Pasadena City College Design Technology Program

Advisory Meeting Minutes

Division: Career & Technical Education

Department: Design Technology

Date: May 5, 2021

Time: 6:00pm

Advisors in Attendance: (LIST NAMES AND TITLES)

- David Dickie, Temple City High School Engineering (Temple City, CA)
- Rachel Adams, Principal partner, Architecture for Education (Pasadena, CA)
- Ricky Burkhart, Manager, Industrial Metal Supply,
- Ray Elledge, National Education Program Manager, Surf Metrology Software (Anaheim, CA)
- Chris Miller, Technical Product Manager, Paton Group (Pasadena, CA)
- Max Lizarraga, retired from Mt. Sac college (Walnut, CA)
- Adam Mattes, President, Sterling Machinery Exchange (South El Monte, CA)
- Devin Myrick, Chief of residential construction, LA dept. of building & safety (Los Angeles, CA)
- Wally Calayag, Technical Sales Engineer, Sandvik Coromant (Los Angeles, CA)

Academic Partners in Attendance: (LIST NAMES AND TITLES)

- Saeed Abedzadeh, Professor, Pasadena City College (Pasadena, CA)
- Mariangela Murguia, Adjunct Professor, Pasadena City College (Pasadena, CA)
- Ali Amouzegar, Professor, Pasadena City College (Pasadena, CA)
- Julie Kiotas, Dean BET, Pasadena City College (Pasadena, CA)
- Mark Keene, Professor, Pasadena City College (Pasadena, CA)
- Jacob Tucker, Professor, Pasadena City College (Pasadena, CA)
- Sonia Shtonov, Adjunct Professor, Pasadena City College (Pasadena, CA)
- Phu Nguyen, Supervisor, Pasadena City College (Pasadena, CA)
- Salvatrice Cummo, Executive Director Economic Workforce Development, PCC (Pasadena, CA)
- Sandy Lee, Professor, Pasadena City College (Pasadena, CA)

Pasadena City College Design Technology Program

Advisory Meeting Minutes

Discussion Notes:

- **Program overview was reported about the Design Technology program and resources including Design Tech program brochure and meeting agenda were provided in advance. Program statistics, course proposals and modifications were stated.**
    - Presentation of our program mission and program statistics including certificate offerings and individual course content
- **Deletion of DT 105 - Emerging Applied Technologies course was presented**
    - Deletion of Emerging Technologies. Course was approved in 2013 but since then has never been offered. It is currently out of date and does not fit within the goals of our certificate offering, we are looking for approval for course deletion.
- **Modification of existing occupational skills certificates to change to low-unit Certificate of Achievements was presented**
    - Opportunities to modify our current occupational skills certificates to become low-unit certificate of achievements for students' transcriptability
    - First modification of occupational skills certificate to low-unit Certificate of achievement is CAD Designer – Architecture/Engineering/Construction.
    - Second modification of occupational skills certificate to low-unit Certificate of achievement is CAD Modeling and Animation
    - Third modification of occupational skills certificate to low-unit Certificate of achievement is CAD Technician – Architecture/Engineering/Construction
    - Fourth modification of occupational skills certificate to low-unit Certificate of achievement is CAD Technician – Mechanical Design And Manufacturing.
    - All certificates are within the range of 9-12 units that we are planning on transitioning up to the certificate of achievement.
- **Removal of Communication requirement on our existing Certificate of Achievement – Mechanical And Manufacturing was presented**
    - Our Certificate of Achievement Mechanical & Manufacturing currently has a communication requirement, students have to either take English or Speech course to fulfill this communication requirement, we are requesting to remove this.
    - We believe the students gain the necessary presentation skills in the individual courses. Meeting the Certificate communication requirements are embedded within all of the student learning outcomes. The integration of visual, verbal, and written techniques are already something we integrate within the curriculum itself.
- **Modification of DT101 – Fabrication Laboratory. Revise course and outline, Change course units to a 1-unit lab (from 2 units). This will allow students from a broad range of disciplines to have access to and work with our fabrication lab's rapid prototyping software/equipment. Course to focus on interdisciplinary programs and updating skills.**
    - This is a course we haven't offered in a while. We have an Introductory Digital Design & Fabrication course, which is a 3-unit course focusing on digital design where students

get to work on hands-on design projects. Students are able to virtually prototype integrating CAD techniques or Computer-aided-design, so we learn Autocad & SolidWorks and we also virtually prototype using rapid prototyping (laser cutting and 3D printing).
    - This course was on the back burner because they were essentially similar types of courses, although the DT8A is the foundation course and transferable course, DT101 is not a transferable course.
    - We would like to reinstate this course and offer it to our PCC community and currently it is a 1-unit lecture and 1-unit lab course. We would like to transition it to a 1-unit lab class so that it is approximately a 3-hour face to face course per week. This will allow students from a broad range of disciplines that want to interface with the equipment to come and utilize the equipment in the Fablab.
    - The environment will have access to fabrication tools as well as learn the CAD necessary for them to physically prototype specific projects, and it can also work as a portfolio development class.
    - A 1-unit lab will also allow more students to have access to the course without impacting their unit count and also provide conversations with other faculty across campus which can integrate within their certificates as well.
- **New program (18-units), CERTIFICATE OF ACHIEVEMENT – CAD DESIGN TECHNICIAN - ARCHITECTURE/ENGINEERING/CONSTRUCTION was presented for approval**
    - This program falls within the Architecture/Engineering/Construction building design & construction thread of Design Technology. We currently have two different program threads, one that's mechanical design & Fabrication, the other that is building design & construction.
    - We currently do have a certificate of achievement for the mechanical design & fabrication, however we never mirrored a certificate of achievement for the other program thread, so this is a new opportunity for us to offer this certificate.
    - This new certificate stacks upon the three occupational skills certificates that are currently offered.
    - Reference to the DT program agenda and program brochure was made for the advisors to review the program description, outline, and student learning outcomes for the certificates.

- **Vote on the program proposal, modifications, and changes. A yes, no, or abstain was requested.**
    - Yes from the Advisory committee was logged for everything that was introduced for Design Technology.
        - Deletion: DT105 – Emerging Applied Technologies
        - Certificate Changes from OSC to low-unit COA

        - CAD Designer – Architecture/Engineering/Construction
        - CAD Modeling and Animation – Architecture/Engineering/Construction
        - CAD Technician – Mechanical Design and Manufacturing
    - Remove Communication Requirement (English Speech): Certificate of Achievement – Mechanical + Manufacturing
    - Modify: DT101 – Fabrication Laboratory
        - To 1-unit lab
        - Revise Course
    - Addition New Program: Certificate of Achievement – CAD Design Technician – Architecture/Engineering/Construction

- **Open Q&A discussion with advisory members (specific to Design Technology)**
    - Chat question regarding quality control and what's planned for design and engineering or maker spaces for 3D printing and reverse engineering.
        - Design Tech reverse engineering project presented from faculty. We include introduction to measurements and modeling in solidworks. We take a look at a specific product and all the components in the assembly, and then observe product and opportunities for improvement. We reverse engineer, virtually model, but do not fabricate all of the components. Students may fabricate the redesign or attachment or some component of the design.
    - Professor Saeed asked if we cover electrical wiring in any of the CAD drafting courses.
        - We shared that we do not cover electrical wiring. We cover construction blueptints and design development for building spaces and create typical construction drawings. We do integrate TypeV building codes and green codes within the design process.
        - Discussed the differences between DT017, DT118, DT114 software used
    - Ray Elledge stated he liked the direction of where things are going, it sounds like there's money coming back into some of these programs and that's encouraging
    - Chris Miller was interested in the articulation agreements to some of the four year colleges, specifically Cal Poly Pomona. Are we aligning with or communicating with the college for articulation?
        - We shared that we have CSU/UC transferable classes, but due to the interdisciplinary nature of the Design Technology, it has been a challenge to identify course to course articulation agreements
        - We have a transfer engineering program, however it is currently in the Natural Sciences division as they work closely with Physics.
        - DT8A, DT8B, DT8C are transfer courses in the course outline of records

- Discussion about high school articulation, Chris brough of john Muir who is also creating a credential program or transferable program.
- Chris also mentioned he works with a lot of schools and universities and having college credit at high school helps with getting into their various desired universities.

- Discussion regarding Design Tech's current dual-enrollment articulation with Temple City High school.
  - We have high school students who take our advanced course in DT in the summer and get transferable college credit.
  - Dave Dickie (Temple City high school) shared that they really appreciate the cooperation with PCC as well as having students get transcripted credit is amazing. He is really encouraging students to take DT classes.