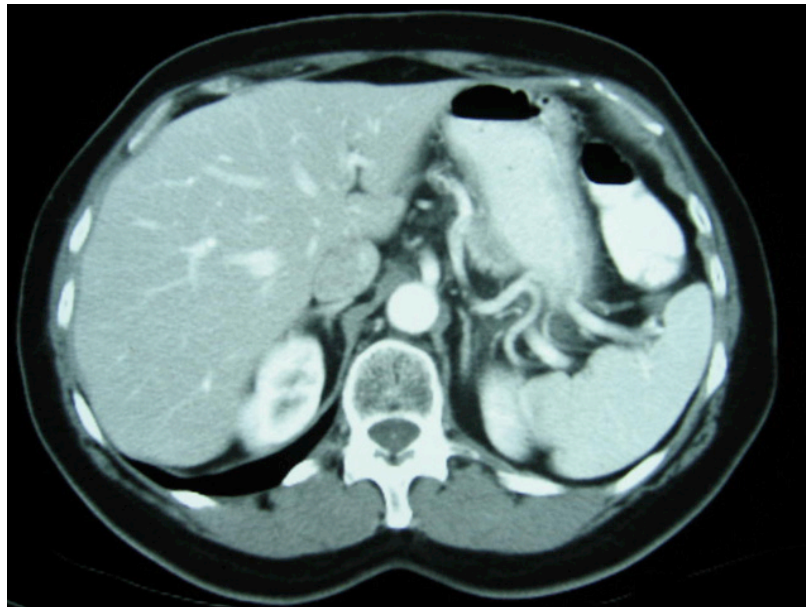


FOOTHILL COLLEGE  
RADIOLOGIC TECHNOLOGY PROGRAM

STUDENT  
CLINICAL COMPETENCY  
HANDBOOK

2011



Student: \_\_\_\_\_

Class of 2013

## Radiography Clinical Competency Requirements



The clinical competency requirements include the six general patient care activities listed below and a subset of the 66 radiologic procedures identified on subsequent pages. Demonstration of competence should include variations in patient characteristics (e.g., age, gender, medical condition).

### General Patient Care

**Requirement:** Candidates must demonstrate competence in all six patient care activities listed below. The activities should be performed on patients; however, simulation is acceptable (see endnote) if state or institutional regulations prohibit candidates from performing the procedures on patients.

**→ TO BE SIGNED BY THE PROGRAM DIRECTOR ←**

| General Patient Care   | Date Completed | Competence Verified By |
|--|----------------|------------------------|
| CPR  |                |                        |
| Vital signs (blood pressure, pulse, respiration, temperature)    |                |                        |
| Sterile and aseptic technique                                    |                |                        |
| Venipuncture   |                |                        |
| Transfer of patient  |                |                        |
| Care of patient medical equipment (e.g., oxygen tank, IV tubing) |                |                        |

**FOOTHILL COLLEGE  
RADIOLOGIC TECHNOLOGY PROGRAM**

**Confidentiality Agreement**

As a student of Foothill College, you have both a legal and ethical responsibility to protect the privacy of patients. All information that you see or hear regarding patients, directly or indirectly, is completely confidential and must not be discussed or released in any form, except when required in the performance of your duties. If you have access to employee or financial information, you are expected to treat such information in the same confidential manner as patient information.

Your user identification code gives you access to confidential information that should only be used in caring for patients, processing financial, and Human Resources data. All information systems access codes are assigned based on the student's need to have information in order to carry out assigned responsibilities as determined by your clinical instructor.

.....

I understand and agree that in the performance of my duties in the Foothill College Radiology Program, I must hold patient information, employee information, and financial information in confidence as outlined above. I also understand that I have an ethical responsibility to respect the Radiologic Technology Program, its faculty, clinical instructors, clinical affiliates, and Program students in matters that are told to me in confidence. I understand that any violation of confidentiality may result in disciplinary action including dismissal from the Program.

Print Name \_\_\_\_\_

Signature \_\_\_\_\_

Date \_\_\_\_\_

### Student Competency Procedure Log

| <b>CATEGORY 1<br/>Chest &amp; Thorax</b>                  | Mandatory | Elective | Date<br>Completed | Patient or<br>Simulated | Verified By | First 6 <sup>th</sup><br>Month<br>Recheck<br>July - Dec. | Second 6 <sup>th</sup><br>Month<br>Recheck<br>Jan. - June |
|---|-----------|----------|-------------------|-------------------------|-------------|--|---|
| Chest Routine   | ✓         |          |                   |                         |             |  |   |
| Chest AP (Wheelchair or Stretcher)                        | ✓         |          |                   |                         |             |  |   |
| Chest Routine (age 6 or younger)                          | ✓         |          |                   |                         |             |  |   |
| Ribs  | ✓         |          |                   |                         |             |  |   |
| Chest Lateral Decubitus                                   |           | ✓        |                   |                         |             |  |   |
| Sternum   |           | ✓        |                   |                         |             |  |   |
| <b>CATEGORY 2<br/>Extremities</b>                         |           |          |                   |                         |             |  |   |
| Thumb or Finger   | ✓         |          |                   |                         |             |  |   |
| Hand  | ✓         |          |                   |                         |             |  |   |
| Wrist   | ✓         |          |                   |                         |             |  |   |
| Forearm   | ✓         |          |                   |                         |             |  |   |
| Elbow   | ✓         |          |                   |                         |             |  |   |
| Humerus   | ✓         |          |                   |                         |             |  |   |
| Shoulder  | ✓         |          |                   |                         |             |  |   |
| Trauma Shoulder (Scapular Y, Transthoracic, or Axillary)* | ✓         |          |                   |                         |             |  |   |
| Trauma Upper Extremity (Non-shoulder)*                    | ✓         |          |                   |                         |             |  |   |
| Clavicle  |           | ✓        |                   |                         |             |  |   |
| Scapula   |           | ✓        |                   |                         |             |  |   |
| AC Joints   |           | ✓        |                   |                         |             |  |   |
| Upper Extremity (age 6 or younger)                        |           | ✓        |                   |                         |             |  |   |
| Foot  | ✓         |          |                   |                         |             |  |   |
| Ankle   | ✓         |          |                   |                         |             |  |   |
| Knee  | ✓         |          |                   |                         |             |  |   |
| Tibia-Fibula  | ✓         |          |                   |                         |             |  |   |
| Femur - 4 views   | ✓         |          |                   |                         |             |  |   |
| Trauma Lower Extremity*                                   | ✓         |          |                   |                         |             |  |   |
| Patella   |           | ✓        |                   |                         |             |  |   |
| Calcaneus   |           | ✓        |                   |                         |             |  |   |
| Toe   |           | ✓        |                   |                         |             |  |   |
| Lower Extremity (age 6 or younger)                        |           | ✓        |                   |                         |             |  |   |
| <b>CATEGORY 3<br/>Cranium</b>                             |           |          |                   |                         |             |  |   |
| Skull   | ✓         |          |                   |                         |             |  |   |
| Paranasal Sinuses   | ✓         |          |                   |                         |             |  |   |
| Facial Bones  |           | ✓        |                   |                         |             |  |   |
| Orbits  |           | ✓        |                   |                         |             |  |   |
| Zygomatic Arches  |           | ✓        |                   |                         |             |  |   |
| Nasal Bones   |           | ✓        |                   |                         |             |  |   |
| Mandible (Panorex acceptable)                             |           | ✓        |                   |                         |             |  |   |

| <b>CATEGORY 4<br/>Spine &amp; Pelvis</b>                 | Mandatory | Elective | Date Completed | Patient or Simulated | Verified By | First 6 <sup>th</sup> Month Recheck<br>July - Dec. | Second 6 <sup>th</sup> Month Recheck<br>Jan. - June |
|--|-----------|----------|----------------|----------------------|-------------|--|---|
| Cervical Spine   | ✓         |          |                |                      |             |  |   |
| Trauma Cervical Spine (Cross Table Lateral)*             | ✓         |          |                |                      |             |  |   |
| Thoracic Spine   | ✓         |          |                |                      |             |  |   |
| Lumbosacral Spine  | ✓         |          |                |                      |             |  |   |
| Pelvis   | ✓         |          |                |                      |             |  |   |
| Hip  | ✓         |          |                |                      |             |  |   |
| Cross Table Lateral Hip                                  | ✓         |          |                |                      |             |  |   |
| Sacrum and/or Coccyx                                     |           | ✓        |                |                      |             |  |   |
| Scoliosis  |           | ✓        |                |                      |             |  |   |
| Sacroiliac Joints  |           | ✓        |                |                      |             |  |   |
| <b>CATEGORY 5<br/>Abdomen &amp; Fluoroscopic Studies</b> |           |          |                |                      |             |  |   |
| Abdomen Supine (KUB)                                     | ✓         |          |                |                      |             |  |   |
| Abdomen Decubitus or Upright                             | ✓         |          |                |                      |             |  |   |
| Abdomen (age 6 or younger)                               |           | ✓        |                |                      |             |  |   |
| Upper GI Series (Single or Double Contrast)              | ✓         |          |                |                      |             |  |   |
| Barium Enema (Single or Double Contrast)                 | ✓         |          |                |                      |             |  |   |
| Small Bowel Series                                       |           | ✓        |                |                      |             |  |   |
| Esophagus  |           | ✓        |                |                      |             |  |   |
| <b>CATEGORY 6<br/>Other</b>                              |           |          |                |                      |             |  |   |
| Intravenous Urography                                    |           | ✓        |                |                      |             |  |   |
| Cystography/Cystourethrography                           |           | ✓        |                |                      |             |  |   |
| ERCP   |           | ✓        |                |                      |             |  |   |
| Myelography  |           | ✓        |                |                      |             |  |   |
| Arthrography   |           | ✓        |                |                      |             |  |   |
| Upper Airway (Soft-Tissue Neck)                          |           | ✓        |                |                      |             |  |   |
| <b>CATEGORY 7<br/>Mobile &amp; Surgical Studies</b>      |           |          |                |                      |             |  |   |
| Portable Chest   | ✓         |          |                |                      |             |  |   |
| Portable Abdomen   | ✓         |          |                |                      |             |  |   |
| Portable Orthopedic                                      | ✓         |          |                |                      |             |  |   |
| Mobile Study (age 6 or younger)                          |           | ✓        |                |                      |             |  |   |
| C-arm Procedure  | ✓         |          |                |                      |             |  |   |
| Surgical Cholangiography                                 |           | ✓        |                |                      |             |  |   |
| Retrograde Pyelography                                   |           | ✓        |                |                      |             |  |   |

\* Trauma is considered a serious injury or shock to the body. Modifications may include variations in positioning, minimal movement of the body part, etc.

## Competency Requirements

### First Year

| Fall Quarter   | Three Competencies  |            |
|----------------|---|------------|
|                | <ul style="list-style-type: none"> <li>▪ Chest – Adult (2V)</li> <li>▪ KUB</li> <li>▪ One Extremity – Non-trauma, Non-pediatric</li> </ul>  | (3)        |
| Winter Quarter | Three Competencies  |            |
|                | <ul style="list-style-type: none"> <li>▪ Chest and Abdomen Recheck Required</li> <li>▪ Three Mandatory Competencies from Category 2</li> </ul> <p>Students may begin elective competencies winter quarter.</p>  | (3)        |
| Spring Quarter | Five Competencies   |            |
|                | <ul style="list-style-type: none"> <li>▪ Five Mandatory Competencies from Category 2</li> </ul>   | (5)        |
| Summer Quarter | Eight Competencies  |            |
|                | <p><b>Recheck competencies required before student performs exam under indirect supervision</b></p> <ul style="list-style-type: none"> <li>▪ Finish Mandatory Competencies from Category 2</li> <li>▪ Two Mandatory Competencies from Category 4</li> </ul> <p><b>Begin pediatric competencies.</b></p> <p>Femur competency is four views: AP/Lat to include knee &amp; AP/Lat hip. If the femur competency is performed during the summer quarter and passed, the student will get credit for passing a hip competency also. The student cannot pass one competency without passing the other.</p> <p>Competencies performed on C-spine and L-spine must be full series. Mock additional views if necessary.</p> | (6)<br>(2) |

### Total of 19 Mandatory Competencies – First Year

## Competency Requirements

### Second Year

| Fall Quarter   | Eleven Competencies  |                          |
|----------------|--|--------------------------|
|                | <ul style="list-style-type: none"> <li>▪ Complete Mandatory Competencies from Category 4 <sup>1</sup></li> <li>▪ Two competencies from Category 5 <sup>2</sup></li> <li>▪ Complete Mandatory Competencies from Category 7 <sup>3</sup></li> </ul> <p><sup>1</sup> Competencies performed on C-spine and L-spine must be full series. Mock additional views if necessary.</p> <p><sup>2</sup> Students who prove competency on Esophagus and UGI in digital fluoro rooms must mock the following overhead views:<br/>           Esophagus: RAO – Rt. Lateral<br/>           UGI: AP – LPO – RAO – Rt. Lateral</p> <p><sup>3</sup> Students rotating through clinics fall quarter will complete Category 1 in place of Category 7.</p> | (5)<br>(2)<br>(4)        |
| Winter Quarter | Eight Competencies   |                          |
|                | <p><b>Recheck competencies required before student performs exam under indirect supervision</b></p> <ul style="list-style-type: none"> <li>▪ Complete Category 5</li> <li>▪ Complete Mandatory Competencies from Category 3</li> <li>▪ Complete Mandatory Competencies from Category 1</li> <li>▪ Two Elective Competencies – Facial Bones &amp; Nasal Bones</li> </ul>  | (1)<br>(2)<br>(3)<br>(2) |
| Spring Quarter | Twenty Three Competencies  |                          |
|                | <ul style="list-style-type: none"> <li>▪ Thirteen Elective Competencies Required</li> <li>▪ Ten Terminal Mandatory Competencies Required               <ul style="list-style-type: none"> <li>One from Category 1</li> <li>Three from Category 2</li> <li>Three from Category 4</li> <li>Three from Category 5 (one must be UGI or BE)</li> </ul> </li> </ul>  | (13)<br>(10)             |

**Total of 17 Mandatory Competencies – Second Year**

**Total of 10 Terminal Competencies – Second Year**

**Total of 15 Elective Competencies – By Program Completion**

## FOOTHILL COLLEGE RADIOLOGIC TECHNOLOGY PROGRAM Clinical Competency Evaluation

Student \_\_\_\_\_ Date \_\_\_\_\_ Procedure \_\_\_\_\_ Clinic \_\_\_\_\_

Quarter \_\_\_\_\_ 1<sup>st</sup> Year ( ) 2<sup>nd</sup> Year ( ) Competency ( ) Recheck ( )

**3 – Acceptable \* 2 – Requires Minor Improvement \*\* 1 – Unacceptable 0 – N/A**

\* More than two “2’s” for any one position requires re-evaluation.

\*\* More than four “2;s” for the exam requires re-evaluation.

\*\* A “1” in any evaluation area requires repeating the Competency Evaluation.

*Students who receive a 2 or 1 in any area with an asterisk (\*) must repeat the evaluation.*

Time competency was started: \_\_\_\_\_ Time competency was completed: \_\_\_\_\_

### Radiation Protection

### Position:

|   |  |  |  |  |  |  |
|---|--|--|--|--|--|--|
| Closes doors during procedure and exposure                                      |  |  |  |  |  |  |
| Collimates to the part of interest or to the IR                                 |  |  |  |  |  |  |
| <b>* Uses gonadal shielding on all patients</b>                                 |  |  |  |  |  |  |
| Demonstrates use of lead aprons and gloves                                      |  |  |  |  |  |  |
| Wears dosimeter on collar   |  |  |  |  |  |  |
| <b>* Inquires about pregnancy of all women of childbearing age</b>              |  |  |  |  |  |  |
| Practices good radiation protection using optimum time, distance, and shielding |  |  |  |  |  |  |

### Use of Equipment

|  |  |  |  |  |  |  |
|--|--|--|--|--|--|--|
| Utilizes tube locks when moving the tube               |  |  |  |  |  |  |
| Moves the bucky tray utilizing the bucky lock          |  |  |  |  |  |  |
| Inserts and removes image receptor from the bucky tray |  |  |  |  |  |  |
| Selects proper image receptor size                     |  |  |  |  |  |  |
| Accurately sets the control panel                      |  |  |  |  |  |  |

### Technical Factor Selection

|   |  |  |  |  |  |  |
|---|--|--|--|--|--|--|
| Selects correct factors at the control panel  |  |  |  |  |  |  |
| Uses a technique chart  |  |  |  |  |  |  |
| Selects technical factors at the proper time during the procedure                       |  |  |  |  |  |  |
| Adapts for technique changes in SID, grid ratio, grid use, collimation, or body habitus |  |  |  |  |  |  |
| Selects appropriate AEC setting when applicable   |  |  |  |  |  |  |
| Exposure index is within proper range   |  |  |  |  |  |  |

**Positioning Skills**

**Position:**

|  |  |  |  |  |  |  |
|--|--|--|--|--|--|--|
| <b>* Knows and performs the proper routine</b>                               |  |  |  |  |  |  |
| Positions the patient correctly to the image receptor                        |  |  |  |  |  |  |
| Aligns center of part to be demonstrated to the center of the image receptor |  |  |  |  |  |  |
| Centers central ray to the center of the image receptor                      |  |  |  |  |  |  |
| Angles central ray to the center of the IR when applicable                   |  |  |  |  |  |  |
| Obliquely patient correctly if required                                      |  |  |  |  |  |  |
| Removes unwanted anatomical parts from the area of interest                  |  |  |  |  |  |  |

**Image Receptor / Markers**

|   |  |  |  |  |  |  |
|---|--|--|--|--|--|--|
| <b>* Identifies the radiograph with “R” or “L” and other appropriate lead markers</b> |  |  |  |  |  |  |
| Places lead markers appropriately and outside the body part                           |  |  |  |  |  |  |
| Identifies the image receptor with the correct patient ID                             |  |  |  |  |  |  |
| Keeps the ID marker out of the anatomy  |  |  |  |  |  |  |

**Patient Management and Care**

|  |  |  |  |  |  |  |
|--|--|--|--|--|--|--|
| <b>* Properly identifies the patient</b>                         |  |  |  |  |  |  |
| Explains the procedure to the patient                            |  |  |  |  |  |  |
| Maintains a professional, caring attitude                        |  |  |  |  |  |  |
| Communicates instructions carefully                              |  |  |  |  |  |  |
| Effectively assists physician when applicable                    |  |  |  |  |  |  |
| Completes exam in a reasonable amount of time                    |  |  |  |  |  |  |
| <b>* Administers to patient’s rights and safety at all times</b> |  |  |  |  |  |  |

**Image Quality and Anatomy**

|  |  |  |  |  |  |  |
|--|--|--|--|--|--|--|
| <b>* Accurately identifies anatomy</b>   |  |  |  |  |  |  |
| Image shows optimum contrast and density |  |  |  |  |  |  |

Comments: \_\_\_\_\_  
 \_\_\_\_\_

Pass ( )      Score \_\_\_\_\_ / 25      Retest ( )      \_\_\_\_\_ - 8

\_\_\_\_\_  
 Student Signature

\_\_\_\_\_  
 Evaluator Signature

## Competency Substitution Form

Student Name: \_\_\_\_\_

Clinical Site: \_\_\_\_\_

Quarter / Year: \_\_\_\_\_

| Competency Not Completed |          | Competency Substituted |          |
|--------------------------|----------|------------------------|----------|
| Competency               | Category | Competency             | Category |
|                          |          |                        |          |
|                          |          |                        |          |
|                          |          |                        |          |
|                          |          |                        |          |

\_\_\_\_\_  
Clinical Instructor

\_\_\_\_\_  
College Instructor

***Patient Movement and Transfer Competency***

Each rotation, beginning fall quarter of the first year until completion of the program, the student will be competency tested on Patient Movement and Transfer.

Clinical instructor to initial and date:

|                             | Initial | Date |
|-----------------------------|---------|------|
| Fall 1 <sup>st</sup> Year   |         |      |
| Winter 1 <sup>st</sup> Year |         |      |
| Summer 1st Year             |         |      |
| Winter 2 <sup>nd</sup> Year |         |      |

***Digital Competency***

Each rotation, beginning fall quarter of the first year until completion of the program, the student will be competency tested when applicable, on Digital Equipment Operation and Processing.

Clinical instructor to initial and date:

|                             | Initial | Date |
|-----------------------------|---------|------|
| Fall 1 <sup>st</sup> Year   |         |      |
| Winter 1 <sup>st</sup> Year |         |      |
| Summer 1st Year             |         |      |
| Winter 2 <sup>nd</sup> Year |         |      |

***Vital Signs and Medical Equipment Competency***

Each quarter, beginning summer quarter of the first year until completion of the program, the student will be competency tested on blood pressure, pulse, respiration, oxygen use, suction machine, and IV solution and tubing.

Clinical instructor to initial and date:

|                             | Initial | Date |
|-----------------------------|---------|------|
| Summer 1 <sup>st</sup> Year |         |      |
| Fall 2 <sup>nd</sup> Year   |         |      |
| Winter 2 <sup>nd</sup> Year |         |      |
| Spring 2 <sup>nd</sup> Year |         |      |

***Sterile and Aseptic Technique Competency***

Summer quarter 1<sup>st</sup> year students will receive instruction and competency evaluation on sterile and aseptic technique.

Clinical instructor to initial and date:

|                             | Initial | Date |
|-----------------------------|---------|------|
| Summer 1 <sup>st</sup> Year |         |      |

***Off-Hour Rotation Competency***

Winter or spring quarter 2<sup>nd</sup> year students will receive instruction and competency evaluation on off-hour shifts.

Clinical instructor to initial and date:

|   | Initial | Date |
|---|---------|------|
| Winter or Spring Quarter 2 <sup>nd</sup> Year |         |      |

### *Operating Room and C-arm Competency*

During the last two rotations the student will be instructed and competency tested on the Operating Room and C-arm.

Clinical instructor to initial and date:

|   | Initial | Date |
|---|---------|------|
| Summer 1 <sup>st</sup> Year or<br>Fall 2 <sup>nd</sup> Year   |         |      |
| Winter 2 <sup>nd</sup> Year or<br>Spring 2 <sup>nd</sup> Year |         |      |

### *Specialty Rotation Competency*

During the last two rotations the student will be instructed and competency tested on the CT, Angiography, and MRI Competency. The Mammography competency is optional.

Clinical instructor to initial and date:

|                                 | First 6-Month Rotation<br>Fall Quarter |      | Second 6-Month Rotation<br>Jan. - June |      |
|---------------------------------|--|------|--|------|
|                                 | Initial                                | Date | Initial                                | Date |
| Angiography                     |  |      |  |      |
| CT                              |  |      |  |      |
| MRI                             |  |      |  |      |
| Mammography<br>(Spring quarter) |  |      |  |      |