Program Creation Process Sign-Off

Program Title: Makerspace Coordinator

Program Units: 18 units

Division: BSS **Proposing Faculty name(s):** Lisa DeLapo

Type of Program: _____ Transfer or __X__ Workforce

Type of Award:

____ Non-transcriptable certificate

_X_ Certificate of Achievement

____ AA/AS Degree

Documentation checklists:

Transfer documentation

__X__ Catalog Description

__X__ List of Courses

__X__ Articulation & transfer data

__X__ Identification of existing program(s) at CSU/UCs

__X__ Completer Projections

__X__ Identification of any additional resources needed to establish program (i.e. faculty, equipment, etc.)

Workforce documentation

__X__ Catalog Description

__X__ List of Courses

__X__ Completer Projections

__X__ Labor Market information

__X__ Identification of any similar program(s) in the area

__X__ Identification of any additional resources needed to establish program (i.e. faculty, equipment, etc.

Transfer/Workforce Work Group: ☒Recommended ☐Not Recommended
Comments:

Work Group Signature: _____ Date: 2·28-18

Supervising Vice President: ☐Recommended ☐Not Recommended
Comments:

Vice President Signature: _Kristy Lisle_ Date: 3-9-18

Planning & Resource Committee: ☐Recommended ☐Not Recommended
Comments:

PaRC Signature: _____ Date:

Division Curriculum Committee: ☐Recommended ☐Not Recommended
Comments:

Division CC Signature: _____ Date:

Following the review by the listed committees, this form should be forwarded to the Office of Instruction.

10/22/14

Foothill College
Credit Program Narrative
Certificate of Achievement: Makerspace Coordinator

Item 1. Program Goals and Objectives

The goal of the Makerspace Coordinator Certificate is to prepare individuals to create, manage, or become employed in makerspaces or fabrication laboratories in school, community center, and library environments. Current libraries, community centers, and schools are in dire need of trained, qualified adults to supervise, maintain, and create makerspaces or fabrication laboratories to build 21st century skills of critical thinking, problem-solving, creativity and imagination, and collaboration and teamwork.

Program Learning Outcomes:
- Upon completion of the program, the student will have acquired the necessary basic skills to create and manage a makerspace or fabrication lab in schools, community centers, and library environments.
- Upon completion of the program, the student will be able to demonstrate appropriate critical thinking and problem-solving skills, creative skills, and collaborative and teamwork skills to provide assistance in a maker or fabrication environment.

Item 2. Catalog Description

The Makerspace Coordinator is a certificate that is designed for people who are seeking employment in fabrication laboratories and makerspaces within community centers, libraries, and education. The program provides 18 units of instruction and support for building models and prototypes, strategies to spark innovation and invention, and creative problem-solving and collaboration. This program includes application and strategies with the foundational concepts and processes for fabrication and design, including the familiarization and use of makerspace and fabrication laboratory tools.

Item 3. Program Requirements

Requirements	Course #	Name	Units	Sequence
Core Courses (15 units)	LINC 75A	Introduction to Instructional Design & Technology	3	Year 1, Fall
	LINC 77A	Design Thinking Process	2	Year 1, Fall
	LINC 77B	Design Thinking & Tinkering	2	Year 1, Winter
	LINC 78A	Computational Thinking for Educators	2	Year 1, Winter
	LINC 73H	Adobe Illustrator Overview	1	Year 1, Winter
	LINC 78C	Project-Based Technology Projects	2	Year 1, Spring
	LINC 84B	3D Design and Fabrication	2	Year 1, Spring
	LINC 58A	E-Portfolio	1	Year 1, Spring
Restricted Electives (3 units)	LINC 77C	Design Thinking for Teachers	2	Year 1, Winter
	LINC 77D	Design Thinking Challenges	2	Year 1, Winter
	LINC 78B	Block-based Programming	2	Year 1, Winter/Spring
	LINC 59	Integrating 21st Century Skills into Instruction	2	Year 1, Winter/Spring

| | LINC 57 | Designing Learner-Centered Instruction | 1 | Year 1, Winter/Spring |
| | LINC 80 | Multimedia Overview | 1 | Year 1, Winter/Spring |

TOTAL UNITS: # of units

Proposed Sequence:
Year 1, Fall = 5-7 units (5 core + 1-2 elective units)
Year 1, Winter 5-7 units (5 core + 1-2 elective units)
Year 1, Spring = 5-7 units (5 core + 1-2 elective units)

TOTAL UNITS: 18 units

Item 4. Master Planning

Foothill College offers programs and services that empower students to achieve their goals as members of the workforce, as future students, and as global citizens. There is currently a high demand for qualified individuals who can maintain a makerspace or fabrication lab in community centers, libraries, and/or educational environments. This innovative program will allow schools to hire individuals as classified personnel to assist faculty with student learning and exploration in makerspaces. It also allows further training for teachers and non-traditional educators to build their skill-set for giving students 21st century, future-ready skills.

Item 5. Enrollment and Completer Projections

Due to the high demand for this job in educational environments, we foresee that a minimum of twenty students will complete the program after the initial year. We have already begun training students in this area with a Veterans Maker Bootcamp (begins February 26, 2018) who will take LINC 75A and ENG 62. Because our 3D Design and Fabrication course does not come online until July 1, 2018, we have partnered with the PSME department to complete 3D design coursework in the interim. The Veterans Maker Bootcamp will allow local Veterans to learn basic makerspace skills and begin internships in makerspaces or fabrication labs within local libraries, community centers, and schools. We foresee that we will create rolling cohort groups to build this program and ensure the courses are filled. We also think that the flexibility in the scheduling of the core and elective coursework throughout the year will allow more participants to join these rolling cohorts throughout the year, increasing the participation in this program. Because at least 50% of the courses can be taught completely online, it is expected that state-wide participation over the next five years will significantly increase the number of students who complete this certificate.

| | | 2015-16 | | 2016-17 | |
| | | Annual Sections | Annual Enrollment | Annual Sections | Annual Enrollment |
Course #	Course Title				
LINC 75A	Introduction to Instructional Design & Technology	N/A	N/A	N/A	N/A
LINC 77A	Design Thinking Process	N/A	N/A	N/A	N/A

LINC 77B	Design Thinking & Tinkering	N/A	N/A	N/A	N/A
LINC 78A	Computational Thinking for Educators	N/A	N/A	N/A	N/A
LINC 73H	Adobe Illustrator Overview	4	63	3	64
LINC 78C	Project-Based Technology Projects	N/A	N/A	N/A	N/A
LINC 84B	3D Design & Fabrication	N/A	N/A	N/A	N/A
LINC 58A	E-Portfolio	2	29	2	62
LINC 77C	Design Thinking for Teachers	N/A	N/A	N/A	N/A
LINC 77D	Design Thinking Challenges	N/A	N/A	N/A	N/A
LINC 78B	Block-Based Programming	N/A	N/A	N/A	N/A
LINC 59	Integrating 21st Century Skills into Instruction	2	29	2	62
LINC 57	Designing Learner-Centered Instruction	1	42	2	65
LINC 80	Multimedia Overview	1	17	1	21

Item 6. Place of Program in Curriculum/Similar Programs

Foothill College currently has a Makerspace at the Krause Center for Innovation (Building 4000). The Makerspace opened in December 2017, and it is open to Foothill students, Foothill faculty, and local community members. There is no other program that is similar to the Makerspace Coordinator Certificate, and courses that will become available July 1, 2018 will support and guide students to this certificate.

Item 7. Similar Programs at Other Colleges in Service Area

Sonoma State University has the only other makerspace certificate available in the state. The Sonoma State program is through their School of Extended and International Education. The program offers a 50-hour requirement of "mix and match" courses. According to Sonoma State's program information page, their certificate program will:
- Understand the core values and principles of Making
- Learn pedagogical practices for empowering learners to explore Making and a Maker mindset in a learning environment
- Design an action plan for implementing Maker activities in a learning environment
- Begin to consider was to integrate Making in the classroom
- Begin to align Maker projects with CCSS and NGSS (web.sonoma.edu/exed/maker-certificate/)

The Sonoma State University Makerspace Certificate Program appears to only introduce the concepts of classroom Makerspaces. The Foothill College certificate incorporates design, pedagogy, and content into its certificate to allow a more whole approach to training and mentoring Makerspace Coordinators for jobs in schools, community centers, and libraries.

Additional Information Required for State Submission:

TOP Code: *0899.00*

Annual Completers: *20+*

Net Annual Labor Demand: *See report*

Faculty Workload: *PT Adjunct Faculty will be between .11 and .33 for workload each quarter.*

New Faculty Positions: *None, our existing (and constantly improving) pool of adjuncts will teach courses.*

New Equipment: *$0 (Makerspace grant from CCCMaker provided equipment.)*

New/Remodeled Facilities: *$0*

Library Acquisitions: *$0*

Gainful Employment: *Yes*

Program Review Date:

Distance Education: *This is the percentage of program courses conducted online; choose from the following:*   0%   1-49%   50-99%   100%

Additional Information:
The Krause Center for Innovation has had frequent correspondence between local county offices of education and school district offices about this program. The administration and leadership are eager for a program such as this to promote and educate their classified staff for this in-demand position. This certificate meets the needs (educationally and financially) for these sites, districts, and county offices for their new makerspace areas. Local community centers (i.e., YMCA) have also contacted us with great interest in a program to train their employees in makerspace tools and pedagogy.

ATTACH THE FOLLOWING:
1. **Labor Market Information and Analysis**
2. **Advisory Committee Recommendation** *(includes advisory committee membership, minutes, and summary of recommendations)*
3. **Regional Consortia Approval Meeting Minutes** *(showing program recommendation)*