

**ACADEMIC SENATE FOR CALIFORNIA COMMUNITY COLLEGES
DISCIPLINES LIST REVISION PROPOSALS**

2020

Information for Proposed Disciplines List Changes

Italics indicate a proposed addition -- ~~Strikeout~~ indicates a proposed deletion
Notation of "Senate" or department name after listing of position indicates that the college senate or department took a position; otherwise position is that of an individual.

NEW DISCIPLINE PROPOSAL

PROPOSAL #2:

Proposed Revision Discipline: Digital Fabrication Technician

Organization: Laney College, Oakland

Proposed Minimum Qualifications:

2 years professional experience

AND

Any bachelor's degree or higher

OR

6 years of professional experience

AND

Any associate's degree

Rationale:

The field of Digital Fabrication Technology is an emerging but established field within Advanced Manufacturing that combines a wide variety of manufacturing techniques, machines, software, materials, and hand skills to create consumer and industrial parts and assemblies. Technicians specialize in prototyping and rapidly producing parts and projects for clients in a small to medium scale, with high attention to detail and turn around. The industry works with all mediums such as wood, plastic, metal, composites, and textiles. Digital Fabrication shops expect their technicians to have basic machining, wood working, and carpentry skills, as well as advanced 3D design software programming abilities. The average rate of pay for a Digital Fabrication Technician in California is \$25 per hour. The short-term nature of this training combined with its potential for gainful employment in a meaningful career make Digital Fabrication Technology a highly demanded skill.

The current list of minimum qualifications does not include Digital Fabrication Technology. The

fields of machining, carpentry, and cabinet making do not fully encompass the broad set of skills and expertise needed to teach Digital Fabrication Technology. For state programs to succeed, we need a refined and acknowledged set of minimum qualifications that institutions can use to hire the most effective teachers for our students.

Consultation with Professional Organizations:

Shop Leaders, a large consortium of digital fabrication technology shops and services in Northern California, has guided the development of our programs and strongly supports our need to refine the hiring process for Digital Fabrication Technology and create minimum qualifications. Their letter of support is attached.

The Fab Foundation is a national organization that supports the development of FabLab programs in Digital Fabrication Technology. It is a network of resources for professionals, educational institutions, and community hubs. You can quickly check it out here:

<https://fabfoundation.org/about/#about-intro> Their letter of support is attached.

To analyze the needs of the regional industry, the Laney College Career and Technical Education (CTE) department conducted a Discovery of Curriculum (DACUM) performed by PROPOSAL #1: Proposed New Discipline: Digital Fabrication Technician Organization: Laney College, Oakland The Ohio State University in 2018. Regional members from the Digital Fabrication trade outlined the skills and qualities required in a proficient Digital Fabrication Technician. The results of the DACUM led to the creation of three certificates of achievement for Digital Fabrication, each with their own emphasis on machining, wood technology, and engineering.

Impact of proposal across the state

Minimum qualifications for Digital Fabrication Technology do not currently exist. We expect a submission into the minimum qualifications handbook will allow schools from across the state to more accurately find and hire the proper personnel and faculty for their programs.

Pro:

- The field of Digital Fabrication Technology gains legitimacy as a growing field and industry that will impact our students in the next 10 years
- Identifying the proper minimum qualifications for faculty will help get people who have the most current knowledge of the subject to educate our students with the current industry needs

Con:

- Some schools may find it challenging to find proficient hiring candidates if the minimum qualifications are too stringent. However, due to the nature of Digital Fabrication Technology, a broad set of skills from a variety of advanced manufacturing industries may be constituted as someone working in Digital Fabrication Technology

Demonstrated Balance of Need across the State and Discipline Seconder from another District

The proposal is seconded by Thomas Cappelletti (Faculty Project Director, SCC Maker Space, Sacramento City College) as well as Payson McNett from Cabrillo College. Additional support has been indicated, and Karen Cook (Drafting Instructor, Maker Space Coordinator at Solano Community College) and Alina Varona (Dean of Workforce and Career Education, College of Marin)

Testimonies:

Name	College/Organization	Testimony	Position
Laney College Faculty Senate	Laney College	Unanimous resolution of support	Support
Bay Area Consortium of Community Colleges	BACCC		Support
Thomas Cappelletti	Faculty Project Director, SCC Maker Space, Sacramento City College	“By all means yes we support this proposal to the ASCCC.”	Support
Karen Cook	Drafting Instructor, Maker Space Coordinator	“Good idea. Our classes are under Industrial Technology because we didn’t know where else to put them.”	Support
Payson McNett	Art, Cabrillo College		Support
Alina Varona	Dean, Workforce and CTE	“Given the evolving nature of the manufacturing sectors (both pre and post Covid), College of Marin (COM) is thrilled to see the leadership of our colleagues at Laney College.”	Support

From:

Jim Krehl
Production Manager
SPM Design

Letter of support for Laney College's Digital Fabrication Technology program

To Whom it May Concern,

SPM Design is a full service interdisciplinary design studio and fabrication company, based in Orange County. SPMD has worked with architecture firms and other clients throughout the country to design and fabricate sculptures, graphic environments, and large-scale architectural installations. Digital fabrication is critical to every project we work on, from graphics for building exteriors and interiors to CNC fabrication of public furniture and art. Digital fabrication requires thorough training that is difficult to achieve by experience alone. As a result, finding qualified technicians, designers, and engineers is not easy.

As our industry grows throughout California, and as our displaced local workforce seeks employment in our sector, it is important that we partner with California community colleges that provide fast and effective workforce training programs. Laney College's Digital Fabrication certificate is a program we believe satisfies that goal, and we hope to similar programs created throughout the state in the future.

California is the nation's largest state, and getting our workforce trained, retrained and back to work is critical for the economic recovery of the nation. California community colleges are in the best position to retrain our currently weakened workforce because they provide easy access to affordable and excellent faculty, facilities, and established programs that have shown their ability to get students hired for well paid jobs. Laney College's CTE program has proven to be one of the best workforce training divisions in the Bay Area, and we are excited to support them.

Thank you for your time,

Jim Krehl
Production Manager / Senior Fabrication Lead
jim@spm-design.com
857 829 0837



Shop Leaders Group

Letter of support for Laney College's Digital Fabrication Technology program

To Whom it May Concern,

The Shop Leaders Group is a collection of people that focus on managing and leading fabrication shops across CA. We began meeting with a handful of people over 4 years ago and today our membership has grown beyond 50 people to include professionals across the state of California from private industry and education. This group formed to crowdsource solutions and share best practices for a myriad of challenges that our industry faces. One of the primary areas of focus is finding, training and retaining talent, as there is a huge lack of appropriately skilled people available. As the use of Digital Fabrication technologies in nearly every industry increases, we will continue to have a hard time hiring qualified people unless there is a large increase in training and education.

As our industry grows in California, and as our displaced local workforce seeks employment in our sector, it is important that we partner with California community colleges that provide fast and effective workforce training programs. Laney College's Digital Fabrication certificate is a program we believe satisfies that goal, and we hope to similar programs created throughout the state in the future.

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Thank you for your time,



Tim Oliver
Kreysler and Associates
Founder and Organizer
Shop Leaders Group
tim@kreysler.com
707-552-3500



October 7, 2020

Letter of support for Laney College's Digital Fabrication Technology program

To Whom it May Concern,

The Fab Foundation formed in 2009 to facilitate and support the growth of the international fab lab network as well as the development of regional capacity-building organizations. The Fab Foundation is a US non-profit 501(c) 3 organization that emerged from MIT's Center for Bits & Atoms Fab Lab Program. Our mission is to provide access to the tools, the knowledge and the financial means to educate, innovate and invent using technology and digital fabrication to allow anyone to make (almost) anything, and thereby creating opportunities to improve lives and livelihoods around the world. Community organizations, educational institutions and non-profit concerns are our primary beneficiaries.

As our industry grows nationwide, and as our displaced local workforce seeks employment in our sector, it is important that we partner with California community colleges that provide fast and effective workforce training programs. Laney College's Digital Fabrication certificate is a program we believe satisfies that goal, and we hope to see similar programs created throughout the state in the future.

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Thank you for your time,

Sincerely,

A handwritten signature in black ink, appearing to read "Sherry J. Lassiter". The signature is fluid and cursive, with a long horizontal stroke at the end.

Sherry J. Lassiter, Ed.M.
President and CEO

The Fab Foundation 50 Milk Street, 16th Floor Boston, MA 02109 USA +1 857-333-7777