & Culture for Travelers	POLI 6	Black Political Economy	RTT 200L	Introduction to Radiation Therapy
OAS 416,X-Z	Music & Humor	POLI 7	American Government & Politics From A Black Perspective	SCI 34H	Honors Institute Seminar in Science
OAS 417,X-Z	The Silk Road: 4000 Years of History From Xian to Rome	POLI 8	Post World War II Germany	SOSC 460,490	Supervised Tutoring
OAS 418,X-Z	Protecting Your Health: How Safe is Your Environment?	POLI 24	20th Century American Foreign Policy	SOSC 75	Tutor Training Methods
OAS 420,X-Z	What's in A Movie: Film & Aging	PSE 300	Pedagogy in Physical Science, Mathematics & Engineering	SPAN 10A	Spanish for Heritage Speakers
OAS 421,X-Z	Creating New Possibilities	R T 190,X-Z	Directed Study	SPAN 34H	Honors Institute Seminar in Spanish
OCEN 10	General Oceanography	R T 66	Computed Tomography Review	SPAN 36,X-Z	Special Projects in Spanish
OCEN 34H	Honors Institute Seminar in Oceanography	R T 67	Advanced Topics in Mammography		
OCEN 36,X,Y	Special Projects in Oceanography	R T 68	Magnetic Resonance Imaging Review		
P T 51	Basic Nutrition for Sports & Fitness	R T 70A,B	Advanced Clinical Experience: Special Procedures		
P T 52	Strength Fitness	R T 73	Advanced Clinical Experience: Mammography		
P T 53	Personal Fitness Trainer Internship				
P T 54	Techniques of Fitness Assessment				
P T 55	Theory & Concepts of Exercise Physiology				

SPAN 39	Contemporary Hispanic Literature in Translation	SPED 142	Cognitive Behavioral Therapy Approaches for College Mental Health	THTR 73	Scenery Projects in Fabric & Wood
SPAN 110	Spanish Language & Culture	THTR 21D	Conservatory Theatre Production	THTR 78	Theatre Technology in Metal
SPAN 111	Practical Spanish	THTR 24	Readers Theatre	VART 5B	Playwriting
SPAN 190,X-Z	Directed Study	THTR 42B	Intermediate Scene Design	VART 6	Advanced Playwriting
SPED 70	Introduction to Aqua Fitness Principles	THTR 42C	Advanced Scene Design	VART 7	History of Animation
SPED 140	Suicide Triage Intervention: Question, Persuade, Respond (QPR)	THTR 72A	Drafting for the Theatre, Film & Television	VART 84,85	Digital Video Editing
SPED 141	Question, Persuade, Refer (Qpr) Gatekeeper Instructor Certification	THTR 72C	3D Computer Drafting for the Theatre, Film & Television	VART 89	Introduction to the Maya 3D System
				VITI 80	Viticulture Skills



“When I enrolled at Foothill as a re-entry student in the mid-1970s, I was scared—afraid that I wouldn’t fit in, afraid that I wouldn’t be able to do the work. What I found was a family of teachers who created an environment of personal attention and support for each student. Foothill gives students the opportunity to develop direction. It’s an especially valuable community resource for students who may be returning to school after raising a family, seeking skills for job advancement or enjoying retirement and the opportunity for personal enrichment.”

*Ann Cribbs,*

*President & CEO, 2009 Summer Senior Games;  
Chairwoman, Bay Area Sports Organizing  
Committee; Gold Medalist, 1960 Olympic Games*

# Faculty & Staff

## Foothill-De Anza Community College District

### Board of Trustees

### Foothill College Administration

### Vice Presidents

### Associate Vice Presidents, Deans & Directors

### Faculty & Administrators

### Emeritus Faculty

### Classified Staff

# Faculty & Staff

## Foothill-De Anza Community College District

Foothill College in Los Altos Hills, and De Anza College in Cupertino, are part of the Foothill-De Anza Community College District.

The district is governed by a five-member board of trustees elected to staggered four-year terms by voters within the district. A student trustee from each college serves as representative to the board. Student trustees are elected annually by the associated students group of each college.

*Vice Chancellor, Central Services*  
Kevin McElroy

*Vice Chancellor, Human Resources  
& Equal Opportunity*  
Dorene Novotny

*Vice Chancellor, Technology*  
Fred Sherman

*Executive Director, Facilities, Operations  
& Construction Management*  
Charles Allen

*Interim Director, Institutional Research  
& Planning*  
Andrew LaManque

*Director, Bond Program Management  
De Anza*  
Thomas Armstrong

*Director, Bond Program Management  
Foothill*  
Art Heinrich

*Director, Budget Operations*  
Bernata Slater

*Director, District Safety & Security*  
Ron Levine

*Director, Environmental Health & Safety*  
Mona Voss

*Director, Facilities & Operations*  
Frank Nuñez

*Director, Foothill-De Anza Foundation*  
Open

*Director, Human Resources*  
Open

*Director, Information Systems &  
Operations*  
Chien Shih

*Director, Foothill-De Anza Internship  
Program*  
Frederick Kuhn Jr.

*Director, Purchasing Services*  
Carmen Redmond

*Director, Risk Management*  
Marsha Kelly

*Director, Systems & Networks*  
Sharon Luciw

*Controller*  
Hector Quinonez

*Associate Director, Foothill-De Anza  
Foundation*

Robin Latta Lyssenko, Laura  
Woodworth, Jennifer Dirking

*Associate Director, Facilities &  
Operations Management*  
Lester Lyons

*Manager, Benefits*  
Christine Vo

*Manager, Custodial Services*  
Marilyn Williams

## Board of Trustees



*Chancellor  
& Secretary  
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FHDA  
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Joan  
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Etienne R.  
Bowie  
*Student Trustee  
Foothill College  
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(elected annually)



Pearl  
Cheng



Laura  
Casas  
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Bruce  
Swenson

Thomasina  
Russaw  
*Student Trustee  
De Anza College  
2010-2011*  
(elected annually)

# Foothill College Administration



*President*  
Judy C. Miner, Ed.D.

## Vice Presidents

*Educational Resources & Instruction*  
Shirley Treanor, Ed.D.

*Interim Instruction & Institutional  
Research*  
Eloise Orrell, M.S.

*Student Development & Instruction*  
Roseann Myers, M.A.

*Work Force Development & Instruction*  
Richard G. E. Galope, M.B.A.

## Associate Vice Presidents, Deans & Directors

*Division Dean, Adaptive Learning &  
Disability Services*  
Gertrude Gregorio, M.A.

*Interim Division Dean, Biological &  
Health Sciences*  
Phyllis Spragge, M.A.

*Division Dean, Business &  
Social Sciences*  
John B. Mummert, M.A.

*Division Dean, Computers, Technology  
& Information Systems; Career  
Technical Education*  
Judy Baker, Ph.D.

*Division Dean, Counseling &  
Matriculation*  
Laureen Balducci, M.S.

*Division Dean, Fine Arts &  
Communication*  
Mark Anderson, M.A.

*Division Dean, Language Arts*  
Paul Starer, M.A.

*Division Dean & Athletic Director  
Physical Education*  
Michael J. Legarza

*Division Dean, Physical Sciences,  
Mathematics & Engineering*  
Peter Murray, M.S.

*Dean, Foothill Global Access*  
Judith Baker, Ph.D.

*Dean, International Education*  
George Beers, M.S.

*Associate Vice President, Middlefield  
Campus & Community Programs*  
Denise Swett, Ed.D.

*Dean, Student Affairs & Activities*  
Patricia Hyland, M.A.

*Director, College Bookstore*  
Romeo Paule, B.S.

*Director, Extended Opportunity  
Program & Services (EOPS)*  
Matais Pouncil, Ed.D.

*Director, Facilities & Special Projects*  
Brenda Davis-Visas, B.S., C.I.D.,  
L.E.E.D. A.P.

*Director, Financial Aid*  
Kevin Harral, M.A.

*Associate Vice President,  
External Relations*  
Kurt Hueg, M.B.A.

*Director, Economic & Resource  
Development*  
Fredrick Kuhn Jr., B.A.

*Registrar*  
Shawna Aced, A.A.



# Faculty & Administrators

**Aced, Shawna (2000)**

*Registrar*  
A.A., Foothill College

**Alfsen, Karen (1985)**

*English for Second Language Learners*  
B.A., M.A., California State, Hayward; M.A., San Francisco State University

**Anderson, Mark K. (1989)**

*Division Dean, Fine Arts & Communication*  
B.S., South Oregon State University; M.A., University of Denver

**Arca, Rosemary (1991)**

*Reading, Composition, Academic Skills*  
B.A., M.A., Santa Clara University; M.A., San Francisco State University

**Arenas, José (2000)**

*Art*  
B.F.A., San Francisco Art Institute; M.F.A., University of California, Davis

**Armstrong, Kathleen (2002)**

*Chemistry*  
B.S., San Diego State University; M.S., Ph.D., University of California, San Diego

**Arreola, Anabel (2006)**

*Counseling*  
B.A., M.A., San Jose State University

**Austin, Kathleen Ramos (1990)**

*Director, Diagnostic Medical Sonography Program*  
ARDMS, AART, CRT, San Jose Hospital, San Jose; B.S., University of Phoenix

**Baker, Judith (2006)**

*Dean, Foothill Global Access*  
B.A., College of William & Mary; M.S.W., Virginia Commonwealth University; Ph.D., University of Texas at Austin

**Balducci, Laureen (2006)**

*Division Dean, Counseling & Matriculation*  
B.A., Alfred University; M.A., State University of New York

**Barkley, Elizabeth (1984)**

*Music*  
A.A., Riverside Community College; B.A., M.A., University of California, Riverside; Ph.D., University of California, Berkeley

**Beers, George (1981)**

*Dean, International Programs*  
B.S., M.S., Indiana University

**Bergmann, Janis (1998)**

*Theatre Arts*  
B.A., University of California, Los Angeles; M.A., San Jose State University

**Berry, John (1985)**

*Computer Information Systems*  
B.A., University of California, Santa Cruz; M.A., Colorado State University

**Bertani, Laurie (2001)**

*Counseling*  
B.A., Sonoma State University; M.A., San Jose State University

**Bissell, Jeffrey (2006)**

*Physical Education/Aquatics Coach*  
B.A., M.A., California State University, Chico

**Boyett, Douglas (1990)**

*Physical Education, Football Coach*  
A.A., Foothill College; B.A., California State University, Chico; M.A., St. Mary's College

**Brown, Carolyn (1996)**

*Graphic & Interactive Design*  
B.S., University of Pennsylvania; M.A., San Francisco State University

**Cammin, Falk Renate (1989)**

*Humanities, English for Second Language Learners*  
M.A., The School for International Training; M.A., San Francisco State University; Ph.D., Stanford University

**Campbell, Rachelle (2010)**

*Radiologic Technology Program*  
A.A., Santa Rosa Junior College; B.S., M.S., California State University, Northridge

**Carlson, Martha (2006)**

*Coordinator, Foothill-De Anza Internship Program*  
B.A., University of Iowa; M.A., California State University, East Bay

**Casciaro, Frank (2004)**

*Physics*  
B.S., University of California, Davis; M.S., University of California, San Diego

**Cashmore, Beatrix (1993)**

*Counselor, Adaptive Learning*  
A.B., University of California, Santa Cruz; M.S., San Francisco State University

**Cellilo, Gerard (1989)**

*Computer Information Systems, Counseling*  
A.A.S., Borough of Manhattan Community College; B.S., M.A., Bradley University; Ed.D., University of San Francisco

**Ciment, Hilary (2001)**

*Art*  
B.F.A., Cooper Union; M.F.A., University of Iowa

**Coffin, Elvira (1994)**

*Spanish*  
B.A., M.A., Monterey Institute of International Studies

**Cohen, Vivian (1987)**

*Counseling*  
B.A., M.Ed., Boston University

**Connell, Samuel (2006)**

*Anthropology*  
B.A., University of Pennsylvania; M.S., Ph.D., University of California, Los Angeles

**Cormia, Robert (2001)**

*Computer Information Systems*  
B.S., California State University, Hayward

**Craig, Jody (1999)**

*Physical Education, Women's Basketball Coach*  
B.S., California Polytechnic State University, San Luis Obispo; M.A., Saint Mary's College

**Crespo-Martin, Patricia (2001)**

*Spanish*  
B.A., Universidad de Salamanca; M.A., Florida State University

**Daley, Richard (1993)**

*Chemistry*  
B.S., California State University, Hayward; Ph.D., University of California, Los Angeles

**Dauer, Lesley (2000)**

*English*  
B.A., Middlebury College; M.F.A., University of Massachusetts, Amherst; Ed.M., Harvard University

**Davies, Paul (1992)**

*Music*  
B.A., San Diego State University; M.A., Ph.D., University of California, San Diego

**Davison, Dolores (2000)**

*History, Women's Studies*  
B.A., University of California, Davis; M.A., University of Oregon

**Day, Bernadette (Bernie) (2001)**

*Articulation Officer*  
B.A., University of California, Berkeley; M.S., San Diego State University

**Delgado, Leticia (2001)**

*Counseling*  
B.S., M.A., San Jose State University

**Delos Santos, Sarah (2008)**

*Mathematics*  
B.S., University of California, Davis; M.S., California State University, East Bay

**Denver, Cathleen (2000)**

*Counseling*  
B.A., California State University, Chico; M.A., California Polytechnic State University, San Luis Obispo

**Drake, Lisa (2010)**

*Accounting*  
B.A., San Francisco State University

**Duncan, Kathleen (1993)**

*Biology*  
B.S., M.S., San Jose State University

**Edwards, Kelly (2007)**

*Physical Education, Assistant Football Coach*  
B.S., San Jose State University; M.A., National University

**Emanuel, LeAnn (2010)**

*Counseling*  
B.A., University of California, Santa Cruz; M.A., San Jose State University

**Erickson, Karen (2000)**

*Biology*  
B.S., San Francisco State University; M.S., University of California, Davis

**Escoto, Isaac A. (2008)**

*Counseling*  
B.A., University of California, Davis; M.A., San Jose State University

**Evans, Brian (2002)**

*Economics*  
B.A., University of California, San Diego; M.A., University of Hawaii

**Farber, John (1981)**

*Electronics, Personal Computer Service, Computer Software Training*  
A.A., West Valley College; B.A., San Jose State University

**Feig, Konnilyn (1989)**

*Business, History, Political Science*  
B.S., B.A., M.A., University of Montana; Ph.D., University of Washington; M.B.A., Golden Gate University

**Finnegan, Jordana (2005)**

*English*  
B.A., M.A., Ph.D., University of Oregon

**Flannery, Owen (2007)**

*Physical Education, Women's Soccer Coach*  
B.S., San Jose State University; M.A., John F. Kennedy University

**Fong, Valerie (2005)**

*English*  
B.A., University of California, Santa Cruz; M.A., California State University, Hayward

**Fox, John (2010)**

*Sociology*  
A.A., Cabrillo College; B.A., University of California, Santa Cruz; Ph.D., University of Massachusetts, Amherst

**Fraknoi, Andrew (1992)**

*Astronomy*  
B.A., Harvard University; M.A., University of California, Berkeley

**Francisco, Marnie (1991)**

*Mathematics*  
B.S., M.S., University of Oregon

**Galope, Richard G. E. (2008)**

*Vice President, Work Force Development & Instruction*  
A.S., Community College of the Air Force; B.S., Embry-Riddle Aeronautical University; M.B.A., Golden Gate University

**George, Carol (1987)**

*Counseling*  
B.S., Ohio State University; M.A., Austin Peay State University

**Georgiou, Ion (2004)**

*Mathematics*  
B.S., Eastern Illinois University; M.S., University of Illinois, Champaign-Urbana; Ph.D., University of California, Santa Cruz

**Gibbs, Patricia (1999)**

*Sociology*  
B.A., University of British Columbia, Canada; M.A., University of Alberta, Canada; M.A., Ph.D., University of Hawaii at Manoa

**Gong, III, Sing (Bubba) (1989)**

*Physical Education*  
B.A., M.A., Stanford University

**Gough, Thomas (2004)**

*Theatre Arts*  
B.A., Santa Clara University; M.F.A., University of California, Davis

**Gravenhorst, Kurt (1985)**

*English*  
B.S., M.A., University of Nevada, Reno; M.A., California State University, Dominguez Hills

**Gray, Nicole (1996)**

*Mathematics*  
A.B., Dartmouth College; M.S., University of Illinois

**Green, Mary Jane (2001)**

*Director, Emergency Medical Technician, Paramedic Program*  
B.A., San Francisco State University

**Gregorio, Gertrude (1980)**

*Division Dean, Adaptive Learning & Disability Services*  
B.A., University of the Philippines; M.A., University of San Francisco

**Haight, Elaine E. (1990)**

*Computer Information Systems*  
B.A., University of California, Berkeley; M.S., Stanford University

**Hale, Melanie (1990)**

*Director, Psychological Services & Personal Counseling*  
B.A., City College of New York; M.S., Columbia University

**Hanning, Brenda (2009)**

*Director, Respiratory Therapy Program*  
A.A., Foothill College; B.S., California State University, Fresno

**Hansen, Theresa (Tess) (1991)**

*English, Composition, Literature*  
B.A., Santa Clara University; M.A., Stanford University; M.A., University of Iowa

**Harral, Kevin (2007)**

*Director, Financial Aid*  
B.S., University of California, Davis; M.A., San Francisco State University

**Hartwell, Robert (2004)**

*Music*  
B.A., Sonoma State University; M.A., San Francisco State University; Ed.D., Columbia University

**Hawkins, Mary K. (2000)**

*Transition to Work*  
B.A., University of the Pacific; M.S., San Francisco State University

**Hayes, Diane (1987)**

*Health*  
B.S., M.S., San Jose State University

**Heiser, Meredith (1991)**

*Political Science*  
B.A., Stanford University; Diploma, Freie Universitaet of Berlin, Germany; M.A., Boston University; Ph.D., Johns Hopkins University

**Herman, Ronald (1997)**

*Photography*  
B.F.A., University of Cincinnati; M.F.A., University of Notre Dame

**Holcroft, Carolyn (2002)**

*Biology*  
B.S.N., Ph.D., University of Kansas

**Horowitz, Kenneth L. (1977)**

*Dental Programs*  
D.M.D., Tufts University

**Hueg, Kurt (1995)**

*Associate Vice President, External Relations*  
B.A., University of California, Los Angeles; M.B.A., Santa Clara University

**Huerta, Susana (2005)**

*English*  
B.A., University of California, Berkeley; M.A., University of California, Santa Cruz

**Hyland, Patricia (2007)**

*Dean, Students, Faculty & Staff*  
B.S., M.A., San Jose State University

**Jardali, Najwa (1991)**

*English for Second Language Learners*  
B.A., University of California, Santa Barbara; M.A., San Francisco State University

- Jinnah, Fatima (2007)**  
*Counseling*  
B.A., University of California, Berkeley; M.S., San Francisco State University
- Johnson, Brenda (1991)**  
*Counseling*  
B.A., California State University, Sacramento; M.A., San Jose State University
- Johnson, Charles (1998)**  
*Computer Information Systems*  
B.A., M.A., California State University, Fullerton
- Jones, Kay (2006)**  
*Librarian*  
B.A., University of California, Davis; M.S., San Jose State University
- Jordahl, Kate (1997)**  
*Photography*  
B.A., University of Delaware; M.F.A., Ohio University
- Josselyn, Carol (1987)**  
*Communication Studies, English*  
B.A., Occidental College; M.A., Southern Illinois University; Ph.D., University of Washington
- Key, S. Jenene (1994)**  
*Radiologic Technology*  
B.S., M.S., University of Alabama
- Khejrou, Ali (1993)**  
*English for Second Language Learners*  
B.A., English University Mohammed V; M.A., San Francisco State University
- Kitajima, Lorraine N. (1985)**  
*Director, Health Services*  
B.S., San Jose State University; M.S., University of California, San Francisco
- Knobel, Marc (2000)**  
*Mathematics*  
A.A., De Anza College; B.A., M.S., San Jose State University
- Knopf, Karl (1977)**  
*Adapted Physical Education*  
B.A., San Diego State University; M.A., San Jose State University; Ed.D., Nova University
- Kornegay, Catherine (1977)**  
*Dental Hygiene*  
A.S., Foothill College; B.A., San Francisco State University; M.A., San Jose State University
- Kuhn Jr., Frederick (2002)**  
*Director, Economic & Resource Development*  
B.A., Sonoma State University
- Lam, Phuong My (2000)**  
*Mathematics*  
B.S., Santa Clara University; M.S., California State University, Hayward
- Lane, Kimberly (2002)**  
*Counseling*  
B.A., Kent State University; M.S.S.A., Case Western Reserve University
- Lane, Linda (1985)**  
*English, Reading*  
B.A., M.S., California State University, Hayward
- Lang, Gary (1988)**  
*Physical Education*  
B.S., California State University, Sacramento; M.S., University of Arizona
- Lankford, Scott (1989)**  
*English*  
B.A., Williams College; M.A., Ph.D., Stanford University
- Larson, Londa (1995)**  
*Chemistry*  
B.S., California State University, Hayward; Ph.D., University of California, Los Angeles
- Lee, Andrew (2005)**  
*Counseling*  
B.A., University of California, Berkeley; M.A., San Jose State University
- Lee, Davida C. Vance (1975)**  
*Counseling*  
B.S., M.A., O.T.C., San Jose State University
- Lee, Debbie (2007)**  
*Mathematics*  
B.A., M.A., San Francisco State University
- Lee, Keith (1996)**  
*Photography*  
B.A., University of California, Los Angeles; M.F.A., School of the Art Institute of Chicago
- Lenkeit Meezan, Karen Allison (2000)**  
*Geographic Information Systems, Geography*  
B.S., Stanford University; M.Phil., University of Cambridge
- Levine, Ronald (2003)**  
*Police Chief*  
District Police
- Lew, Debra (2001)**  
*Counseling*  
B.A., University of California, Los Angeles; M.S., California State University, Los Angeles
- Lewis, Brian (2001)**  
*English*  
B.A., University of California, Santa Barbara; M.A., San Francisco State University
- Lin, Eta (2007)**  
*Psychology*  
B.A., M.A., Ph.D., University of California, Santa Barbara
- Liner, Thomas (2000)**  
*Physical Education, Women's Soccer Coach*  
B.A., California State University, Chico
- Loceff, Michael (1984)**  
*Computer Information Systems*  
B.S., University of Michigan; M.S., Stanford University
- Lopez, Joanne (1996)**  
*Biology*  
B.A., Ph.D., University of California, Santa Cruz
- Lum, Linda (1977)**  
*Art*  
B.A., Marycrest College; M.A., University of Iowa
- Mac Neil, Donald (2008)**  
*Adaptive Physical Education*  
B.A., M.A., San Francisco State University
- MacDougall, Maureen (1999)**  
*Veterinary Technology*  
B.S., Manhattan College; M.S., Pennsylvania State University; D.V.M., Purdue University
- Macias, Dixie (1990)**  
*Physical Education, Men's Tennis Coach*  
B.S., San Jose State University; M.A., Stanford University
- Manske, Kent (1990)**  
*Art, Graphic & Interactive Design*  
B.F.A., University of Wisconsin, Eau Claire; M.F.A., School of the Art Institute of Chicago
- Marasco, David (2004)**  
*Physics*  
B.A., B.S., University of California, San Diego; M.S., Ph.D., Northwestern University
- Martinez, Ricardo A. (1994)**  
*Mathematics*  
B.S., California State University, Chico; M.S., California State University, Hayward
- Masegian, Kelly (2007)**  
*Coordinator, Foothill-De Anza Internship Program*  
B.A., Trinity University; M.A., Our Lady of the Lake University, San Antonio
- McGriff, Steven (2008)**  
*Teacher-in-Residence, Krause Center for Innovation*  
B.A., Stanford University; M.A., San Jose State University; Ph.D., Pennsylvania State University
- McLeod, Bruce (2006)**  
*Theatre Arts*  
B.A., Western Washington University
- Meade, LaDawn (2001)**  
*Computer Information Systems*  
B.A., University of Utah; M.S., California State University, Sacramento
- Melia, Martin (2001)**  
*Biology*  
B.A., University of California, Berkeley; M.A., San Francisco State University
- Menager-Beeley, Rosemarie (1991)**  
*Psychology*  
B.A., University of California, Berkeley; M.S., California State University, Los Angeles; Ed.D., University of Southern California
- Menendez, Natalia A. (1991)**  
*English, Composition, Literature*  
B.A., M.A., University of California, Berkeley
- Miller, Ellen (2006)**  
*Program Developer, Professional & Workforce Development*  
B.A., University of Maryland; M.A., College of Notre Dame
- Miller, Lawrence S. (1979)**  
*Respiratory Therapy*  
A.A., Santa Monica College; B.A., M.A., California State University, Long Beach; R.R.T., University of California, Los Angeles Medical Center
- Miner, Judy C. (1988)**  
*President*  
B.A., M.A., Lone Mountain College; Ed.D., University of San Francisco
- Miyasaki, Cara (1991)**  
*Director, Dental Assisting Program*  
A.S., Foothill College; B.S., M.S., University of California, San Francisco
- Morasci, Richard (1996)**  
*English for Second Language Learners*  
B.A., University of California, Berkeley; M.A., San Francisco State University
- Morriss, Patrick (2001)**  
*Mathematics*  
B.A., North Dakota State University; M.S., San Jose State University
- Mudge, Rachel (2004)**  
*Mathematics*  
B.A., Scripps College; M.S., Santa Clara University
- Mummert, John (2001)**  
*Division Dean, Business & Social Sciences*  
B.A., Pennsylvania State University; M.A., University of New Mexico
- Murphy, William (2002)**  
*Computer Networking*  
B.S., M.S., University of California, Berkeley; J.D., Santa Clara University
- Murray, Peter (2005)**  
*Division Dean, Physical Sciences, Mathematics & Engineering*  
B.S., M.S., Clarkson University
- Myers, Roseann (1996)**  
*Vice President, Student Development & Instruction*  
B.S., Hampton University; M.A., Rowan University, Glassboro
- Nava, José (1998)**  
*Accounting, Business*  
B.A., University of California, Los Angeles; M.A., University of California, Berkeley
- Nava, Tobias (2005)**  
*Counseling*  
B.A., M.A., San Jose State University
- Ni, Preston (1991)**  
*Communication Studies*  
B.S., M.S.B.A., San Francisco State University
- Norick, Amanda (2005)**  
*Chemistry*  
B.S., Western Oregon University; M.S., Vanderbilt University
- Oburn, Ronald K. (1975)**  
*Physical Education*  
B.S., M.A., California State Polytechnic University
- Ong, Teresa (2007)**  
*Learning Disability Specialist*  
B.A., National University of Singapore; M.A., New York University; M.A., University of San Francisco
- Onugha, Erica (2008)**  
*English*  
B.A., University of California, Berkeley; M.A., University of California, Los Angeles
- Orrell, Eloise J. (1984)**  
*Interim Vice President, Instruction & Institutional Research*  
B.S., University of San Francisco; M.S., Midwestern State University
- O'Loughlin, Rita A. (1989)**  
*Adapted Physical Education*  
A.A., Orange Coast College; B.A., California State University, Chico; M.S., California State University, Hayward
- O'Neal, Verley A. (1989)**  
*Computers & Information Systems*  
B.S., Princeton University
- Park Lee, Young Hee (2008)**  
*Mathematics*  
B.S., Kyungnam University, Korea; M.S., Ph.D., Korea Advanced Institute of Science & Technology
- Patyk, Jay (2000)**  
*Economics*  
B.A., M.A., San Jose State University
- Paye, Anne M. (1989)**  
*English*  
B.A., San Jose State University; M.A., Stanford University
- Pelzel, Robert E. (1980)**  
*Broadcasting, Radio*  
B.A., University of California, Berkeley
- Pennington, Simon (2006)**  
*Art History*  
B.A., San Jose State University; M.A., University of East Anglia, Norwich, England
- Perino, Kathryn (1994)**  
*Mathematics*  
B.S., California Polytechnic State University, San Luis Obispo; M.S., Eastern Washington University
- Peter, Karl M. (1992)**  
*Director, Veterinary Technology Program*  
B.A., Fresno Pacific University; D.V.M., University of California, Davis
- Pierce, Robert C. (1971)**  
*History*  
B.A., M.A., San Jose State University; Ph.D., University of Wisconsin, Madison
- Piparo, Elaine (2001)**  
*Counseling*  
B.A., University of California, Berkeley; M.S., San Francisco State University
- Ploke, Irving (1990)**  
*Physical Education*  
A.A., De Anza College; B.A., M.A., San Jose State University
- Pouncil, Matis D. (2007)**  
*Director, Extended Opportunity Program & Services*  
B.S., Southern University, Baton Rouge; M.A., California State University, Long Beach; Ed.D., University of California, Irvine
- Pratt, Keith (1998)**  
*English for Second Language Learners*  
B.A., California State University, Hayward; M.A., San Jose State University; M.A., San Francisco State University
- Ragey, Joseph (1988)**  
*Art, Graphic & Interactive Design, Theatre Arts*  
B.F.A., Memphis State University; M.F.A., San Francisco State University; M.A., San Jose State University
- Reid, Roberta Anne (1990)**  
*Art History*  
B.A., California State University, Humboldt; M.A., University of California, Santa Barbara; Ph.D., Stanford University
- Ripp, Kathryn (2004)**  
*Physical Education, Women's Volleyball Coach*  
B.A., University of Pacific; M.A., Saint Mary's College
- Rivera-Montanez, Julio (2001)**  
*Spanish*  
B.A., University of Puerto Rico; M.A., Brown University
- Robbins, Doren (2001)**  
*English, Creative Writing*  
B.A., The Union Institute, Cincinnati; M.F.A., University of Iowa

- Rosenberg, Shanán (2002)**  
*Physical Education, Men's Basketball Coach*  
B.A., University of California, Davis; M.A., California State University, Chico
- Ruble, Andrew (2008)**  
*Art, Ceramics*  
B.F.A., Kansas City Art Institute; M.F.A., Louisiana State University
- Rush, Tiffany (2010)**  
*Respiratory Therapy*  
B.S., M.S., Florida Agricultural & Mechanical University
- Sauter, David (2000)**  
*Environmental Horticulture & Design*  
B.S.L.A., Iowa State University; M.A., University of Iowa
- Sawka, John (1988)**  
*Mathematics*  
B.S., Harvey Mudd College; M.S., M.Phil., Ph.D., Yale University
- Scattini, Gene (1985)**  
*Physical Education, Men's Golf Coach*  
B.A., San Jose State University; M.A., University of Nevada, Reno
- Schmidt, Ernest (2005)**  
*Psychological Services*  
B.A., University of the Pacific; M.S.W., University of California, Berkeley
- Schultheis, Lisa (2002)**  
*Biology*  
B.S., University of Arizona; Ph.D., University of California, Berkeley
- Schultz, Gillian (2007)**  
*Biology*  
B.A., University of Rochester; M.S., Ph.D., University of California, Riverside
- Serna, Leticia (2001)**  
*Counseling*  
B.S., San Jose State University; M.S., California State University, Hayward
- Seyedin, Sara (1998)**  
*Accounting*  
B.A., National University of Iran; M.P.A., University of Colorado; M.B.A., San Jose State University; Ph.D., University of Northern Colorado
- Shewfelt, Barbara (1989)**  
*Physical Education*  
M.F.A., New York University; M.S., Stanford University
- Silverman, Loretta (2000)**  
*Mathematics*  
B.A., University of California, San Diego; M.S., San Jose State University
- Sinclair, Jennifer (2010)**  
*Mathematics*  
B.A., M.A., San Francisco State University
- Small, Daphne (2001)**  
*Director, Student Activities*  
B.A., University of California, Santa Barbara; M.A., San Jose State University
- Spragge, Phyllis (1998)**  
*Interim Dean, Biological & Health Sciences Division*  
A.S., College of the Redwoods; A.S., Foothill College; A.S., Cañada College; B.A., St. Mary's College; M.A., San Jose State University
- Stanley, Brian H. (1980)**  
*Mathematics, Engineering*  
B.Sc., University of Birmingham, England; M.S., University of Kansas; M.S., Santa Clara University
- Starer, Paul (1999)**  
*Division Dean, Language Arts*  
B.A., University of California, Santa Cruz; M.A., San Francisco State University
- Stefonik, Benjamin (2010)**  
*Psychology*  
B.A., University of Wisconsin, Eau Claire; M.A., San Francisco State University
- Stevenson, Janis (1975)**  
*Music*  
B.A., M.A., San Jose State University
- Svenson, Daniel K. (1995)**  
*Director, Environmental Horticulture & Design Program*  
B.S., Oregon State University; M.L.A., California Polytechnic University, Pomona; M.B.A., Sonoma State University
- Svetich, Kella (2005)**  
*English*  
B.A., M.A., University of Nevada, Reno; Ph.D., University of California, Davis
- Swett, Denise (2007)**  
*Associate Vice President, Middlefield Campus & Community Programs*  
B.A., M.P.A., San Jose State University; Ed.D., University of San Francisco
- Taketa, Victoria (1988)**  
*Counseling*  
B.A., M.A., San Jose State University
- Tam, Victor (2007)**  
*Chemistry*  
B.S., University of California, Berkeley; M.S., Ph.D., University of California, San Diego
- Tambling, Bruce (2007)**  
*Music Technology*  
B.A., Charter Oak State College
- Tapia, Brian (2006)**  
*Philosophy*  
B.A., M.A., San Diego State University
- Thomas, Jeanne (2007)**  
*Child Development*  
B.A., San Jose State University; M.A., Pacific Oaks College
- Thomas, Mary (2001)**  
*Librarian*  
B.A., University of California, Davis; M.L.S., University of California, Los Angeles
- Thunen, Charlotte (1986)**  
*Librarian*  
B.S., University of California, Davis; M.L.S., University of Hawaii
- Tomita, Ikuko (2001)**  
*Japanese*  
B.A., M.A., Tokyo University of Foreign Studies; Ph.D., University of California, Santa Barbara
- Townes, Shawn (2000)**  
*Communication Studies*  
B.A., M.A., San Francisco State University; Ph.D., Ohio University
- Treanor, Shirley (1988)**  
*Vice President, Educational Resources & Instruction*  
A.A., Prince George's College; B.S., Maryland University, College Park; Advanced Respiratory Therapy Certificate, University of Chicago; M.S., San Francisco State University; Ed.D., University of San Francisco
- Tripp Caldwell, Kristin (2001)**  
*Video Arts*  
B.F.A., University of North Texas; M.F.A., School of Visual Arts, New York
- Urrutia-Lopez, Rebecca (2000)**  
*Coordinator, Cooperative Work Experience Education*  
B.S., San Jose State University; M.A., University of San Francisco
- Uyeda, Diane (2004)**  
*English for Second Language Learners*  
B.A., Occidental College, Los Angeles; M.A., University of Washington
- Velasco, Lauren Popell (2000)**  
*Communication Studies, Forensics*  
B.A., Bates College; M.A., Stanford University
- Villanueva, Voltaire (2007)**  
*Counseling*  
B.A., M.A., San Francisco State University; M.A., University of San Francisco
- Violett, Glenn (2006)**  
*Business*  
B.S., M.B.A., Golden Gate University
- Visas, Brenda (2008)**  
*Director, Facilities & Special Projects*  
B.S., San Jose State University
- Voyce, Warren (2007)**  
*Athletic Trainer, Physical Education & Athletics*  
B.S., M.S., California State University, East Bay
- Wang, Xiujuan (1991)**  
*Physics, Engineering*  
B.S., Zhejiang University, Peoples Republic of China; M.S., University of Toledo
- Watkins, Sandra (1998)**  
*Computer Science*  
B.A., Western Illinois University; M.S., Iona College
- Wheeler, Bonny (2000)**  
*Director, Radiologic Technology Program*  
B.A., M.A., San Jose State University
- Whitehill, Anita (1999)**  
*Computer Information Systems*  
B.A., University of California, San Diego; M.B.A., San Francisco State University
- Wilkes, Pamela (2005)**  
*Librarian*  
B.A., University of California, Santa Cruz; M.L.I.S. University of California, Berkeley
- Will, Marguerite (Mimi) (1976)**  
*Computer Information Systems*  
B.A., M.A., San Francisco State University; M.A., San Jose State University
- Wolterbeek, Kim S. (1989)**  
*English, Creative Writing Conference*  
B.A., M.A., University of the Pacific, Stockton
- Wong, Rita (1991)**  
*English for Second Language Learners*  
B.A., San Francisco State University; M.A., University of Michigan
- Wong, Russell (2006)**  
*Learning Disability Specialist*  
B.A., University of San Francisco State University; M.A., Santa Clara University
- Woolcock, Joseph (1987)**  
*Political Science*  
B.A., Boston College; M.A., Ph.D., Stanford University
- Wu, Tilly Liu (2000)**  
*Counseling*  
B.S., M.A., San Jose State University
- Yamamoto, Judy (2008)**  
*Dental Radiology*  
B.A., M.S., San Francisco State University; B.S., University of California, San Francisco
- Ziegenhorn, William (2004)**  
*History*  
B.A., University of California, Davis; M.A., San Jose State University
- Zwack, Teresa (2010)**  
*Mathematics*  
B.A., University of California, Santa Cruz; M.A., California State University, East Bay

## Emeritus Faculty

- Abbey, William L. (1958)**  
*Physical Education & Athletics*  
B.S., University of Oregon; M.A., San Jose State University
- Adams, Katherine (1988)**  
*Counseling*  
A.A., Foothill College; B.S., College of Notre Dame; M.A., Santa Clara University; Ed.D., University of San Francisco
- Adams, Lily (1987)**  
*Counseling*  
B.A., University of the East; M.Ed., Ph.D., Loyola University
- Adler, Richard R. (1962)**  
*Biology*  
B.S., Michigan State University; M.Ed., Wayne State University; M.S., University of Michigan
- Anderson, Dorothy A. (1961)**  
*Business*  
B.S., University of Nebraska; M.A., Stanford University
- Atchison, James A. (1964)**  
*Psychology*  
B.A., Saint Mary's College; M.A., New Mexico Highlands University; C.G. Institute, Zurich, Switzerland
- Barnett, Elyse (1992)**  
*Anthropology*  
B.A., Brandeis; Ph.D., Stanford University
- Becchine, Virginia E. (1976)**  
*Director, Respiratory Therapy*  
A.S., Foothill College; B.A., Montclair State University; M.A., Santa Clara University
- Bell, Mary D. (1992)**  
*French*  
B.A., University of California, Los Angeles; M.A., Tulane University
- Berthiaume, R. Dennis (Denny) (1970)**  
*English*  
B.A., M.A., San Diego State University
- Bonneau, B. Leon (1968)**  
*Astronomy*  
B.A., San Jose State University; M.A., California State University, Northridge; M.Ed., San Francisco State University
- Bray, D. Jene (1964)**  
*Counseling*  
B.A., M.A., Arizona State University
- Broadwin, John (1990)**  
*Librarian*  
B.A., Stanford University; M.L.S., University of California, Los Angeles
- Broussard, Charles C. (1967)**  
*Counseling*  
B.A., Louisiana State University; M.A., San Francisco State University
- Bruguera, Jorge (1972)**  
*Reference Librarian*  
B.A., University of Pittsburgh; M.L.S. Carnegie Institute of Technology
- Bryan, William J. (1965)**  
*Music*  
B.S., St. Louis Institute of Music; M.S.Ed., University of Southern California
- Campbell, Bob C. (1963)**  
*Physical Education: Recreation Coordinator*  
B.S., M.S., State University of Iowa
- Carr, Janice (1989)**  
*Mathematics*  
A.B., Colby College; A.M.T., Harvard University
- Carter, Celeste V. (1996)**  
*Biology*  
B.S., University of California, Berkeley; M.S., Harvard; Ph.D., Pennsylvania State School of Medicine
- Chavez, Robert A. (1970)**  
*Counseling, Middlefield Campus*  
B.A., M.A., University of New Mexico

- Chivington, Thomas H.** (1966)  
*Physical Education, Tennis*  
A.A., Ventura College; B.S., Wyoming University; M.A., Washington State University
- Chung, Lilia** (1974)  
*English as a Second Language*  
A.A., Holy Ghost College; B.Ph., M.A., University of Santo Tomas; Ph.D., Syracuse University
- Clark, Nancy Howe** (1977)  
*Director, Children's Programs*  
B.A., M.A., Stanford University
- Cole, Jerry R.** (1967)  
*Men's Basketball, Physical Education*  
B.A., M.A., University of Denver; Ed.D., Colorado State College
- Connor, Ann Wilkinson** (1965)  
*Associate Dean, Instruction; Off-Campus Programs, Interchange*  
B.A., M.A., San Francisco State University
- Conom, Tom** (1982)  
*Manager, College Police & Safety Services*
- Cotter, Stanley** (1964)  
*Mathematics*  
B.A., University of California, Berkeley; M.A., University of Illinois
- Critchfield, Frederick** (1960)  
*Director, Economic Development, Grants, Apprenticeship Programs*  
B.S., Utah State University; M.A., Stanford University
- Cross, Truman B.** (1970)  
*History*  
B.A., Portland State College; M.A., George Washington University; Ph.D., Indiana University
- Day, Diane D.** (1964)  
*English*  
B.A., U.C. Berkeley; M.A., Sacramento State University
- De Luna, Yaya** (1971)  
*History, Sociology*  
B.A., M.A., San Jose State University; Ph.D., University of Southern California
- De Palma, Barton** (1962)  
*Art, Film*  
B.F.A., M.F.A., University of Pennsylvania
- DiLeonardo, Christopher** (1990)  
*Geology*  
B.A., M.S., San Jose State University; Ph.D., University of California, Santa Cruz
- Dillon, William M.** (1992)  
*Director, Aviation Program*  
B.S., Cheney State University; M.S., California State University, Hayward; A.T.P. C.S.I.I.
- Di Nucci, Linda** (1991)  
*Reach Program*  
A.A., West Valley College; B.A., M.A., M.S., San Jose State University; R.N., Western Pennsylvania Hospital School of Nursing
- Dominguez, Arno** (1990)  
*Physical Education*  
B.A., San Jose State University; M.A., St. Mary's College
- Dong, Raymond P.** (1976)  
*Electronics*  
B.S., Tri-State University; M.A., Michigan State University
- Dorsey, Donald** (1973)  
*Dean, Student Affairs & Activities*  
B.A., Prairie View A & M College; M.A., San Jose State University
- Dowling, W. Lescher** (1967)  
*Photography*  
B.A., University of California, Santa Barbara; M.A., San Diego State University
- Ehly, William L.** (1961)  
*Spanish*  
B.A., M.A., University of Denver
- Ellsworth, Orval T.** (1974)  
*Electronics Museum*  
B.A., Ph.D., University of California, Los Angeles
- Ettinger, Stanley L.** (1966)  
*Graphic Design*  
B.F.A., Pratt Institute; M.A., New York University
- Fairchild, James R.** (1966)  
*Football, Physical Education*  
B.A., M.A., College of the Pacific
- Feeter, J. William** (1975)  
*Animal Health Technology*  
B.S., D.V.M., Kansas State University
- Felix, Raul** (1973)  
*Work Experience Coordinator, Cooperative Education*  
B.A., M.A., San Jose State University
- Fetler, James M.** (1964)  
*English*  
B.A., San Francisco State University; M.A., University of California, Berkeley
- Fish, Ruth Anne** (1959)  
*Mathematics*  
B.S., M.S., University of Arizona
- Fisher, Carl J.** (1964)  
*Accounting, Business*  
B.A., M.B.A., Stanford University
- Flowers, April** (1988)  
*English, English for Second Language Learners*  
B.A., Auburn University; M.A., San Francisco State University
- Fong, Bernadine Chuck** (1970)  
*President Emerita*  
B.A., M.A., Ph.D., Stanford University
- Ford, John Rene** (1967)  
*Drama, Speech*  
A.A., Santa Ana College; B.A., U.C. Santa Barbara; M.A., San Jose State University
- Gallo, Joseph D.** (1963)  
*English*  
A.A., Fullerton Junior College; B.A., M.A., San Jose State University; D.Arts., University of Pacific
- Gatlin, Susan** (1996)  
*Division Dean, Physical Education*  
B.A., Humboldt State University; M.S., South Oregon State College
- Gause, Mary Jane Powell** (1977)  
*Computer Applications*  
B.A., University of Washington; M.A., University of California, Berkeley
- Gause, Richard A.** (1964)  
*Art*  
B.A., M.A., University of California, Berkeley
- Gonzales, Richard R.** (1972)  
*Counseling*  
B.A., San Jose State University; M.A., California Polytechnic State University, San Luis Obispo
- Gonzalez, Ismael** (1987)  
*Director, EOPS-CARE*  
A.A., West Valley College; B.A., California State University Hayward; M.A., University of San Francisco
- Grenbeaux, Jean M.** (1965)  
*English, Education*  
B.A., San Jose State University; M.A., Stanford University
- Gutter, Malcolm D.** (1962)  
*Economics*  
B.A., City College of New York; M.A., University of California, Berkeley
- Hack, Sharon** (1989)  
*Travel Careers*  
B.A., Brigham Young University
- Handa, Judith H.** (1973)  
*Dean, Instruction & Student Affairs*  
B.A., M.S., University of Hawaii
- Harkin, Arthur P.** (1963)  
*Biology*  
A.A., Compton College; B.A., University of California, Berkeley; M.S., University of Utah
- Hasling, John** (1966)  
*Speech, Broadcasting*  
B.A., M.A., Sacramento State University
- Hawkins, Mark F.** (1965)  
*English, Humanities*  
B.A., Ph.D., University of California, Berkeley; M.A., San Francisco State University
- Hawley, Gene M.** (1967)  
*Physical Education*  
A.A., Everett Junior College; B.A., M.A., San Francisco State University
- Heinz, Duane** (1970)  
*Chemistry*  
A.A., Hartnell College; A.B., Sacramento State University; Ph.D., University of California, Davis
- Hendrickson, Maribeth** (1974)  
*Philosophy*  
B.A., M.A., San Jose State University; Ph.D., Stanford University; J.D., University of California, Hastings College of the Law
- Henning, Richard L.** (1967)  
*Dean, Community Services, Development & Public Relations*  
A.A., Taft College; B.A., M.A., San Jose State University; Ed.D., University of Southern California
- Heslet, Marylou M.** (1990)  
*Counseling*  
B.A., M.S., California State University, Hayward; M.L.A., Stanford University
- Hicks, Elizabeth M.** (1972)  
*Aviation*  
B.A., San Jose State University
- Holler, Gordon W.** (1968)  
*Art*  
B.A., University of Nebraska; M.A., University of California, Berkeley
- Hurd, Warren** (1998)  
*Dean, Faculty & Staff*  
B.S., Wayne State University; M.S., De Paul University; Ed.D., Northern Illinois University
- Hutchinson, Clarence G.** (1966)  
*Counseling*  
B.A., M.S., University of Southern California
- Jaschob, Charles** (1967)  
*Art, Computer Graphics*  
B.F.A., Pratt Institute; M.A., Teachers College, Columbia University
- Kane, David H.** (1968)  
*Business, Office Technology, Computer Information Systems*  
B.B.A., Woodbury University; B.A., California State University, Los Angeles; M.A., Teachers College, Columbia University
- Keiffer Gillette, Karen** (1990)  
*Librarian*  
B.A., University of Oregon, Eugene; M.L.S., San Jose State University
- Ketels, Henry E.** (1967)  
*Physical Education, Track*  
B.S., M.S., University of Southern California
- Kingson, Robert C.** (1965)  
*English*  
B.A., M.A., University of California, Los Angeles; Ph.D., University of California, Berkeley
- Klee, John B.** (1961)  
*French, Spanish*  
B.A., M.A., University of Southern California
- Kohs, Gerald D.** (1965)  
*English*  
B.A., Eastern Michigan University; M.A., University of Michigan
- Konigsberg, Charles W.** (1973)  
*Ornamental Horticulture*  
B.S., M.A., California Polytechnic State University, San Luis Obispo
- Lawlor, Steven C.** (1972)  
*Business, Computer Information Systems, Data Processing, Database Management*  
B.S., San Jose State University; M.B.A., Santa Clara University
- Lindauer, Charles** (1997)  
*Mathematics*  
B.S.E.E., City College of New York; M.S.E.E., City University of New York; Ph.D., Virginia Polytechnic Institute
- Long, Bernard F.** (1965)  
*Physics*  
A.A., Memorial University College, St. John's Newfoundland; B.S., M.S., Dalhousie University, Halifax, Nova Scotia; M.S., Fordham University
- Long, William E.** (1959)  
*Electronics*  
B.A., University of Illinois; M.A., Stanford University
- Lowe, Irel D.** (1967)  
*Associate Dean, Administrative Services*  
B.S., M.Ed., University of Idaho; Ed.D., Brigham Young University
- Lynn, Sandy** (1989)  
*Mathematics*  
B.A., M.A., University of Oregon
- Macadangang, Fortunato** (1973)  
*Counseling, EOPS*  
B.A., Brigham Young University; M.S.W., San Jose State University
- Maltzman, Charlene** (1986)  
*Adaptive Learning, STEP Program Coordinator*  
B.A., San Francisco State University; M.A., Santa Clara University; Ed.D., University of San Francisco
- Manikin, Linda R.** (1964)  
*Music*  
B.S., New York University; M.A., Stanford University
- Manley, John L. (Jay)** (1980)  
*Drama, Theater Conservatory*  
B.A., M.A., San Francisco State University; Ph.D., University of California, Berkeley
- Manoogian, Norman V.** (1965)  
*Physical Education*  
B.A., M.A., Stanford University
- Manville, Wallace C., Jr.** (1977)  
*Special Education*  
B.S., University of Illinois; M.S., San Francisco State University
- Marvin, Denos P.** (1965)  
*Speech*  
B.A., Mexico City College; M.A., Teachers College, Columbia University
- Mauch, James T.** (1964)  
*Division Dean, Language Arts*  
B.A., University of the Americas, Mexico; M.A., University of California, Berkeley
- Maus, Walter S.** (1958)  
*Business*  
B.A., San Jose State University; M.A., Stanford University
- McCarty, Lois** (1967)  
*Sociology, Psychology*  
B.A., M.S., San Jose State University
- McCulla, Ernest (Joe)** (1978)  
*Philosophy*  
B.A., M.A., Loyola University
- McDonald, Marilyn M.** (1984)  
*Librarian, Archivist*  
B.A., M.A., Stanford University; M.L.S., San Jose State University; M.B.A., Golden Gate University
- McHargue, Mike** (1977)  
*Counseling, Honors Institute, Staff Development*  
B.A., Occidental College; M.A., California State University, Northridge; Ph.D., Stanford University
- McLanathan, Mary C.** (1959)  
*Division Dean, Biological & Health Sciences*
- McNeill, Nayan** (1961)  
*English*  
A.A., Santa Ana College; B.A., M.A., Ph.D., U.C. Berkeley
- Mendrinros, Roxanne** (1991)  
*Librarian, Library Technology*  
B.A., Dickinson University; M.L.S., Simmons Graduate School, Boston; Ph.D., Boston College
- Michalski, Ann T.** (1986)  
*Computer Technology & Information Systems*  
B.A., Hunter College; M.A., San Jose State University

- Miller, Charles J.** (1969)  
*Mathematics*  
B.S., Iowa State University; M.A., University of South Dakota
- Mishel, Joyce** (1975)  
*Travel Careers*  
B.A., Cornell University; M.A., New York University
- Moffat, Glenn P.** (1964)  
*Biology*  
B.A., Science Education, B.S., Biology, Western Washington University; M.S., University of Utah; M.A., San Jose State University
- Morris, Victor** (1967)  
*Music*  
B.M., M.M., Manhattan School of Music
- Mortarotti, John L.** (1963)  
*Division Dean, Fine Arts*  
B.M., University of the Pacific; M.A., University of Washington
- Moss, Lloyd K.** (1966)  
*Chemistry*  
B.S., University of California, Los Angeles; Ph.D., Stanford University
- Mraz, Doyne J.** (1967)  
*Drama*  
A.A., Sacramento City College; B.A., M.A., University of the Pacific; Ph.D., University of Southern California and Stanford University
- Norton, Nile** (1981)  
*Music*  
B.A., Coe College; M.A., D.M.A., Stanford University; Dipl., Hochschule für Musik, Vienna
- Olsen, Marky** (1968)  
*Counseling*  
A.A., Colorado Women's College; B.A., Colorado State College; M.A., San Jose State University; M.A., Santa Clara University
- O'Donnell, Clarence R.** (1967)  
*Counseling*  
B.S., M.A., California State Polytechnic University
- Osterdock, Leonis** (2002)  
*Director, Pharmacy Technology Program*  
B.S., University of the Pacific
- Park, King T.** (1965)  
*Chemistry, Computer Information Systems*  
B.A., M.A., Rice University
- Parks, Jack D.** (1968)  
*Football, Physical Education, Track*  
A.A., Riverside College; B.A., M.A., University of California, Los Angeles
- Patterson, Marion** (1986)  
*Photography*  
B.A., Stanford University; M.A., San Francisco State University
- Patterson, William R.** (1971)  
*Vice President, Institutional Research & Instruction*  
B.S., California State Polytechnic University; M.A., Santa Clara University; Ed.D., University of Southern California
- Pauling, Kay** (1987)  
*Biology*  
B.A., Ph.D., University of California, Riverside
- Pavic, Mary Ann** (1975)  
*Division Dean, Biological & Health Sciences*  
A.A., Sacramento City College; B.A., M.A., San Jose State University
- Perren, Marjorie F.** (1966)  
*Business, Office Technology, Computer Information Systems*  
B.S., University of Nebraska; M.A., San Jose State University
- Pon, Donald** (1971)  
*Chemistry, Computer Information Systems*  
B.S., M.S., Stanford University
- Prosser, Herbert** (1982)  
*Semiconductor Processing*  
B.A., Columbia College; M.A., Columbia University; Ph.D., Stanford University
- Quinn, James J.** (1970)  
*English*  
B.A., M.A., San Jose State University
- Roe, Stuart J.** (1964)  
*Broadcasting, Film, Television*  
B.A., M.A., University of California, Los Angeles; M.S., Indiana University
- Rosenthal, Miriam P.** (1970)  
*Dental Assisting*  
A.A., Foothill College; B.S., University of San Francisco
- Roth, Irvin M.** (1959)  
*History*  
B.A., Occidental College; M.A., Stanford University
- Rotty, Elaine** (1981)  
*Physical Education, Intercollegiate Women's Golf*  
B.S., Winona State; M.S., Arizona State University
- Rouse, Lawrence D.** (1975)  
*Psychology*  
B.A., M.A., San Jose State University; Ph.D., Pacific Graduate School of Psychology
- Rude, D. Allen** (1966)  
*Health*  
B.S., M.S., Southern Illinois University
- Ruelas, Enrique** (1978)  
*Accounting, Business*  
B.A., San Francisco State University; M.A., San Jose State University
- Ryan, Lucia Ann** (1990)  
*Counseling, International Students*  
B.A., St. Lawrence University; M.A., Santa Clara University
- Scheiding, Herman G.** (1967)  
*Journalism*  
B.A., M.A., University of Denver
- Schobert-Jones, G. Judith** (1966)  
*German*  
B.A., M.A., University of Utah
- Schrier, Nancy G.** (1969)  
*English*  
B.A., Smith College; M.A., Stanford University
- Schumacher, Barbara A.** (1965)  
*Physical Education*  
B.S., Douglass College, Rutgers University; M.A., University of California, Berkeley; M.A., Santa Clara University
- Scott, Walter** (1998)  
*Library Coordinator*  
B.A., California State University, Fresno; M.L.S., Queens College, City University of New York
- Seelbach, Eugene** (1975)  
*Mathematics*  
B.A., Blackburn College; M.A., Ph.D., University of Wyoming
- Seeger, Carolyn B.** (1975)  
*Counseling*  
B.S., M.S., San Jose State University; L.V.N.
- Shaner, Bryan** (1978)  
*Counseling*  
B.A., Raymond College; M.S., San Jose State University
- Sherrill, Richard R.** (1959)  
*Mathematics, Physics*  
B.S., University of California, Berkeley; M.A., San Jose State University
- Shipnuck, Murray E.** (1958)  
*Curriculum and College Articulation*  
B.A., U.C., Berkeley; M.A., Ed.D., Stanford University  
**Sierra, Angel M.** (1972)  
*Chemistry, Counseling, Mathematics, Physics*  
B.S., California State University, Hayward; M.A., M.S., San Jose State University
- Silveria, William** (1986)  
*Computer Information Systems*  
B.S., University of California, Berkeley; M.S., Ph.D., University of Hawaii
- Sommerfield, Richard R.** (1968)  
*Physics*  
B.S., M.S., University of Arizona
- Spicer, Mona** (1979)  
*Dental Hygiene*  
B.A., M.A., San Francisco State University
- Stietzel, Eric R.** (1970)  
*Computer Information Systems, Mathematics, Philosophy*  
B.A., M.A.T., Yale University
- Strand, Tomas F.** (1969)  
*Mathematics, Engineering*  
B.S.E.E., Massachusetts Institute of Technology; M.S.E.E., Stanford University
- Summa, Terry** (1973)  
*Music*  
B.A., San Francisco State University; M.A., Holy Names
- Sutherland, Richard** (1967)  
*Librarian*  
B.A., Michigan State University; M.S., University of Michigan; M.L.S., University of California, Berkeley
- Sutter, E. Eugene** (1962)  
*History, Political Science*  
B.Ed., Illinois State University; M.A., University of Michigan
- Swenson, Bruce P.** (1967)  
*Dean, Instruction & Educational Resources*  
B.S., Stanford University; M.S., University of Wisconsin; Ph.D., University of California, Berkeley
- Taffae, Eleanor** (1979)  
*Psychological Services*  
B.A., Hunter College; M.A., Ph.D., University of Connecticut
- Talbot, Alan R.** (1967)  
*Baseball, Physical Education*  
B.A., M.A., Stanford University
- Telfer, Richard W.** (1966)  
*Mathematics*  
B.A., San Jose State University
- Thompson, Robert J.** (1959)  
*Business, Data Processing*  
B.A., California State University, Chico; M.A., Ed.D., Stanford University
- Thompson, William** (1974)  
*Business, Marketing*  
A.A., University of Minnesota; B.S., San Diego State University; M.B.A., Golden Gate University
- Tinsley, William E.** (1964)  
*Philosophy*  
A.A., Chaffey College; B.A., San Jose State University; M.S., University of Oregon
- Torres, Rudy** (1969)  
*Psychology*  
A.A., Foothill College; B.A., M.A., San Jose State University; Graduate Intern, University of California, Berkeley
- Tuell, James** (1981)  
*CTIS, Data Communication*  
B.A., San Jose State University; M.S., Golden Gate University
- Urabe, Sandra** (1980)  
*Counseling*  
B.A., University of California, Santa Cruz; M.S. California State University, Hayward
- Urband, Richard** (1974)  
*Respiratory Therapy*  
A.A., Foothill College; B.A., University of California, Berkeley
- Verbar, Lydia L.** (1962)  
*Health Counselor*  
B.A., University of California; M.P.H., University of California School of Public Health; M.D., New York Medical College
- Wagner, William S.** (1959)  
*Political Science*  
B.A., University of California, Santa Barbara; M.A., Columbia University
- Walker, Lee R.** (1959)  
*Mathematics*  
B.S., B.A., M.S., University of Southern California
- Walker, William O.** (1964)  
*Creative Writing, English*  
B.A., Bard College, New York; M.A., University of Connecticut
- Watson, Carol** (1978)  
*Adaptive Learning*  
M.S., Hofstra University
- Watts, June** (1967)  
*Acquisitions Librarian*  
B.A., University of Arizona; B.A., Holy Names College, Spokane; M.A., University of Denver
- Wirth, Jean** (1987)  
*Counseling, Articulation, Curriculum Officer*  
A.A., A.B., University of California, Berkeley; M.A., Ph.D., Ohio State University
- ZuHoene, Otto** (1959)  
*German*  
Abitur Artland Gymnasium; D Jur., University of Heidelberg



# Classified Staff

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Audio Visual Technical Center

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Operations

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Admissions & Records

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Admissions & Records

**Ang Nieto, Alma**  
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**Angel, Remigio**  
Custodian II  
Operations

**Apodaca, MariaElena**  
Outreach Specialist  
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**Atkins, John**  
Laboratory Technician  
Biology

**Baliguat, Victor**  
Workstation Support Technician II  
Educational Technology Services

**Banks, Mike**  
Workstation & Systems Support Technician  
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**Barnes, Skip**  
Sales Coordinator, Senior  
Professional & Workforce Development

**Barreto Jr., Luis**  
Computer Lab Operations Coordinator  
Computers, Technology & Information  
Systems

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Administrative Assistant I  
Occupational Training Institute

**Bowers, Shelly**  
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**Brown, Dolores**  
Administrative Assistant I  
Office Services

**Brown, Julie**  
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Pass the Torch Program

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**Capristo, Miguel**  
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Transfer Center

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Supervisor, Office Services  
Educational Resources & Instruction

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College Web Coordinator Senior  
Marketing & Communications

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Program Supervisor  
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**Cross, Stanley**  
Police Sergeant  
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**Cruz, Ricardo Madera**  
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Operations

**Cuevas, Jose**  
Custodian I  
Operations

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Computer Lab Instructional Coordinator  
Adaptive Learning

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Secretary  
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Administrative Assistant I  
Instruction & Institutional Research

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Admissions & Records Assistant  
Admissions & Records

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Community Services Officer  
District Police & Safety Services

**Diefenbach, Michael**  
Laboratory Technician  
Biological & Health Sciences

**di Gregorio, Becki**  
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Business & Social Sciences

**Dobbins, Margo**  
Disability Access & Compliance Supervisor  
Adaptive Learning

**Dorcak, John**  
Police Officer  
District Police & Safety Services

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Executive Assistant  
Student Development & Instruction

**Duong, Tung Thi**  
Financial Aid Assistant  
Financial Aid

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Program Coordinator, Senior  
Economic Development

**Elwell, Susanne**  
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Faculty Association

**Engels, Kirsi**  
Library Technician, Senior  
Library

**Franco, Stephanie**  
Evaluation Specialist, Senior  
Admissions & Records

**Frankeberger, William**  
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Student Affairs & Activities

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Krause Center for Innovation

**Gallagher, Gigi**  
Human Resources Technician II  
Educational Resources & Instruction

**Galoyan, Naziko**  
Admissions & Records Assistant  
Admissions & Records

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Program Coordinator I  
Pass the Torch Program

**Garrido, David**  
Instructional Designer  
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**Gilani, Darya**  
Administrative Assistant Senior  
Instruction & Institutional Research

**Godinez, Christy**  
Financial Aid Assistant  
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Outreach Specialist  
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**Gorman, Gary**  
Custodian I  
Operations

**Grillot, David**  
Math Center Assistant  
Mathematics

**Gucker, Judy**  
Administrative Assistant I  
Tutorial Center

**Guzman, Alfred**  
Administrative Assistant I  
Middlefield Campus

**Ha, Hien**  
Administrative Assistant I  
Adaptive Learning

**Hamilton, Agnes**  
Custodian  
Operations

**Hand, Art**  
Library Technician, Senior  
Library

**Harding, Barbara**  
Library Technician, Senior  
Library

**Harris, Asha (Ach-sah)**  
Furniture, Fixtures & Equipment Coordinator  
Educational Resources & Instruction

**Hawley, Diane**  
Bookstore Courseware Coordinator  
Bookstore

**Haynes, Debbie**  
Administrative Assistant II  
Educational Resources & Instruction

**Haywood-Smith, Maisha**  
Outreach Specialist  
Student Outreach & Retention

**Henderson McLeod, Joyce**  
Test Proctor  
Adaptive Learning

**Henderson, April**  
EOPS Coordinator  
Extended Opportunity Program & Services

**Hernandez, Lyliana**  
Outreach Specialist  
Student Outreach & Retention

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Apprentice I—Plumber  
Operations

**Hinds, Susanne**  
Library Technician, Senior  
Library

**Hodges, Pamela**  
Library Technician, Senior  
Library

**Hollins, Wilbert**  
Instructional Associate  
Fine Arts & Communication

**Hood, Jacky**  
Program Coordinator Senior  
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**Hunter, Elizabeth**  
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Physical Education

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Workforce Development & Instruction

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Facilities/Physical Education

**Johnson, Alice**  
Math Center Assistant  
Mathematics

**Johnson, Anne**  
Program Coordinator I  
Tutorial Center

**Johnson, Eric**  
Radio Station Coordinator  
Fine Arts & Communication

**Jung, Henry**  
Admissions & Records Supervisor  
Admissions & Records

**Kikoshima, Helen**  
Administrative Assistant II  
Foothill Global Access

**Kitagawa, Anthony**  
Ceramics Technician  
Fine Arts & Communication

**Knepp, Richard**  
Photography Laboratory Technician  
Fine Arts & Communication

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International & Distance Learning

**Landes, Norm**  
Instructional Associate  
Language Arts

**Largent, Allison**  
Administrative Assistant II  
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**Levine, Arthur**  
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Physical Sciences Math & Engineering

**Luu, Lily**  
EOPS Program Specialist  
Extended Opportunities Programs &  
Services

**Maestas-Hoohuli, Rose**  
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Language Arts

**Mangiameli, Christine**  
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**Marome, Tahiya**  
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Fine Arts & Communication

**McKellar, Charlie**  
Program Coordinator II  
Middlefield Campus

**McLeod, Norman**  
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Operations

**Meade, Jeff**  
Police Officer  
District Police & Safety Services

**Miller, Darnell**  
Custodian III  
Buildings & Grounds

**Mines, Sherri**  
Administrative Assistant Senior  
International Education

**Mitchell, Stephen**  
Program Coordinator II  
Student Activities

**Moore, Christina**  
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Fine Arts & Communication

**Muntean, Nicolae**  
Printing Services Coordinator  
Educational Resources & Instruction

**Murphy, Kevin**  
Financial Aid Coordinator  
Financial Aid

**Nelson, Leif**  
Police Officer  
District Safety & Security

**Nguyen, Amanda**  
Police Officer  
District Safety & Security

**Noone, Leslye**  
Division Administrative Assistant  
Language Arts

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Educational Technology Services

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Student Affairs & Activities

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Health Services

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Educational Resources & Instruction

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Middlefield Campus

**Pingali, Sirisha**  
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District Police & Safety Services

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Bookstore

**Ramos, Mario**  
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**Razzaqui, Zarmina**  
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Workforce Development

**Respicio, Manuel**  
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**Riggins, Julie**  
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Media Center

**Riley, William**  
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**Robinson, Linda**  
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Media Center

**Rocha, Francisco**  
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Buildings & Grounds

**Rodriguez, Faustino**  
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**Rosenthal, Eric**  
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**Ruiz, Cipriano**  
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Operations

**Sain, Monica**  
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Foothill Global Access

**Satana, Pedro**  
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Custodial

**Schrage, Paul**  
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Fine Arts & Communication

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Marketing & Communications

**Schukraft, Michelle**  
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Physical Education

**Shields, Tita**  
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**Sias, Roberto**  
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**Sivek, Marcia**  
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**Smith, Karen**  
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Library

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President's Office

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Adaptive Learning

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**Terranova, Cheryl**  
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Admissions & Records

**Thomas, Deborah**  
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Operations

**Thomas, Lori**  
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**Vines, Michael**  
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**West, Kerry**  
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**Zuniga, Paul**  
Instructional Associate  
Fine Arts & Communications



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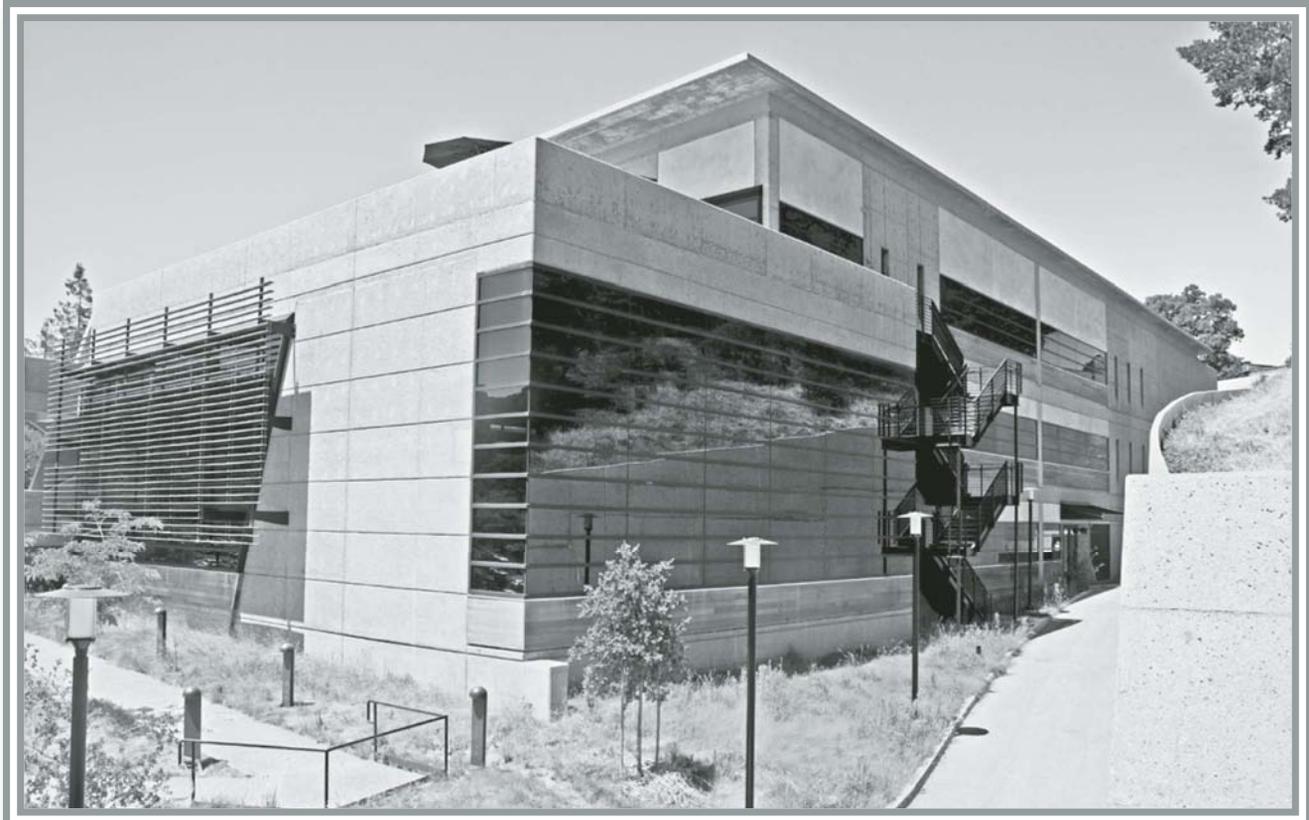
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# Campus Information

## Parking Regulations

## Area & Middlefield Campus Maps

## Directions to Foothill College Main Campus

## Directions to Foothill College Middlefield Campus

## Foothill College Campus Map, Key & Legend

## Parking

## Accessible Elevators

## Accessible Parking

## Shuttle Service

## TDD-Deaf Access

# Campus Information

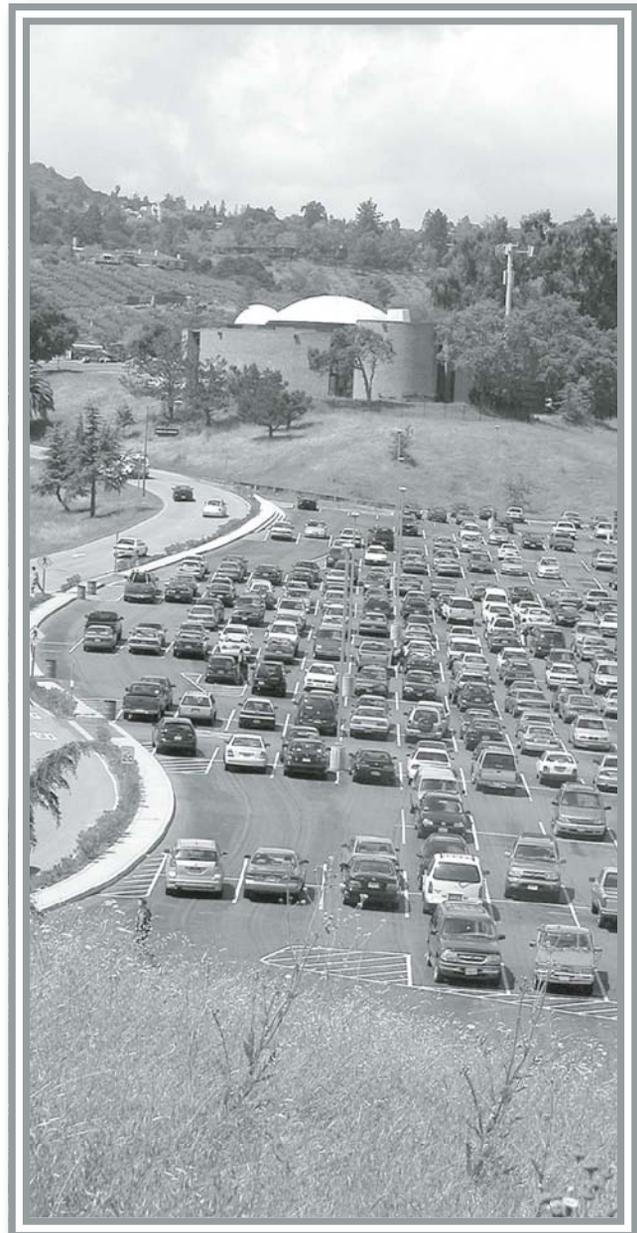
## Parking Regulations

The Foothill-De Anza District Police Department supervises on-campus parking and traffic. The following rules and regulations apply to all students, staff and public. You can find a complete list of college parking and traffic regulations in the Admissions & Records Office and District Police Department, 2103.

- The speed limit in campus parking areas and access ways is 5 miles per hour. The speed limit of 20 miles per hour is posted on all roadways and is strictly enforced.
- Except in areas with 30-minute parking meters, all vehicles must display a valid parking permit to park on campus. Failure to display a permit will result in a citation.
- A parking permit is required from 7 a.m. to 10 p.m. seven days a week—at the Foothill College Main Campus. This requirement is enforced.
- Overnight parking is prohibited.
- Parking permits are not required at Middlefield Campus.
- Day-use parking permits are \$2 and are valid for the date of purchase only. Purchase from permit dispensers in all student parking lots. Purchase quarterly or annual permits from the Admissions & Records Office.
- All vehicles must properly display a valid parking permit. Students are authorized to park in marked stalls in student lots only. Students may not park in stalls marked for disabled, staff, vendors, official vehicles or park in roadways, dirt areas or along parking lot curbing. People with disabilities are required to display state-issued identification on their vehicles or, in the event of temporary disabilities, obtain permits from the Disability Resource Center, Room 5801; or call (650) 949-7017.
- Staff parking permits are required for all staff spaces. Staff permits are issued by the District Police Department.
- Special permits will be issued only by the District Police Department. The permit must be displayed on the dashboard or hang on the interior mirror so it can be read from the outside. Special permits are valid only when used within the areas and dates designated on the permit.
- Motor vehicles, bicycles and skateboards are not permitted on the interior portion of campus.

- All vehicles remaining for more than 20 minutes in areas posted for 20-minute maximum will be cited.
- Parking or loitering on campus after 11 p.m. and/or after special activities is prohibited.
- Alcoholic beverages are prohibited on campus.

For more information, call the District Police Department at (650) 949-7313.



# Area & Middlefield Campus Maps



**FOOTHILL COLLEGE**  
*Main Campus*  
 12345 El Monte Road  
 Los Altos Hills, CA 94022-4599  
 (650) 949-7777  
 (650) 949-7375 (fax)



**FOOTHILL COLLEGE**  
*Middlefield Campus*  
 4000 Middlefield Road  
 Palo Alto, CA 94303-4739  
 (650) 949-6950  
 (650) 949-6979 (fax)

## Directions to

### Foothill College Main Campus

Foothill College is located in Los Altos Hills, 10 minutes south of Stanford University and 20 minutes north of San Jose. From Interstate 280, exit El Monte Road and travel west. Visitors must purchase a required campus parking permit for \$2. Quarterly and annual permits can be purchased in the Admissions Office. Public bus routes #23 and #52 serve the college approximately every 30 minutes.

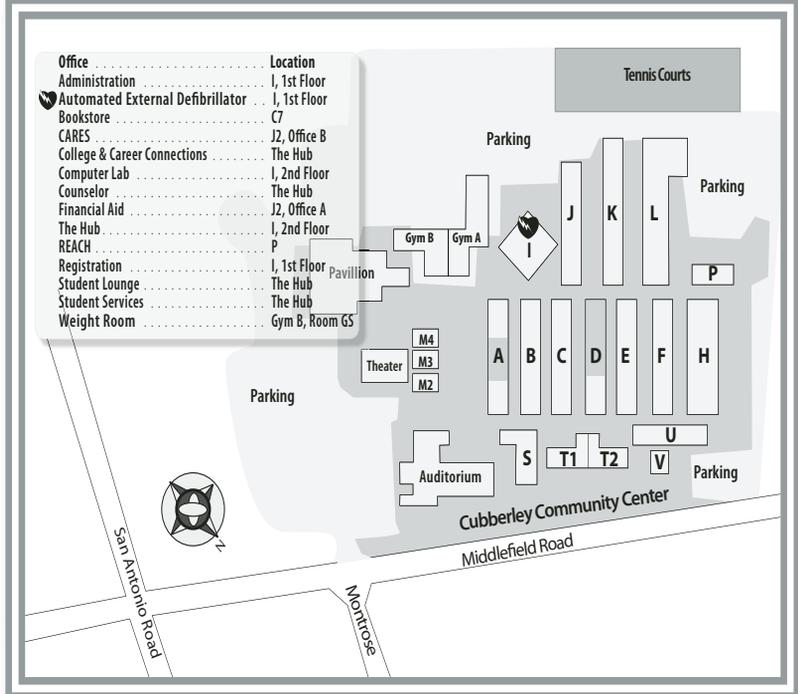
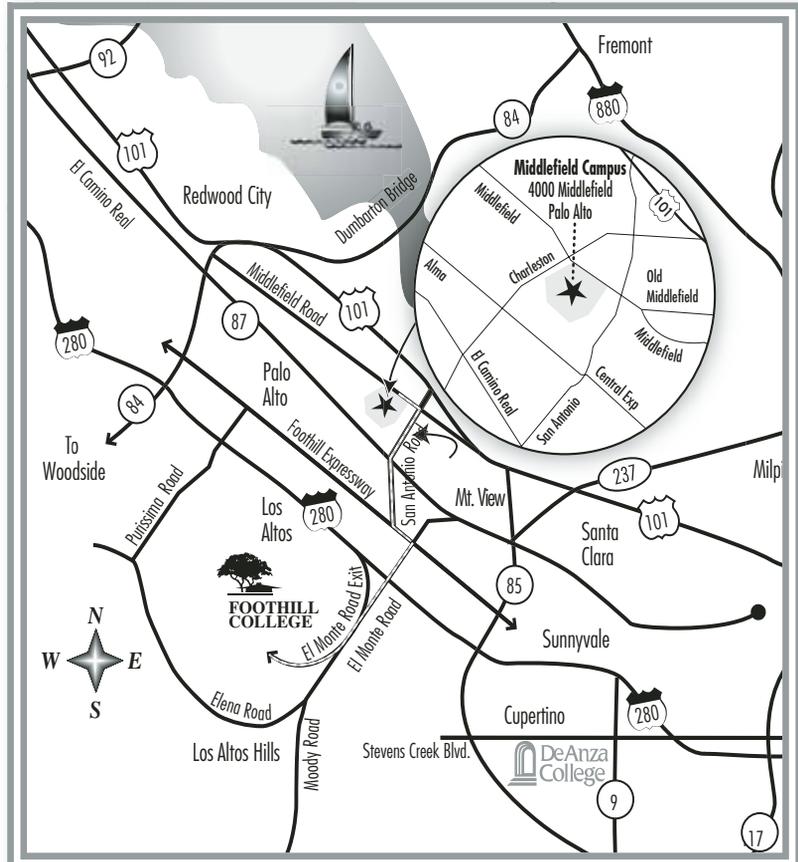
## Directions to

### Foothill College

### Middlefield Campus

The Foothill College Middlefield Campus, 4000 Middlefield Road, is located on Middlefield Road between Charleston and San Antonio roads in Palo Alto.

**To travel from the Main Campus to the Middlefield Campus:** Drive east on El Monte Road. Turn left on Foothill Expressway. Turn right on San Antonio Road. Turn left on Middlefield Road. Parking at Middlefield Campus is free. The trip is five miles.



# Foothill College Campus Map, Key & Legend

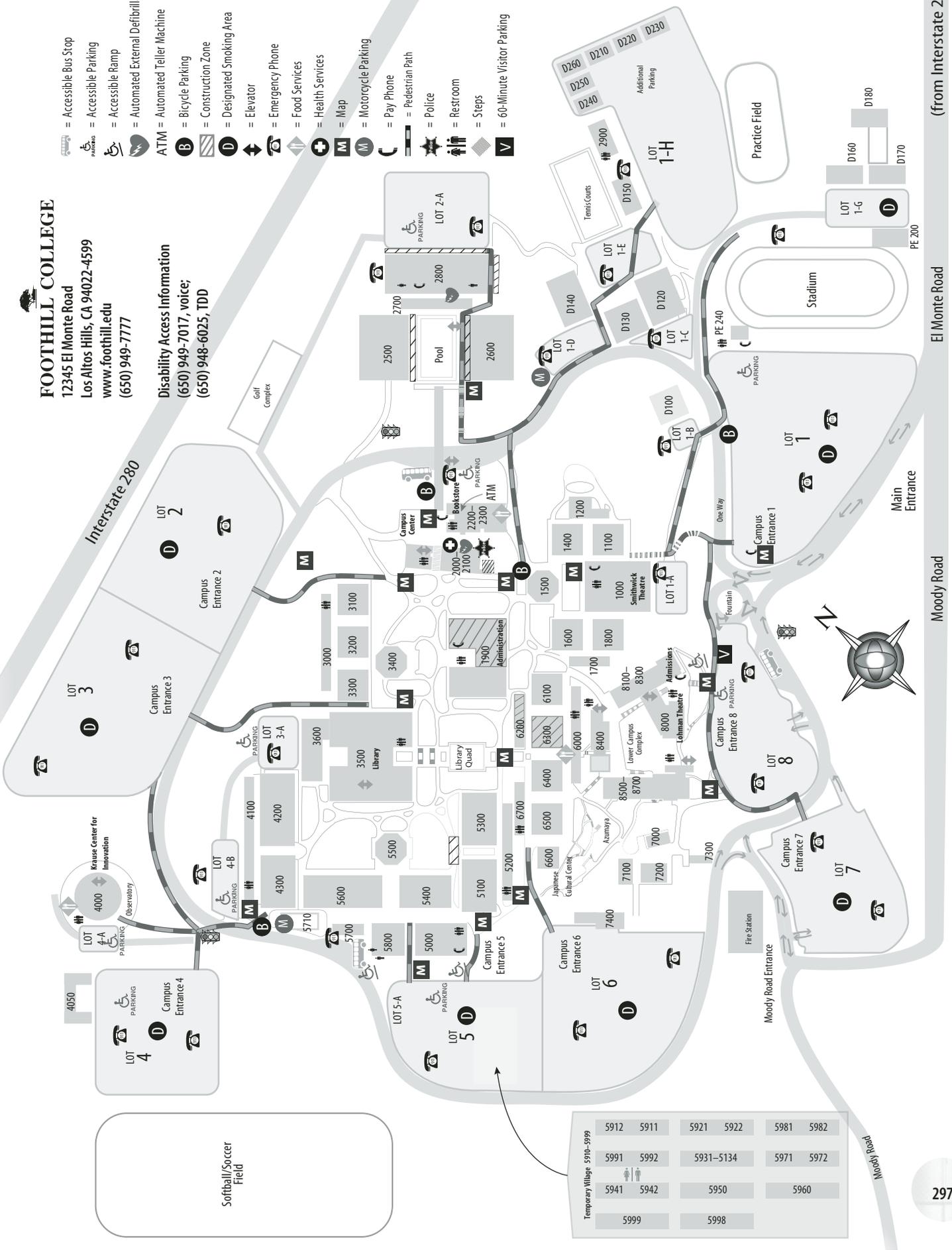
PROGRAM/DIVISION	LOCATION	PROGRAM/DIVISION	LOCATION	ACCESS INFORMATION
Academic Senate	1936	Honors Institute	5425	<h2>Parking</h2> <p>All vehicles must display a parking permit at all times including weekends. Failure to display a permit will result in a citation. Day-use permits are \$2 at dispensers located in all student parking lots. Quarterly and annual permits can be purchased at the Admissions Office (Room 8101).</p>  <h2>Accessible Elevators</h2> <p>Located at Krause Center for Innovation, Library, Pool Deck, Campus Center, Student Services Building &amp; Life Sciences Building</p> <h2>Accessible Parking</h2> <p>Located in Lots 1, 2-A, 3-A, 4, 4-B, 5, 8 and upper and lower transit stations. You must display the DMV-issued placard. To obtain a temporary disability on-campus permit, call (650) 949-7017</p> <h2>Shuttle Service</h2> <p>To all points on campus is available for students with physical disabilities. For operating hours, call (650) 949-7017.</p> <h2>TDD-Deaf Access</h2> <p>Call (650) 948-6025 or e-mail <a href="mailto:DavisBrenda@foothill.edu">DavisBrenda@foothill.edu</a>. For more access information visit the Disability Resource Center (Room 5801); access <a href="http://www.foothill.edu/al">www.foothill.edu/al</a>; or call (650) 949-7017, voice; (650) 948-6025, TDD</p>
Adaptive Learning Division	5801	IDEA Lab	1211	
Adaptive Physical Education	2509	Instructional Support Center	3612	
Admissions & Records Office	8101	International Programs	5403	
Altos Room	2019	International Students Office	5922	
Appreciation Hall	1501	Intramural Programs	2149	
Apprenticeship Program	4026	KFJC-FM Radio Station	6202	
Articulation	5401	Krause Center for Innovation	4001	
Associated Students of Foothill College (ASFC)	2011	Language Arts Division	6201	
ASFC Design Center	2017	Language Arts Lab	6308	
ASFC Smart Shop/OwlCard	2016	Library	3501	
Biological & Health Sciences Division	5211	Lohman Theatre	8002	
Bookstore	2301	Matriculation	8301	
Business & Social Sciences Division	3007	Middle College	2152	
Campus Abroad	4016	Occupational Training Institute (OTI)	6408	
Career Center	8329	Observatory	4001	
Chancellor's Office	D120	Older Adult Program & VAMC	5801	
Chinese Heritage Room	3523	Outreach & Retention Office	8102	
Classified Senate	5027	PSME Center	4213	
Computer Access Center	5710	Pass the Torch	5999	
Computers, Technology & Information Systems Division	4118	Physical Education & Athletics Division	2710	
Cooperative Work Experience Program	4128	Physical Sciences, Mathematics & Engineering Division	4118	
Counseling Division	8301	Placement Testing	8213	
CTIS Computer Center	4001	Police	2103	
Dental Hygiene Clinic	5312	President's Office	1934	
Dining Room	2201	Psychological Services & Personal Counseling	2120	
Disability Resource Center	5801	Quick Copy	4052	
Distance Learning	3600	Robert C. Smithwick Theatre	1001	
English Writing Center	6305	Service Learning & Volunteer Center	2014	
Entrepreneur Center	5912	Student Accounts	2006	
Environmental Horticulture & Design	8602	Student Activities	2009	
EOPS Computer Lab	8212	Student Affairs	2002	
EOPS Tutoring	3526	Student Success Center	8102	
ESL Writing Center	6308	Temporary Village	5901-5999	
Evening College	1929	Theatre Box Office	8007	
Extended Opportunity Program & Services (EOPS) Office	8202	Toyon Room	2020	
Facilities Rental	2713	Transfer Center	8329	
Faculty Association	D140	Transition to Work	5801	
Financial Aid	8202	Tutorial Center & Programs	3526	
Fine Arts & Communication Division	1701	Veterinary Technology	8504	
Fitness Center	2506	Wellness Center	2506	
Forum	5001			
Health Services	2126			
Hearthside Lounge	2313			

To accommodate construction projects, expect some offices and services to be relocated on campus.

**FOOTHILL COLLEGE**  
 12345 El Monte Road  
 Los Altos Hills, CA 94022-4599  
 www.foothill.edu  
 (650) 949-7777

**Disability Access Information**  
 (650) 949-7017, voice;  
 (650) 948-6025, TDD

- = Accessible Bus Stop
- = Accessible Parking
- = Accessible Ramp
- = Automated External Defibrillator (AED)
- = Automated Teller Machine
- = Bicycle Parking
- = Construction Zone
- = Designated Smoking Area
- = Elevator
- = Emergency Phone
- = Food Services
- = Health Services
- = Map
- = Motorcycle Parking
- = Pay Phone
- = Pedestrian Path
- = Police
- = Restroom
- = Steps
- = 60-Minute Visitor Parking



5912	5911	5921	5922	5981	5982
5991	5992	5931-5134	5971	5972	
5941	5942	5950	5960		
5999	5998				

(from Interstate 280)

El Monte Road

Moody Road



FOOTHILL COLLEGE