CTE Program Review – Annual Program Update for 2021-2022
PART A

SECTION 1: BASIC PROGRAM INFORMATION

Program Name: **Computer Aided Design and Drafting**

Program Faculty Department Chair(s): Wendie Siverts

Program SAC Chair(s): Justin Mortensen

Program Dean: Diane Shingledecker

Pathway Dean: Alyson Lighthart

Please highlight where your classes are offered.

Classes/Services offered at: CA / RC / SE / SY / NB / HC / WCC / Metro / CLIMB / OMIC / Other:

1A. Program Structure

- Do you have a Competitive Entry or Admissions Process?
  - ___ Competitive, based on admission criteria
  - ___ Competitive due to limited capacity, based on order of application
  - _X__ Open entry
  - ___ Other _____

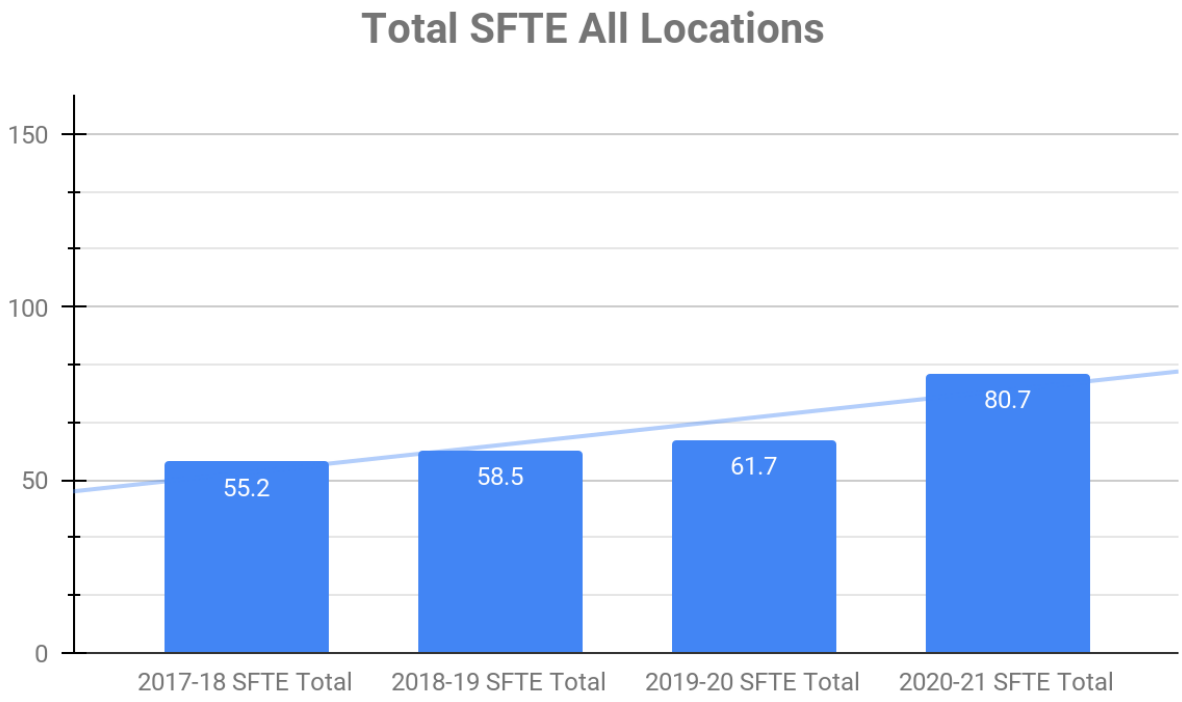
SECTION 2: REFLECTING ON DATA

All data cited below can be found here:
https://www.pcc.edu/institutional-effectiveness/program-profiles/
***Note the row of Tabs just below your Bookmarks Bar. Begin on the Home Tab. This is where you will choose your selection criteria for your data. Return to the Home Tab whenever you want to change your selection criteria. See the Help and Data Dictionary Tabs as well as the Data Directions Document included in the email with this template for more information.

Please include data from at least the last three years and up to the last five years. A 3-year review is recommended. SACs may have unique circumstances and reasons for looking more or less broadly.

2A. Enrollments (SFTE) per year; Location (where course is taught); Modality

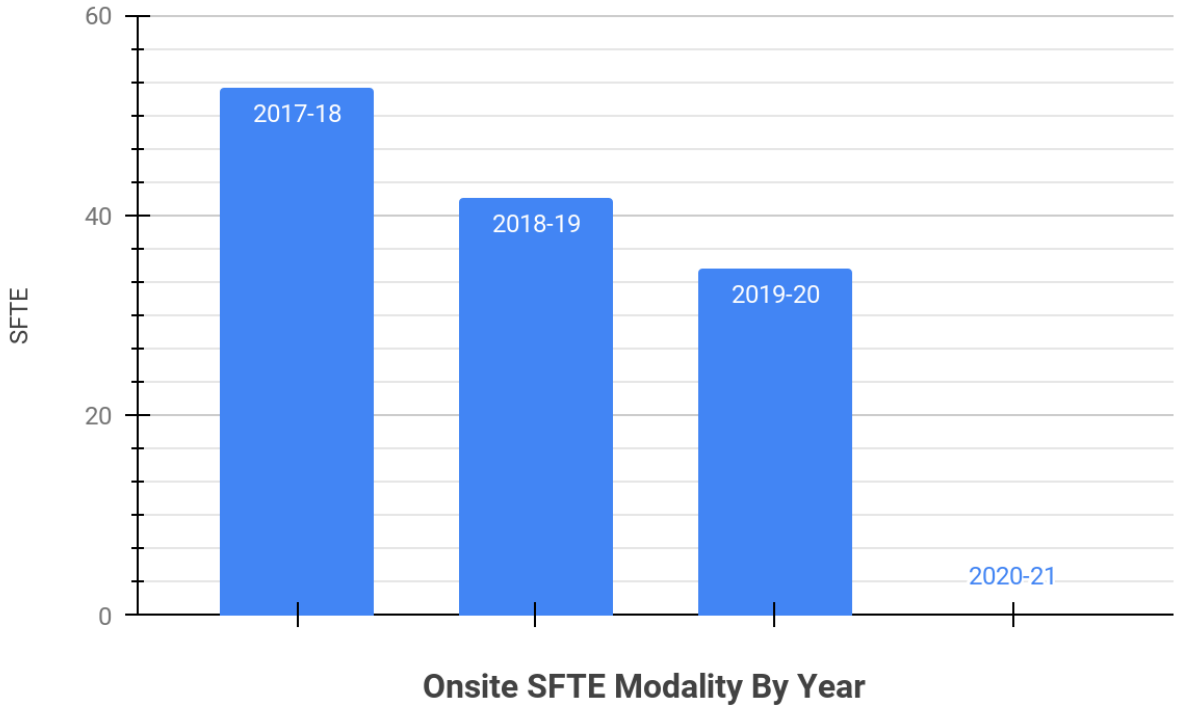
Total SFTE Analysis:



The above chart is a summary of the total SFTE for all locations. (Note, South East campus is the only location CADD classes were offered for the given dataset). The CADD program has been fortunate to have a history of modest increases of about 5%-6% in SFTE year over year. However, last year was the largest SFTE increase of 30% from the previous year due to COVID pandemic. The classes were offered as “remote” format classes. The chart shows a good trend of continuous growth and interest by

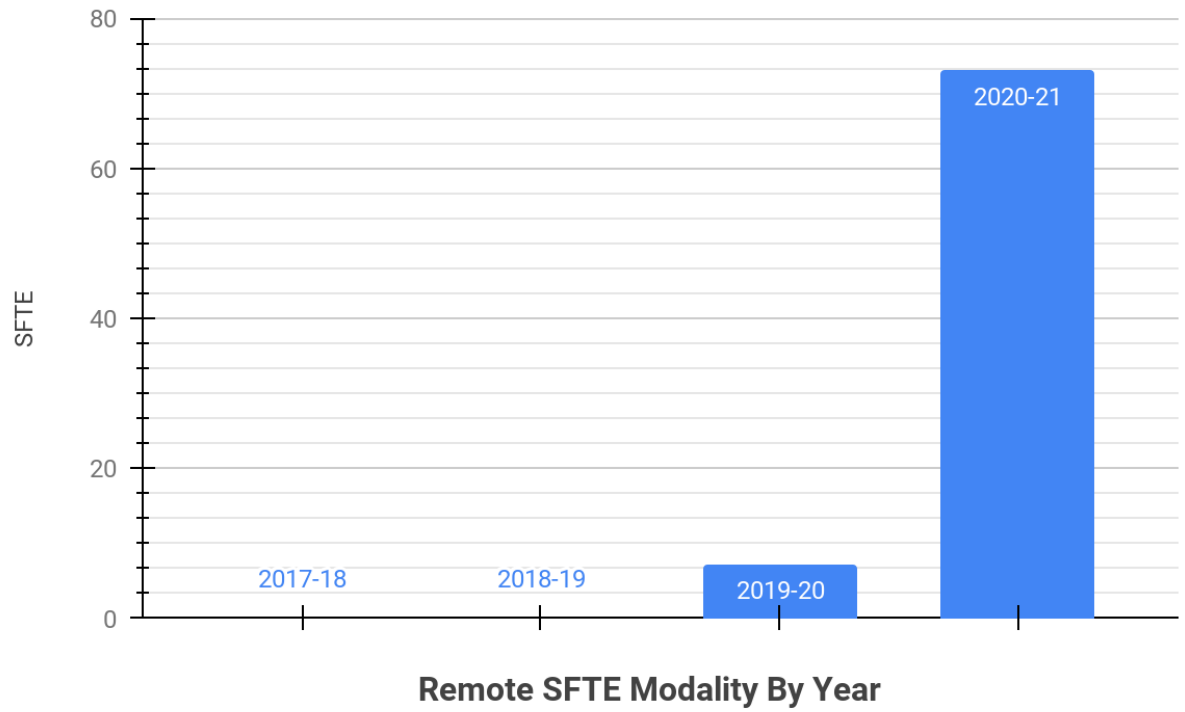
the populace in the CADD program. We anticipate a trend of modest increases moving forward as the pandemic related data point may have been an anomaly of a larger increase than usual.

Onsite SFTE Analysis:



The trend for the CADD program has been to offer more online classes over the recent years. We continue to offer a choice of online and face to face sections, however we see a slight trend down for face to face as some of the online class versions have become popular with strong enrollment. This has culminated in the 2020-2021 remote modality. CADD appreciates the Online Learning department and their assistance in the development of online classes. The experience and certification that CADD staff had with online teaching really has helped deliver purposeful and in what we believe has become more effective remote teaching.

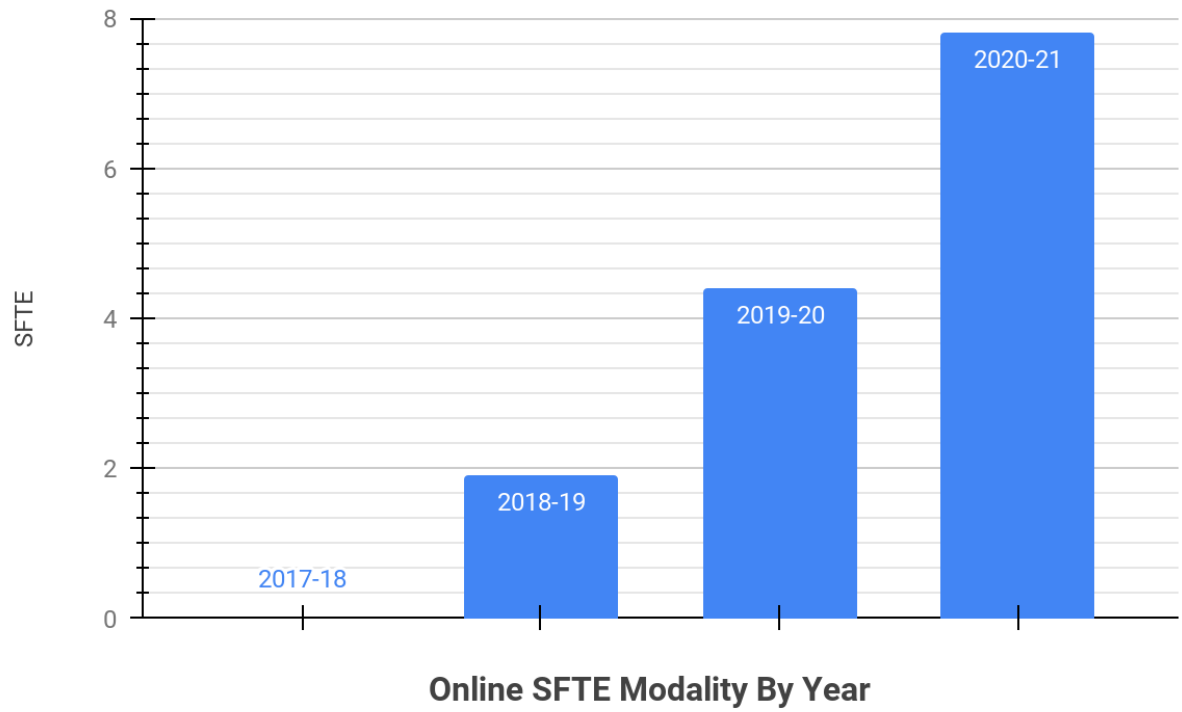
Remote SFTE Analysis:



Remote SFTE Modality By Year

In the very latter part of the 2019-20 academic year, CADD transitioned to a remote learning modality due to COVID pandemic. This led to the entire next academic year being remote learning as well. Moving forward, we will transition back to onsite modality as the college opens up. Many pedagogical lessons have been learned by CADD staff and teaching effectiveness has increased from when we first started the remote format. We noticed that some of our students really enjoy the remote learning modality. Once normal operations resume, CADD would like to explore this type of learning modality. It combines the best of online learning and face to face learning. Assuming some sort of permanent framework or process is developed by the college, such an additional offering would be of great value to our students. We do recognize that some students do prefer face to face meetings and that will be part of the course offerings, ideally giving students diverse options that best suit their situations.

Online SFTE Analysis:



Online SFTE Modality By Year

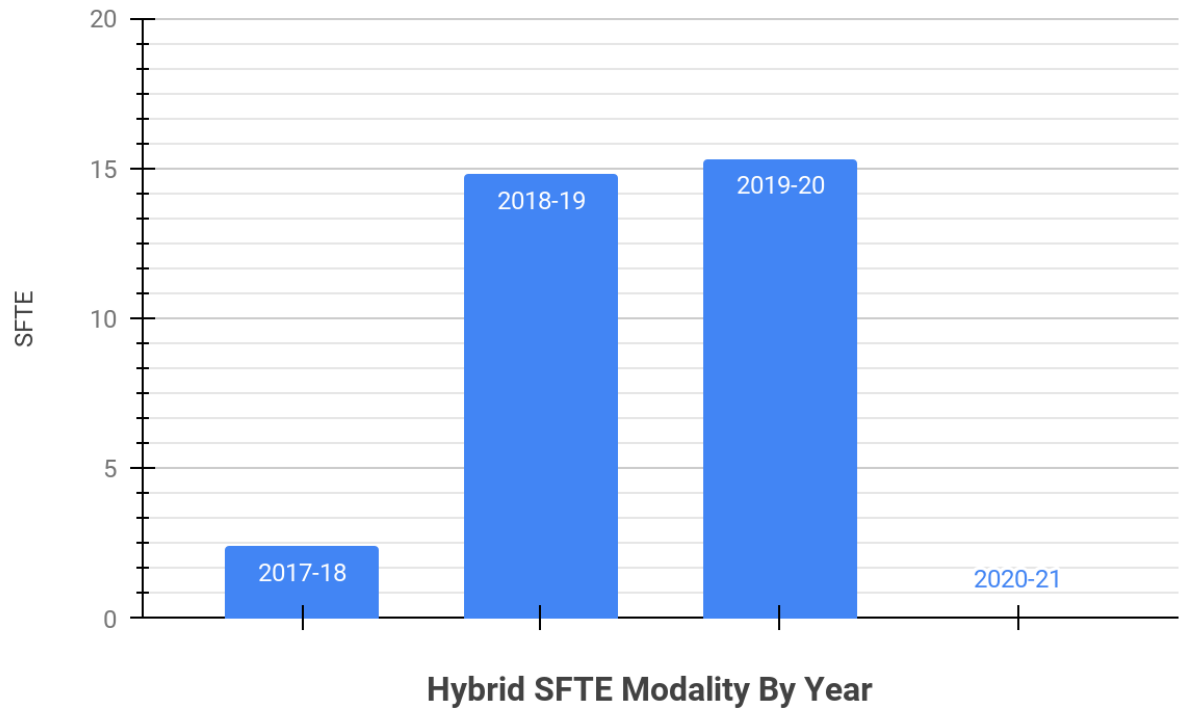
Over the course of several years, CADD has increased online offerings. We found that students have been interested in this modality as part of their academic options. The PCC Online Learning department has worked with CADD in creating offerings that have been successful in filling. CADD has now identified the courses that work best for online offerings and will be slowing down in creation of online courses. However, we do hope more students will show interest and take advantage of the online courses that CADD has to offer. Currently, we have the following courses available online (in addition to face to face sections)

CADD 126 Introduction to AutoCAD
CADD 160 Drafting Fundamentals
CADD 175 SolidWorks Fundamentals (Winter 2022)
CADD 275 SolidWorks Advanced

The above courses generally fill when offered. We will continue to offer these courses strategically alongside with the usual face to face offerings.

Looking at the annual trends, we see an increase year over year in SFTE with online classes. As we peak in the offerings of online classes, we believe this trend will stabilize and will grow, but at a lower rate.

Hybrid SFTE Analysis:



Hybrid SFTE Modality By Year

Note that hybrid classes defaulted back to “remote” modality for coding purposes for the 2020-21 academic year. Therefore, hybrid modality was absorbed by the new “remote” category. SFTE for 2020-21. During regular operations, we anticipate distinct hybrid offerings as well online and onsite modalities.

2A1. *Does this data suggest any questions that the SAC would like to pursue?*

We would like to better understand the reason(s) for the large percentage of SFTE over the last year. We assume students were negatively impacted by COVID-19 employment wise and therefore seeking further education at a higher rate. However, the remote modality may also have been a factor in such an increase in SFTE. An assumption could be that remote modality allowed for more accessibility of classes for our students. We will carefully track this topic as we resume normal face to face classes.

2A2. *Do the data suggest adjustments be made in your program, such as schedule or course offerings, with regards to enrollment? If yes, what ideas/strategies do you have that you would like to implement or have help with?*

The year over year increase in SFTE has helped to demonstrate that the current scheduling format is effective. We have experimented with different strategies over the last several years, including offering Saturday classes. We feel that our current format of late afternoon and evening classes seems to align with the bulk of students' schedules. With the online format classes, we continue to offer more options for our students.

2A3. *Are there other data reports that you would find informative/useful with regards to enrollment? How would this information support decision-making for the program? A report that has some anonymous demographic information including age would be helpful as we have a wide age range of students in our program. By having a better understanding of the age trends, we can use this information to make decisions for fine tuning our marketing and outreach programs.*

In addition, we request a report that shows the geographic home address of our students. This might be an auto generated report (not a manual lookup for each student G#) that shows a map of commuting locations for given courses being offered. If possible, leveraging the Ad Astra system would be acceptable.

2B. Course Success Rates

Data Definition: Success rate represents the percentage of students who successfully complete a course. It is calculated as:

$$\%\ S = \frac{\text{Number of students receiving a grade of A, B, C, P, PR, or CM}}{\text{Number of students receiving a grade of A, B, C, D, F, P, NP, I, W, PR, CM, N, UP}}$$

PR, CM, N, and UP are non-credit grades used in the Adult Basic Education program.

Success rates for gender and race are not calculated when the enrollment is less than 5. For any success rate that is not calculated, the total for that column is also not calculated.

% Success By Course and Modality

SEE Modality Tab

2B1a. *Are there any courses with lower or higher pass rates than others (over time, over many sections, or a notably higher or lower rate)? If so, which ones?*

Success Rates Analysis:

High Success Rate Analysis:

Following is a table of the most successful courses for previous academic years.

Year	Course	Modality	Success Rate %	Median Success Rate for all Courses
2020-21	CADD 136, 155	Remote (all)	100	84.35
2019-20	CADD 105, 160, 235, 245, 275	Onsite, hybrid, onsite, remote, onsite	100	96.4
2018-19	CADD 199G,	Onsite (all)	100	88.25

	245, 275			
2017-18	CADD 136, 185, 195, 199G, 235	Onsite (all)	100	92.05

Low Success Rate Analysis:
Following is a table of the least successful course for previous academic years. We monitor the least successful courses to look for a trend and take corrective action when necessary.

Year	Course	Modality	Success Rate %	Median Success Rate for all Courses
2020-21	CADD 126	Remote/Online	72, 74.5	84.35
2019-20	CADD 136	Onsite	76.9	96.4
2018-19	CADD 126	Onsite/Online	80, 63.6	88.25
2018-19	CADD 160	Hybrid	75.6	88.25
2017-18	CADD 175	Onsite	76.9	92.05

2B1b. *Are there any modalities with lower or higher pass rates than others (over time, over many sections, or a notably higher or lower rate)? If so, which ones?*

In the high success rates table, we do not see any trends that need further investigation. There does not appear to be a trend of year over year courses that consistently are 100% pass rate for the same courses repeatedly. Over half of these courses are offered later in the certificate program and by that time students are committed and need the course completed for the certificate. There does not seem to exist a correlation between modalities as a predictor of success. We will continue to monitor trends looking for repeating patterns of courses that may appear in the above tables.

2B2. Strategy Insights

What strategies have you used to maintain high success rates? What can be learned that might be applied to courses with lower success rates? What are possible actions to be taken to understand/address lower success rates? Please clearly explain how your discipline intends to explore content/curriculum, pedagogy/teaching, course material selection, etc. using culturally responsive teaching approaches throughout the next year. Try to identify a realistic one year goal.

We have been fortunate to have high success rates thanks to the dedication of our students and faculty. Generally, the courses with higher pass rates such as CADD 195, 235, 245, 275 are taken later in the CADD program. We generally see high success rates for these advanced courses. These courses often are the last few that a CADD student must complete in order to earn a certificate. The motivation and dedication of our students leads to high success rates.

Courses for which lower success rates are typically entry level “CAD” software specific that students are trying out. We believe students taking these entry level courses become interested in learning CAD software, but quickly realize it is not something they do not want to pursue and do not withdraw in time. Advising students to either drop the course and being upfront in expectations might help. We will be utilizing the course details page as a way to help advise students before signing up for these courses. In addition to these strategies, we are working on piloting a Persistence Project to encourage a sense of belonging in one of our gateway courses, CADD 160. We are interested in seeing if this helps change the success rates for the above courses in a positive way.

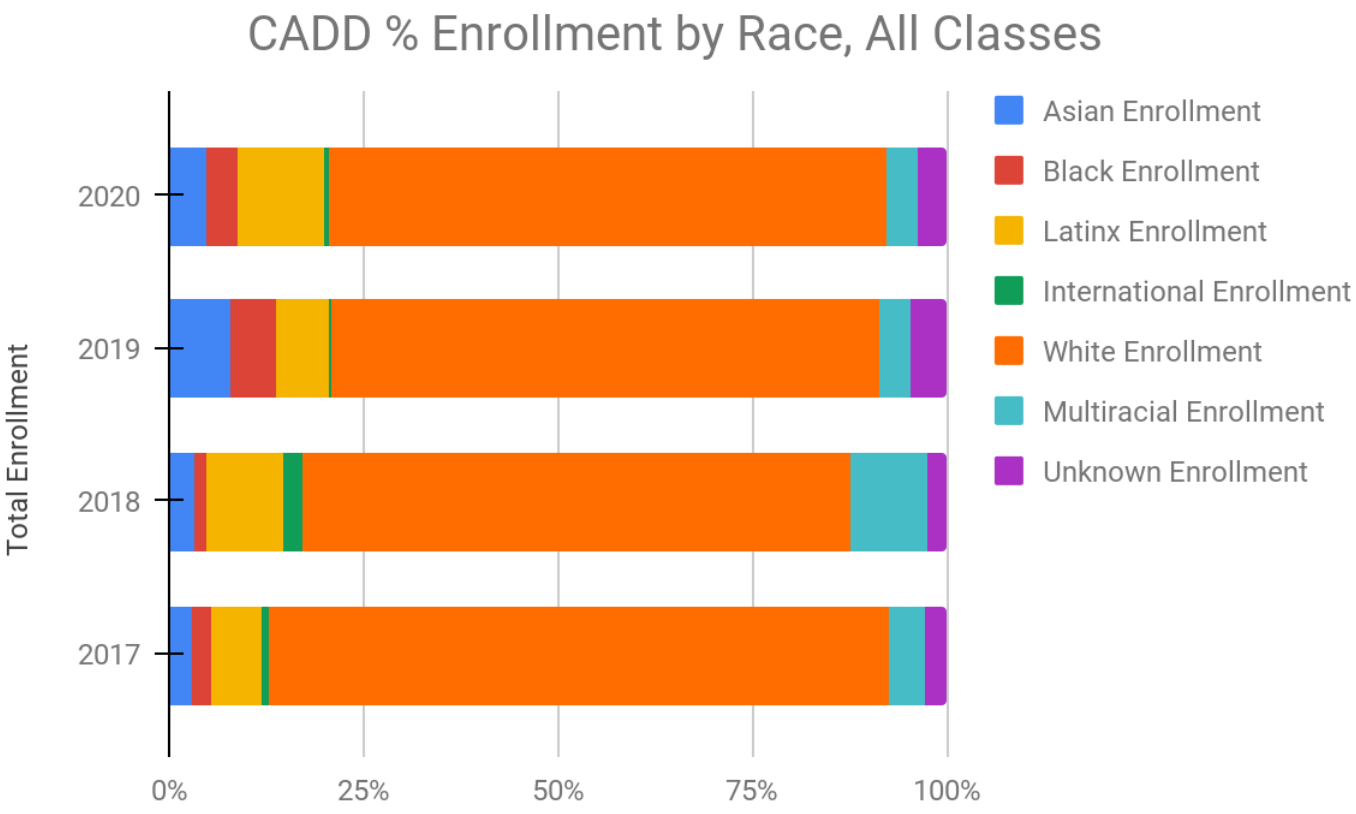
Enrollment and % Success By Course and Student Demographics

SEE Gender, Race, and Pell Tabs

2B3. *The data may indicate a pattern of inequities (in gender, race, or Pell eligibility) in student enrollment or success. Please clearly explain how your program intends to explore content/curriculum, pedagogy/teaching, course material selection, etc. using culturally responsive teaching approaches throughout the next year. Try to identify a realistic one year goal.*

CADD has been working on culturally responsive teaching and learning for the last couple of years. A measurable goal we would like to pursue this year is to have all CADD faculty take a CSOD offered culturally responsive course. This might include the "Communicating about Culturally Sensitive Issues" online class. We then would discuss our reflections on the training in faculty meetings and how we might incorporate some of what we have learned into our classes.

Race Analysis:

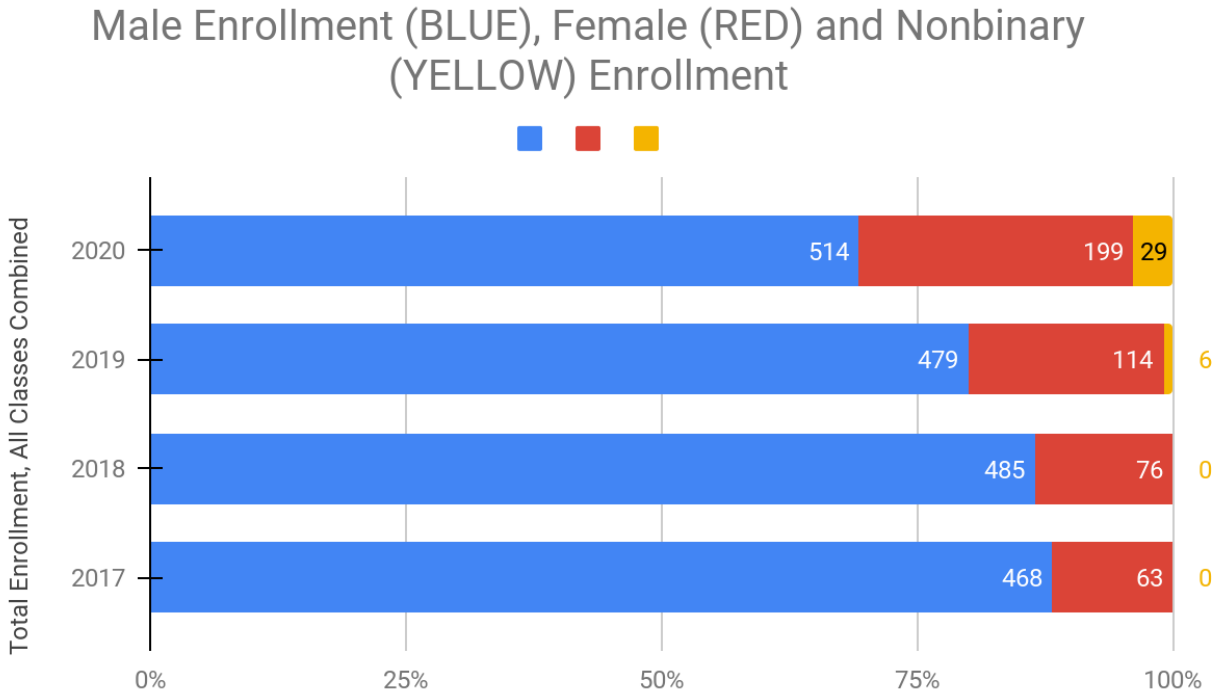


CADD is pleased to see an increase in the diversity of enrollment of our students. We see a diversity trend from the initial data back in 2017 with more diversity in the recent years. This makes it more

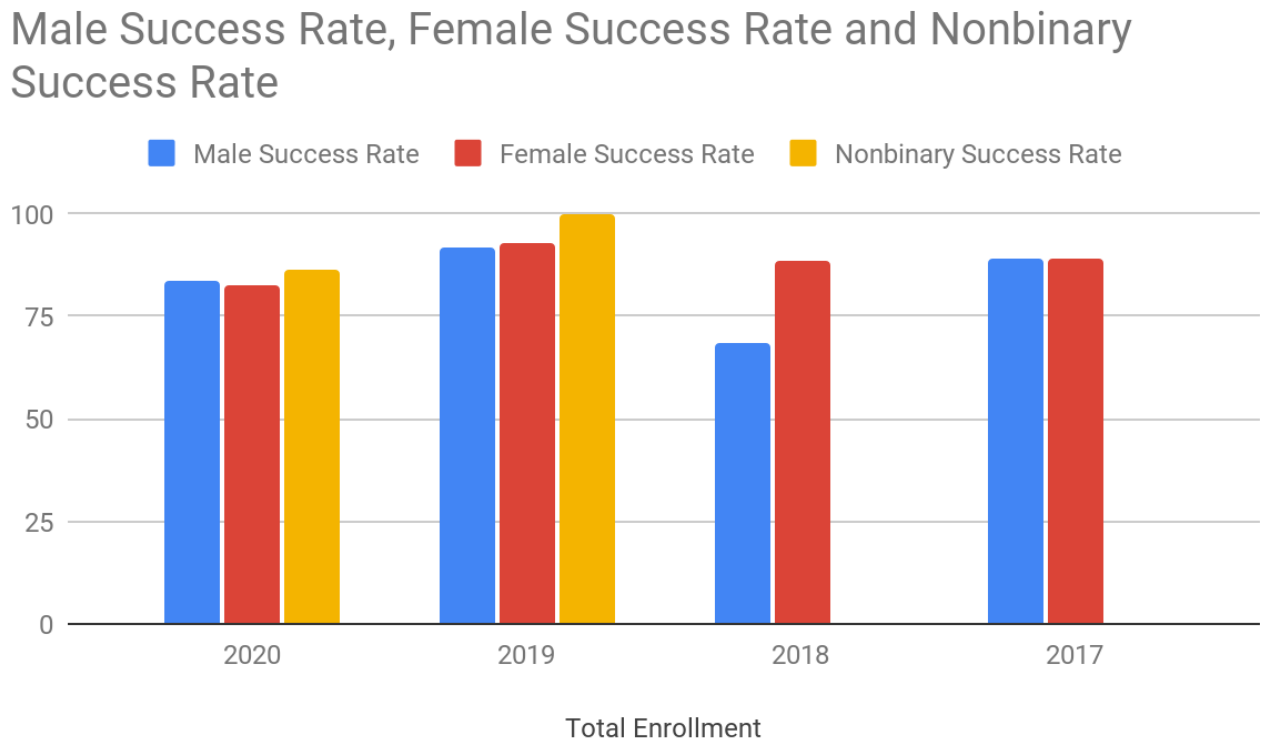
important that faculty develop culturally responsive teaching practices to ensure our teaching practices are relevant to the student audience we serve.

Students identifying as Asian, Black and White are the groups that generally have the highest success rates. However, LatinX and Multiracial success rates are generally behind the other aforementioned groups. CADD will research training and begin discussions to specifically address these groups (LatinX, Multiracial) to see if there is something specific that can be done to increase success rates among these groups.

Gender Analysis:



Of the various areas that CADD is focusing on, this includes the gender diversity of students enrolled in the program. Drafting and CADD has been traditionally a male dominated field. We hope to be part of the solution in encouraging other non-male identifying genders to be involved in the CADD field. We are very pleased to see an increase in women and non-binary genders taking CADD courses and we continue to see a nice increasing trend of non-male genders. We hope to continue this trend by adopting the larger PCC goals of culturally responsive teaching and being inclusive to all genders. We have developed marketing strategies that are non gender specific, including our home page image which helps students imagine themselves immersed in CADD regardless of gender.



Success rates among the genders is fundamentally the same. We do see Nonbinary success rate a little higher than the other genders however, but that data set is limited. Looking at the last two years of recent data, we do not see any negative trend that should be addressed relating to equitable success for genders.

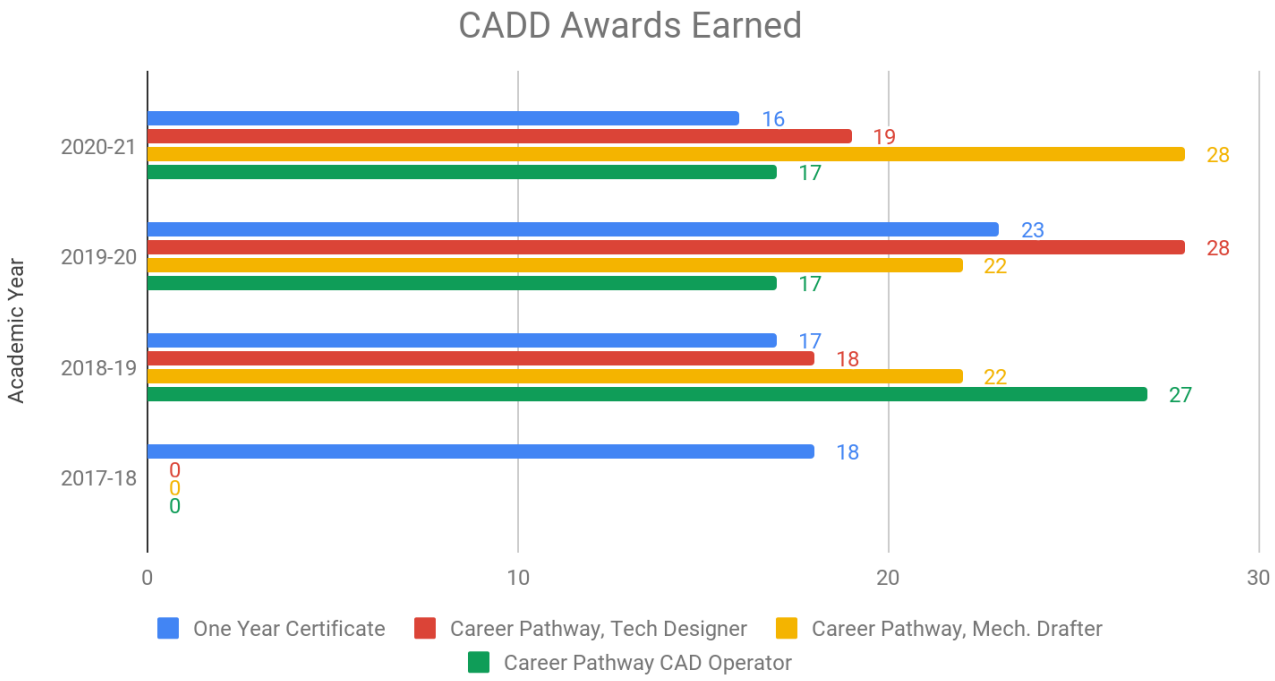
2B4. *What support does your SAC need to fully explore inequities in enrollment or student success? For example, are there any other data reports you would find useful to have related to student success?*

We request data from Dual Credit to see a breakout of CADD student data by HS and gender. This would help us to see where more outreach might be helpful. This might include having a CADD "event" for non-male identifying students.

2C. CTE Completions

SEE Awards Tab

2C1. *Is the program independently tracking student completions? Feel free to share your data sets here. Are there any program practices that positively influence completions? Are there any program practices that could be revised in order to more positively influence completions? Please explain.*



The above chart shows the certificates that have been earned by our CADD students over the past four academic years. We have a total of four certificates that our students can earn. Three of the embedded certificates were created after the 2017-2018 year to allow students to take a minimum amount of credits and still obtain a certificate. These career pathway certificates utilize the minimum amount of credits and courses to obtain a position in industry and stack towards the 1 year certificate. This has become a positive influence in the ability for students to earn a certificate that can lead to employment. The data shows that more students are able to complete a career pathway certificate than the one year certificate.

We do recommend, however, that our students work toward earning the 1 year certificate to increase their marketability for career positions. The certificates are outlined below from the CADD website.

Degrees and certificates

Award	Length	Financial aid eligible	Currently accepting students?
Certificate: Computer Aided Design and Drafting	1 year	✓	✓
Career Pathway Certificate: CAD Operator	Less than 1 year	⊘	✓
Career Pathway Certificate: Mechanical Drafter	Less than 1 year	⊘	✓
Career Pathway Certificate: Technical Designer	Less than 1 year	⊘	✓

Tracking of this completion data was obtained from the IE website and loaded into a google spreadsheet document. We do not manually track these completions.

Earning the 1-year certificate takes time and dedication. Over time, fewer students earn this award than the career pathways. CADD plans to increase some of our online course offerings to allow for more flexibility for students to take courses. We also have been given funding over the past year to hire a peer tutor for CADD. The tutor has been an immense help to our students who have been offering weekend help hours. We find a lot of our students do work on weekends when staff is typically taking time off. It really helps move students forward if they are stuck or struggling. Our tutor has reported that on average about two students are utilizing the service on a weekly basis. There are increases during the term during week five and week eight with three or more students obtaining tutoring. We believe that a tutor is a very important resource for our program. Efforts will be made in raising the comfort level of using a tutor and how to best implement a tutoring schedule.

2C2. *If different from your internal tracking (if you do it), what conclusions or observations are suggested by the graduation data provided in the Awards Tab?*

N/A

2C3. *Is your program aware of any external influences that strongly affect program completion? For example, labor market impacts, business partnerships, or internship availability, etc. Please explain.*

We are not aware of any major external influences that negatively impact the ability of our students to complete their program completion. We are aware of a small percentage of students who obtain CADD related jobs and are unable to continue their education due to work conflicts. This is a minor issue that might impact completion. We find that most employers encourage their students to complete their certificate and work worth them around school schedules.

2C4. *Are you able to get information about graduate job placement/salaries for recent graduates? If so, please describe how you get that information, and what you have learned.*

Yes. We have an employment job tracker that we have been documenting placement for graduates. Our process has been for instructors to fill out the sheet when they hear back from students. This only is the case for a small percentage of students. In addition, our IAA has helped by calling each certificate graduate in the fall time to interview them about their employment. Obtaining salary is difficult as it relates to personal information. We rely on job openings and our industry partners to give us salary ranges. Over the last year, we have not been able to keep this data up to date due to reorganizations and remote work. We request assistance in this effort moving forward.

SECTION 3: REFLECTION ON ASSESSMENT OF STUDENT LEARNING

3A1. Learning Assessment Reports

X Multi Year Plan current and complete
X 2021 Summary Data Report submitted
X 2021 CTE Learning Assessment Report submitted

__X__ 2021 TSA submitted (Please check if TSA submitted)

Program Notes: If any of the above forms above was not submitted, please explain why. Feel free to add additional notes/ context as appropriate.

3A2. Assessment Reflection

Please respond to the question below, which relates to your SAC's 2020-2021 Learning Assessment Report to the Learning Assessment Council (LAC).

Commendations: The CADD SAC has done a very thoughtful and thorough job of the assessment. They have done a very commendable job of involving all PT and FT faculty in the plans for the assessment, and in planning to be culturally responsive in their teaching practices.

Suggestions/Comments: The peer reviewers would encourage the CADD SAC to be more clear in their reporting about how the norming and scoring is conducted for their assessment rubric, so that it does not appear as in this report that a single faculty member may have "graded" assignments as opposed to others assessing a program outcome. We also agree with the SAC that perhaps LAC assessments could be integrated with their APU assessment so it reduces the burden of having to do multiple reports.

Questions: How could the CADD SAC collaborate with the LAC/CTE coach to make this integration happen for next year?

In addition, the peer reviewers note that the other outcome listed on the SDR - "Use current Computer Aided Design technology to design, and subsequently print, two-dimensional industry standard drawings" had a much lower success rate with students. Limiting the consideration to those students who submitted the portfolio, only 67% passed. Would the SAC consider focusing a future assessment project on this outcome instead, given that there is more "room to move" on improving student achievement of the outcome?

SAC Response:

Response to Suggestions/Comments/Questions:

Background information with regard to scoring: CADD has two full time faculty members and four part time faculty members and therefore has a small staff. All of our part time faculty members work full time and teach usually just one class for the CADD department per term and are unable to take on other assignments very often.

Given this staff configuration, we often have to resort to one full time faculty member scoring the results for their own project. For the next LAC project, we will make efforts to share the scoring task as much as possible. We will also work with our LAC coach to come up with a solution to work with our limited number of staff to better normalize our scoring.

Response to Outcome improvement:

CAD SAC will review and implement (if possible) a project related to “Use current Computer Aided Design technology to design, and subsequently print, two-dimensional industry standard drawings.” This will include data collection and making changes to improve the baseline pass rates.

SECTION 4: ADDITIONAL ACHIEVEMENTS, CHALLENGES or OPPORTUNITIES

4A. *Is there anything further you would like to share about your program's achievements at this time?*

1. **OMIC Opening:** We are excited to be a part of the OMIC opening, offering an in-person class at the new center in Fall 2021 and another scheduled for Winter 2022. Over the Summer, our department participated in an On-ramp event there, and attendees expressed excitement about the CADD program. We look forward to an on-going connection to OMIC.
2. **STORI Developments:** Our program was able to take advantage of the STORI program over the summer, and we developed two online courses plus one hybrid course. Working with the instructional designers for these projects benefited the quality of our online shells and we can leverage this work to improve other course shells. With remote learning, all of our instructors are now using D2L, and we continue to work toward a consistent experience for students as they access content, assignments and grades through the LMS.
3. **Future-to-Go:** Per recommendations from our Advisory Committee, our department presented details about our program to high-school students through Portland Public School’s Future-To-Go event in March 2020. We want to participate again next year, hopefully in-person.
4. **OER Resources:** We have worked to keep costs down for students by implementing low-cost and no-cost materials where possible. Last year, we received a grant from SE Student Life to develop an OER for our CADD 115 CAD Mathematics course. We used this resource in Fall 2022, and are excited to have a textbook that is both free to our students and in a format which we can continue to improve.
5. **Retraining Programs:** A notable share of our students come to our program through retraining programs such as Workforce Oregon. We see a high success rate with these students.
6. **Instructor Appreciation:** We are proud of positive responses in student course evaluations for our instructors and courses, including feedback such as:
    a. It is so clear that Adam really cares about his student's learning.
    b. There are many tutorials online for the subject matter, but I feel that the real value to this course is that we have access to someone who uses the software daily.
    c. Phil was amazing! He was engaged, prepared, and structured in his delivery.
    d. While it's harder to connect with people over zoom, Phil encouraged us to participate and get to know each other as best as we can.

e. Jeremy is very willing to help students with any problem they are having. He takes his time to make sure students understand his instruction
f. Kelly loves Inventor and his passion shows through in every part of class. He wants everyone to learn it and love it as much as he does!
g. Justin has been consistently replying to my questions and helping me learn despite my challenges.
h. Wendie created a very positive class. Feedback is great and very helpful in making us good drafters.
i. I was surprised at how much I enjoyed the group project. I have had many poor experiences with group work in the past, but somehow this worked well and was one of the most sociable and engaging activities all term.

4B. *Are there any challenges not described above that you would like to note here?*

1. ***Return to normal operations:*** As we move toward a full reopening, finding the right balance has been tricky. As we are now offering a few in-person classes, students report concerns about signing up for an in-person class that begins immediately after a remote class. We also want to be careful to avoid undercutting students who are in our program at the moment *specifically because it is remote,* while also cognizant that many of our other students would benefit from more face-to-face classes.

2. ***Student access to technology:*** One struggle for our program is that students need computer workstations capable of running the CAD software we use in our program. During lock-down, IT has provided support for our students by providing Splashtop accounts that can access our CADD lab computers remotely, but this is a less than ideal solution. Prior to the lock-down, a subset of our students relied on CADD lab and library computers to complete their coursework. Managing the variation in student access to hardware and technology in a manner that is genuinely equitable will continue to be a challenge for us. We hope that any new equipment installed in our classrooms would allow for rotating old CADD computer systems into libraries or other accessible locations.

3. ***Need for additional instructors:*** With strong enrollment, it has been difficult to offer enough sections of our courses to meet demand, given the number of available instructors. Both of our full-time instructors have been regularly teaching overload to support the cohort of students currently working toward the one-year certificate. We are seeking additional part-time instructors to supplement our department.

4C. *Do you see any opportunities in the near or long term that you would like to share?*

1. ***New digital fabrication equipment:*** We look forward to integrating new equipment into our classrooms. We envision a larger maker space for both our students and the SE community. As we learn more about the build-out for the SE STEM Center we hope to optimize our space to complement future STEM Center programming and outreach events.
2. ***New one college reorganization:*** As our students live throughout the district, offering classes at multiple campuses could benefit our students and provide broader awareness of the CADD program, as we are able to do now at OMIC.
3. ***CADD AAS Degree:*** Our application for a Drafting and Design AAS degree has been stalled, initially due to the reorganization of the MET/CMET degrees and now due to state requirements to explicitly demonstrate tangible financial benefit to students earning a two-year degree versus a one-year certificate.

   Our students continue to enquire about a two year drafting/design degree, including graduates who wish to return for this award. Our advisory committee supports the implementation of one as well. [See details in Section 5 for related guidance from the Advisory Committee.] Our intuition as professionals is that while the 1-year certificate is a great vehicle for students to expand their skill-set from related fields, many of our students would greatly benefit from an associates degree. Like the HECC, we are committed to the success of students who have been historically underserved, including students of color, English language learners, economically disadvantaged students, LGBTQ students, and students with disabilities. We believe not only in the ability of students to achieve in our program but also to succeed in industry. Earning an AAS degree enhances the qualifications of our students, thereby increasing their opportunities when seeking work in the CAD, mechanical design and product design industries.

   Barrett Faneuf, Senior Mechanical Engineer/Mechanical Architect at Intel Corporation and our CADD Advisory Committee Chair put it this way:

   > “I will say that “degree” filters to the top of the search algorithm in people's brains better than “certificate,” because usually when you have a degree you also have certificates.
   >
   > “It’s an added layer of sophistication and educational follow through that you can demonstrate on a resume. A certificate ... can be very narrowly focused, and is still necessary, especially for those industry learners who are coming for a specific certificate in a specific class, or for people who are reviewing job postings and saying ‘this is a [CAD] program I need to have.’
   >
   > “When I’m looking at resumes that have either a bunch of certificates, or a couple of certificates and a degree, I know that that degree is more well rounded, and will have more of those features in it that I want in a candidate. I want a candidate who can do the physical work but I also want a candidate who can communicate those results to

their stakeholders and their peers. And that usually comes with a degree rather than a certificate.

"I want [entry level designers] to be able to identify problems, communicate recommendations to their stakeholders, and I want them to have a mental foundation of problem solving - not just take this sketch from your senior engineer and turn it into a piece of CAD. …[These] additional capabilities are often reflected more in a candidate who has a degree rather than simply a certificate. It's essentially a stamp of … well roundedness. That's the impression I get from a degree as opposed to a certificate."

4. ***Industrial Design Transfer program:*** Another avenue to support student achievement in the product development field is to offer a transfer opportunity for a four-year degree. The University of Oregon has a Product Design Bachelor of Arts degree, and other four-year programs are available at Washington and California public universities (Bachelor of Arts and Bachelor of Science, depending on school.) A collaboration with UO to design a transfer program would serve PCC's objectives to support the success of students facing persistent barriers in their education. These same students are often also shut out of careers in the technology field.

SECTION 5: INDUSTRY AND EXTERNAL ACCREDITATION GUIDANCE

5A. Advisory Committee

Please check your Advisory Committee list at Spaces. If it is not up to date, submit the current list to academicaffairs@pcc.edu and we can update Spaces for you.

Advisory committee roster is current as of: The current membership roster is not dated (a request for an updated roster was made to our administrative assistant on 11/21)

Please summarize feedback/input that you have received from your Advisory Committee over the past two years, and outline actions that resulted from this feedback.

Some Highlights of feedback from industry partners recently:

Work Ready Skills (Soft Skills as well)

- Students need to be taught the need for personal accountability in the workforce and working online
- Students need to develop critical analysis, problem solving, and resource utilization skills. They need to open up to global thinking with the ability to teach themselves new skills and software.
- There is a need for short term training opportunities.
- Students should develop the ability to work online and remotely and ability to adapt to remote work environments.

Curriculum Related Topics

- Incorporate real projects in courses.
- Allow for room on student projects that drive their interest.
- Teach learning of CAD skills that can be transferred to other software platforms. Train in skill sets.
- Timely feedback is important for online and hybrid courses.

Student Credentials as future Employees

- Having a degree filters to the top of the search algorithm. Perception of a degree better than a certificate. A degree might present a candidate as more well rounded and have a better foundation for problem solving.
- Importance of gathering employment data of former students and track that.

Are there any examples of successes you have had working with your Advisory Committee that you would like to highlight?

- The advisory committee has helped guide us in curriculum, specifically on soft skills that they expect students to have. We have implemented a module in CADD 100 that covers best practices for on the job skills and behavior. Students then go over several real world examples of dilemmas found in the workplace and how to overcome them. These range from relations with managers and co-workers and the ability to overcome mistakes.
- The committee suggested development of short term training opportunities and CADD was able to implement a series of Career Pathway Certificates. These certificates could be earned in as little as 12 credit hours and would allow for basic marketable skill sets. We do recommend students earn their one year certificate, however the Career Pathway certificates are stackable within the one year certificate program.
- The advisory committee is very supportive of our efforts to develop the AAS degree, and we will continue to seek help as we advocate for this. They have provided important feedback to help us make such a degree worthwhile. The feedback included some additional AAS courses related to measurement, jig and fixture design and drafting topics.

Does the SAC have any suggestions for ways that the Program and Pathway Deans could support the SAC and the Advisory Committee to work together effectively?

We have good support from administration for resources and participation in our advisory committee. One challenge we have is consistent membership attendance among members. We do have a few core members who participate regularly however have helped us be successful.

One idea to strengthen membership is a few personal invitations from our administration for the next meeting might be helpful. Thank you.

5B. Accreditation

- *Do you have professional or programmatic accreditation? (This is a separate accreditation from PCC's institutional accreditation by NWCCU).*

  YES

  If yes:

  - *What is the name of your accrediting body?*

    American Design and Drafting Association (ADDA.org)

  - *What is the typical accreditation cycle?*

    Annually, with a major review every five years.

  - *When is your next self-study/visit scheduled to occur?*

    August 2022

Please summarize feedback/input that you have received from your accrediting body over the past two years, and/or any actions taken as a result of accreditation recommendation or guidance.

For the last two years, ADDA.org has approved our annual renewal applications. Every five years, ADDA requires a more extensive renewal application with submission of recent data. This typically includes updated syllabi, advisory committee list, curriculum updates, faculty, equipment and facilities updates. During the last renewal, we were approved for continued curriculum certification with no exceptions.

As part of our ADDA.org partnership, we offer an ADDA.org sponsored onsite certification examination for our students. This allows our students the ability to earn the "Apprentice Drafter" certification. ADDA.org provides scoring feedback and we closely monitor the results of the exams and modify curriculum where needed to improve scores over time. As students progress in their careers, they can earn the certified drafter and certified design drafter certifications. Below is a table of scoring feedback provided by ADDA.org.

ADDA Apprentice Drafter Mechanical Certification Exam Summary Results 2018-21

	2018	2019	2020	2021
Total students taking exam	6	7	18	7
Total students earning passing score (75%)	4	7	15	5

Average Score by Year

Competency 1: Abbreviations, Terms, Identification	73.85%	76.92%	70.14%	78.89%
Competency 2: Drafting Equipment, Media, Reproduction	65.60%	65.50%	72.24%	64.77%

Competency 3: Shapes-Lettering, Geometric Symbology	74.67%	87.08%	80.00%	81.52%
Competency 4: Dimensioning and Notations	67.27%	66.48%	64.44%	64.94%
Competency 5: Orthographic Projections, Identification and Terminology	62.86%	85.71%	78.99%	72.11%
Competency 6: Geometric Construction and Descriptive Geometry	82.29%	88.57%	82.69%	83.27%
Competency 7: MultiView Drawing, Identification and Terminology	69.78%	82.50%	76.86%	72.06%
Competency 8: Sectional Views, Identification and Terminology	72.00%	79.17%	74.12%	77.14%
Competency 9: Auxiliary Views, Identification and Terminology	64.00%	78.75%	70.59%	67.14%
Competency 10: Pictorials, Identification and Terminology	86.00%	88.13%	88.53%	86.07%
Competency 11: Basic Welding, Symbols, Identification and Terminology	76.92%	80.29%	83.71%	73.08%
Competency 12: Basic Tolerancing, GD	68.57%	79.17%	74.23%	70.07%
Competency 13: Basic Math and Geometry, Drafting Math	81.88%	88.67%	84.38%	83.93%
Competency 14: Drawing Implementation, Identification, Numbering	87.20%	83.50%	82.82%	86.29%
Competency 15: Professional Drafting Practices and the Workplace	80.00%	87.50%	84.37%	82.86%
Total	75.24%	82.27%	79.14%	77.03%

Overall, scores have been stable. As the exam requires a fee to participate, the number of students attempting the exam tends to be low. We have been concerned that test results were not a useful barometer as a result, but the scores were similar in 2020, with significantly higher participation. That said, 2019 is a bit of an outlier (100% passed.) We seek to better understand some of the results, particularly low average scores in Competency 4.