



FULLERTON COLLEGE

ELEVATING. EXCELLENCE.

Administrative & Operational Services

2022 - 2023 Self-Study Four-Year Program Review Template

Technology and Engineering

Statement of Collaboration

The department/office staff listed below collaborated in an open and forthright dialogue to prepare this Self Study. Statements included herein accurately reflect the conclusions and opinions by consensus of the department/office staff involved in the self-study.

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Authorization

After the document is complete, it must be signed by the Principal Author, the Department Manager, and (when appropriate) the Dean or appropriate Immediate Management Supervisor (IMS) prior to submission to the Program Review Committee.

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1.0 Mission and Goals

Mission, Vision, Core Values and College Goals drive all college activities. The Program Review committee would like to understand the connection of your department/office to the Mission, Vision, Core Values and College Goals. Summarize how your department/office supports each area.

Mission: The mission of the Technology and Engineering Division is to offer Career Education instruction to the local community by offering accredited education programs and pathways, training and services that meet the individual needs of learners and the economic needs of the region.

Vision: Our vision is to ensure that all learners meet their education and training goals by obtaining the knowledge, skills and dispositions needed to be economically, technically, and professionally successful in the region.

Core Values: The Technology and Engineering Division will pursue the mission by ensuring that all learners, faculty and staff are supported with the resources they need to provide a quality learning environment that contributes to student success. Each member of the division must make a commitment to support and contribute professionally to our learning community in an effort to remove barriers, serve populations that are marginalized and creatively solve pedagogical challenges. We will build and measure purposeful partnerships that contribute to our strengths, strengths that could not be developed in isolation. And, all learners will contribute to the learning environment with dignity, respect and professionalism.

College Goals:

2.0 Department/Office /Data & Trends Analysis

2.1 Describe the purpose, components, and staffing of this department/office.

The division supports the operation of more than fifteen education and training programs which are staffed by twenty-eight full time members, fifty-seven adjunct members, and ten classified staff members. Everyone works together to provide career and technical education opportunity to the learners who come to our division. In addition, the division collaborates with k-12 partners, the other colleges in the Orange County Region, Cal State Fullerton and UC Irvine. We also operate and collaborate with associations and employers to offer work-based learning such as internship and apprenticeship and Disney Aspire. Some of the programs offer opportunity for learners to qualify or earn industry certifications such as LA City Structural Welding Certifications, American Welding Society Certifications, Cosmetology Certification, SolidWorks Certification, OSHA /Certification, Automotive Service Excellence, and others by special request. The division supports faculty members in their pursuit of professional development and professional endorsements that allow standards-based qualifications to be granted to learners by some of the instructors. Nearly all the service areas have necessary support. There are a few areas such as the machine department, welding department and construction department that have no classified help causing disparity. The faculty must do all the preparation, some of the repairs and more. We in the division do our best to support the areas that lack help to the best of our ability. Some of the departments have coordinators or faculty advocates that receive no reassigned time, yet they must complete all of the reports and processes as any large department with significant reassigned time. Finally, the division now has eight computer labs and likely the most unique technical software on the campus. The division lacks an expert who can construct machine networks, install complex software and allow machines to talk with computers and machines to talk with machines by data connection on a network. An engineering and technical division survives on technological change and without

an IT expert dedicated to this activity, there will be delays and breakdowns that cause students and faculty to go without necessary software. The general rule of software and data systems is if the entire college does not use it, it is not supported. An IT engineer is needed as well as infrastructure that will be able to function well through constant change.

2.2 Staffing – complete the table below. Please list the total number of personnel in each type of position in the department/office. Within each classification in the first column, please list the position titles. For confidentiality, **do not** include the names of any people in the position.

CURRENT STAFF					
Classification (Include position titles)	# of staff in each position title	Percent of employment	Months per year of employment	Source of funding (General / Categorical)	FTE
Managers					
Dean	1	100%	12	General	1
Regional Employer Engagement (TDRD)	1	100% Special Project Director(not permanent)	12	Regional Funds SWP	VACANT
Classified					
1. Admin 3 – Division Office	1	100%	12	General	1
2. Admin 1 – Division Office	1	100%	12	General	1
3. Admin 2 – Media Studies/Division Budget/SWP	1	80%+20%	12	General+ SWP	1
4. Lab Technician - Cosmetology	1	100%	12	General	1
5. Admin 2 - Cosmetology	1	100%	12	General	1
6. Clerical Assistant 2 - Cosmetology	1	100%	12	General	1
7. Automotive Program Coordinator	1	100%	12	General	1
8. Television Video Technician (this is outdated)	1	100%	11	General	1
9. Lab Clerk - Radio	1	60%	11	General	1
10. Radio Broadcast Technician	1	100%	12	General	1
11. Instructional Aid - Cosmetology	1	50%	10	General	VACANT
Hourly - Adult					
Hourly - Student					
Professional Experts					
Cosmetology	1	26 hours/wk	10 months for limited time based on funds available	Perkins/ SWP Student support	HOURLY TO ASSIST WITH NEW TECH.

					Total FTE
					11.5

2.3 Other Resources

OTHER RESOURCES				
Please list each position by classification in the department/program	Services Provided	Number of Hours	Overall Cost	Source of funding (General / Categorical)
Independent Contractors				
Volunteers				
Interns				
Total Hours & Costs				
Total FTE				

2.4 Utilize the data provided in the tables above in a discussion of the appropriateness of the staffing levels of this department/office.

The technology and engineering division operates seven distinct service areas that are supported with the classified staff members listed in 2.2. None of the offices share the same physical space. The staff members are located in different buildings or technical areas. The staffing levels requested in this review are determined by program operational hours, student and faculty load, and the variety of services provided.

Automotive service: Courses are offered morning, afternoon, and evening as well as Saturday. Instruction is every semester, including summer. The department manages with one classified staff member. Adequate support is 1.5 members due the number of hours, courses and faculty who instructor in this technical space. The intensity of the lab set-up and preparation that is needed by support staff. The facility is much smaller that any other automotive facility in the region, yet the enrollment is that of peer programs. This means the space must be highly flexible for a variety of classes to be taught in the same physical space. To accomplish this, the classified member must take down and set up equipment in the morning, in the afternoon and evening. **This is an understaffed area by .5 FTE.**

Cosmetology (office and dispensary): Courses are offered from 7:00 a.m. to 10:30 p.m. Monday through Thursday. Classified staff must be at the college by 6:30 a.m. for student check-in per state board regulation. There is another student check-out/check-in between 4:30 p.m. and 5:00 p.m. The final check out is at 10:30 p.m. Faculty and learner support is needed 6:30 a.m. to 10:50 p.m. Monday to Thursday and 6:30 a.m. to 5:00 p.m. Friday. There is currently not enough time allotted to the classified staff to cover all the hours each semester including summer. Another classified member starts in the afternoon and closes the cosmetology office at 10:30 p.m. The cosmetology dispensary provides all the materials to the instructors and

students and tracks the use of chemicals across the department. During the pandemic and beyond the dispensary is also running a drive through service for students to pick up supplies. The cosmetology dispensary has a 50% 10-month vacant position due to a retirement. When fully staffed, the cosmetology department does not have sufficient human resources in the office and dispensary. In addition, because this is a year-round program when a cosmetology classified member takes vacation there is no service to support learners and faculty. When the cosmetology classes are not in session, the classified staff are very busy preparing for the next classes. There is no good time for a cosmetology staff member to take a vacation or be sick. **The cosmetology program needs to increase the .50 position to a 100% position.** The cosmetology department can receive random checks by the state board of barbering and cosmetology so staffing and organization is critical.

Media Studies (radio, television and IT support) : The media studies departments have three classified members. One full time 12-month member and two members that are less than 12 months. **The only significant staffing issue in this area is each member should be 100% 12 month and the TV Video technician should be reclassified as an IT technician due to the fact the work in this area is all computer networking and IT related.** One reclassification is need as well as adding two months of additional support time. Media studies classified members also work across the college to produce sports broadcasts, interview members of the college community, support campus communications when requested, and at times solve complex IT problems that involve networks, software and devices that the IT department cannot support. One challenge is when the faculty are away, that is the time for these classified members to step in and do the major work to upgrade systems and prepare for the next semester.

Division Financial Support/Strong Workforce Fiscal Support/Media Studies Office Support: This classified position supports the faculty of the media studies division by providing direct support to full time and adjunct faculty. This member processes all the absence forms for the division except for the cosmetology area. This member also processes all the financial requests for the division as well as assists the dean in monitoring all accounts (there a many) and faculty spending. This position arranges for all the food and beverage for division meetings, advisory meetings, events and conferences hosted by the division. This position works with the IT department for approvals for computers (the division has the most computer labs), printers, repairs and service contracts. This position also works with the dean to get estimates on service work, electrical, data, furniture and other facilities related requests by the division. This position helps to manage the vehicles, the gas purchase and insurance between the district and the division. This is a significant area of responsibility. The position was 80%, eleven-month however it was changed to 100%, twelve-month to include 20% FTE to support Strong Workforce across the division. **At the current time this area is properly supported.**

Division Office: The division office is supported by two classified members. An admin one and an admin three. Instructional delivery in the division is scheduled 7:00 a.m. to 10:30 p.m. Monday through Friday and Saturday until 4:00 p.m. The division office runs short on support when classified staff take vacation. We do our best to shift people or post signs to direct customers/learners to a nearby office for help. The office has excellent ability to support the learners and faculty as well as a proven record of supporting business and industry. There is potential for more direct engagement with employers, and incumbent worker training as well as apprenticeships. These are services that most other division do not provide. If the college wishes to grow employer related education and training opportunity more support and

knowledge will be critical for success. **At the current time this functional area is properly staffed and supported.**

2.5 How does this department/office serve the population of the college?

This question misses the fact we serve a population in and beyond the college. All of the offices/employees from 2.4 above serve the population by supporting the learning process, creating and supporting a quality instructional environment and facilitating the efforts of educators to do their jobs in an adequate manner. In addition, the division office serves the community by engaging with employers (together with faculty) to serve on advisory committee's which in turn drive curriculum and instruction. The division provides direct services to employers who are supporting or sponsoring employer sanctioned education and employment pathways. The classified members solve problems and remove barriers to make the learning process and learning environments function more effectively and efficiently. Classified staff members and the dean regularly go out to companies to help incumbent workers register for classes, tour facilities and gain an understanding of how we can support the education and training of their employees. It is also our job to educate our partners on how to navigate the college systems. The division supports regional initiatives and projects by administering the projects, arranging meetings and supporting the goals of the Orange County Region, including K-12 initiatives from time to time. The division also provides information and opportunity to engage with community and state leaders so they can observe the effectiveness of career education.

The division contributes to the college by supporting and whenever possible providing the means for faculty to collaborate and innovate. Combined planning, the use of facilities, equipment and budgets are at times shared all to provide the instructors and the learners with new an innovative learning experiences.

2.6 Since the previous Program Review Self-Study what significant changes have occurred that impacted the services of this department/office?

The pandemic had a profound impact on this division. Some of the programs simply could not operate due to physical campus closure. Even though the Governor declared some of the occupational preparation areas essential, the college sent all programs to virtual environments. Enrollment declined by more than 50% in some departments. The faculty were very grateful for the executive decision to move some occupational preparation programs back onto campus that floundered in the virtual environment. Enrollment is now making a comeback with a handful of programs filling seats at the level before the pandemic. In fact, a few programs have small course waiting lists and the number or sections is equal to that before the pandemic. The support the division provided programs during the pandemic was essential to checking-out equipment, supporting faculty in the virtual environment, constructing a high-flex classroom and much more. The division responded in a creative and energetic manner.

Retirements within the division increased since the last self-study. It is extremely difficult to find enough technically qualified faculty to deliver courses. It is critical for the division to hire more full-time faculty in construction, architecture, interior design, cinema television, and cosmetology. There is opportunity to share some full-time faculty between construction, architecture and interior design.

Since the last self-study the division facilities are more worn out, under-sized and outdated. Here are some examples of how technological change in occupational education impacts facilities:

LiDAR for vehicles. To calibrate LiDAR a space approximately 100-200 feet long must be established. The automotive facility at Fullerton College is compact and is not able to develop true activities in this new technology. Welding processes continue to improve. Welding booths now can have at least three welding processes at each workstation. The current/old welding booths are sized for a single process. There is a lack of multi-process welding stations so that learners can benefit from all welding processes. Even with equipment money, there is not enough facility space to implement a modern welding and fabrication laboratory. Energy instruction is an integral part of the construction program. There are a significant number of new state and national laws and codes related to energy, energy conservation, distribution and control. The construction faculty have a tiny footprint to construct and execute construction and energy activities that teach learners now and into the future. There is not one solar panel, not one completely automated student-built activity area yet the faculty strive to teach what they can in a postage stamp space with extremely full classes. There is no classified help in the welding or construction areas. Learners are landing good paying jobs and employers are sending incumbent workers to the evening courses. Data from the center of excellence shows construction as a strong occupational area in Orange County.

These are just a few examples of areas that cannot be taught online, that need considerable well-planned flexible space, modern infrastructure, certified instructors and support personnel, to support high quality learning. This is the true mission of the college. A university does not have the mission career education technician mission which makes the college uniquely different than the university.

- 2.7 Describe any laws, regulations, trends, policies and procedures or other influences that have an impact on the effectiveness of your department/office.

The division is the technology and engineering division. This division must change rapidly to keep pace so that learners are not entering the workforce with irrelevant skills and abilities. We need to update software every three years. We must update computers every three to five years so that students are working with tools that are up to date with codes and engineering standards. Technology changes on vehicles rapidly yet do we have a plan to update our automotive facilities to keep pace? What about manufacturing, the change is rapid from prototyping with 3D printers to white light scanning to ensure proper geometric dimensioning and tolerancing. To implement a proper 3D printing environment, a building ventilation system needs to be designed for such coursework. Energy laws and codes, welding codes, building codes impact our architecture, interior design and construction programs. How do we demonstrate and teach all the technology to a standard where learners can enter the workforce and be capable if we have no infrastructure that supports today's technology? We use Strong Workforce Funds and Perkins funds to help with equipment and training however the facilities are antique. Where do we implement a solar array, power inverter and control system on the ground level so students can understand these California code required systems? The district will need to have a plan or soon, technical programs will be completely outdated in the current physical spaces. To be clear, all technical programs need new space with new infrastructure.

- 2.8 Provide any other data that is relevant to your self-study, for example, if you collected data to assess an outcome.

Members of the division look at data in everything we do. If we work with employers, we look at the number of learners, the success of the learners, the needs of the employer and more. Faculty, the lead admin and the dean work with learners and employers to build coursework pathways to support specific employment education goals. For, example we examine cohorts within the

division to see what programs the learners are engaged in and how to accommodate their educational needs around their work schedules. We work with the Center of Excellence every week to inquire and receive Labor Market Information reports for departments across the college. We use launch board data in our proposals, and we get county data analysis such as the layoff reports and other supply and demand data which is required for decision making, planning and implementation. If an outcome is to have a program that meets the needs of the community with employment and living wages, yes, we must assess that data.

3.0 Strengths, Weaknesses, Opportunities, Challenges (SWOC)

3.1 Based on your analysis in 2.1 through 2.8, what are the strengths of your department/office?

The faculty and staff are very good supporting students and helping them succeed. The division acquires funds from several sources to purchase supporting equipment and software.

Members of the division work across disciplines to grow and support new initiatives in an energetic fashion.

There is a tremendous amount of academic diversity across the division. There are more than 15 programs.

The members of the division assess situations and implement change. For example, members of the division designed and implemented a hi-flex classroom with the approval of the IT department. The members of the division show initiative, learn new technical information and get things accomplished.

Connections within the community are strong. Political leaders, k-12 leaders and business leaders across the area are very interested in this division. The community will find division leadership, faculty and staff out in the community marketing our services and programs.

There are currently two apprenticeship programs that are administered in the division.

Disney Aspire is the new program that is currently connected to many CTE programs demonstrating employer support.

The division hosts education and training events for educators and experts. Manufacturing, autonomous systems, cosmetology, design, and other training is conducted across the division.

Between 2015 and 2021 the division implemented six additional computer labs to support technical education. Before this time the division only had one computer lab. The infrastructure for the computer labs was not implemented with the building remodel so the effort to implement these labs took a significant amount of time, money and expertise.

Members of the division have key knowledge. When the IT department and the facilities department tell members of the division “if you install it we will not support it” the members of the division step up and continue to ensure progress is made and technologically we are moving forward.

3.2. Based on your analysis in 2.1 through 2.8, what are the weaknesses of your department/office?

The division lacks full-time faculty and classified support staff for construction, welding, machine, automotive and other technical support across the division. There is an immediate need for three full-time faculty and one-and-a-half classified staff.

The division lacks storage spaces to house equipment and materials used across the discipline. Given classrooms are used by more than one discipline in many departments, the equipment must be removed and stored between classes. There is no storage space.

There must be a dedicated computer software support technician. Every semester the software for one or more departments is not installed properly and the faculty and students get very frustrated that the software is not functional on time.

The buildings are not all as secure as they should be. The division is beginning to implement keyless technology. This implementation effort because there is no facility plan for increased security. People and property must be better protected.

The overall building and infrastructure for the division is outdated. This weakness has a profound effect on the division's ability to keep up with change.

3.3 Based on your analysis in 2.1 through 2.8, what opportunities exist for your department/office?

Implement more software and data systems across the division. The division needs to move toward more effective and efficient systems to support faculty and learners.

Increase work-based learning opportunities for students. Work based learning also benefits learners if the employer pays for the cost of college.

Provide professional development to faculty and staff within the division and across the college as new technology is implement in the division.

There is great opportunity to expand construction, welding and automation-based education if a new facility for energy, construction, utilities and systems is constructed.

There is great opportunity for engineering and science-based collaboration if new space is constructed to support integrated learning such as drone technology, autonomous systems, design courses such as fashion, DART, architecture, printing and interior design. Other areas include engineering, biotechnology, crime scene analysis, metrology, materials science and cyber security would benefit from a space where such collaborations could exist.

3.4 Based on your analysis in 2.1 through 2.8, what challenges exist for your department/office?

Full time human resources (faculty and staff) are limited so planning and execution of new initiatives has less overall effort.

Technical facilities (new) are not planned.

Employer engagement does not have a regular position allocation at the college. It is funding with project money and the salary is not competitive to peer colleges.

Post-pandemic decisions are not helping the division or college systems get back to normal effort.

4.0 Outcomes Assessment

Note: Sections 4.8 and 4.9 are new. Please review before filling out your outcomes tables below.

4.1 List your outcomes and complete the expandable table below.

	What are your program outcomes?	When was the Assessment completed?	When did you analyze the data?	When were the changes made?	Number of Cycles Completed
1.	Nurture relationships with the general public, institutional partners, business, industry and professional associations.	This is assessed each year in review.	From 2018 to 2021	New relationships working on projects were initiated with Disney Aspire, a number of manufacturing companies, from 2018 to 2022.	1
2.	To provide timely, professional, and accurate support to Technology and Engineering Division Faculty	This was reviewed closely in 2019	The division asked faculty where they needed support and to what frequency as a result of the pandemic.	Changes were made March 2019 to spring 2021.	Over four semesters the division meet either every two weeks or once a month

4.2 Assessment: Complete the expandable table below.

	Intended Outcomes	How will you determine if the	How will you collect the	Can this data be disaggregated at	What will the results show?
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		outcome is met?	data?	the student level?	
1.	Increase access for faculty, staff and learners through engagement with stakeholders.	More student placements at work sites, contract training, collaborations on projects in the region that benefit faculty and learners.	The information will be shared with Vice Presidents, and the division. Data is collected through institutional research, and through stakeholders.	In some cases it can if the data is coded.	We want to results to show there is demand for college education and service beyond traditional methods.
2.	In order to improve support within the division staff and professionals across the campus will have to work together to improve systems (such as implementing new software) so that learners and instructors have access to the technological resources they need when they are needed. In addition, the division will need to work across the college to create information and deliver that information to stakeholders that help them connect to services at the college. Examples include contract education, employer paid education benefits and modes other than what might be called the high school transition model.	Information will be written and clear. Information will be on the college web site. Stakeholders that currently collaborate with the college will assist to review the information to ensure it is easy to understand and easy to navigate.	A process must be established to code businesses and learners so that data can be pulled easily from banner/argos.	Yes, if the data is coded properly.	Greater engagement beyond high school transition. Employer engagement with employers able to provide feedback to services provided to there employees who are also FC learners.
3.					
4.					

4.3 How has assessment of outcomes led to improvements in services provided to students by this program?

As the division assesses the needs of the learners and students, we make incremental yet significant progress toward more effective programming. We learn that not everyone is able to understand how to navigate the college systems and we must provide intimate support at times to employers and learners to help them simplify processes.

4.4 How has assessment of outcomes led to improvements in student learning and achievement?

There is clear evidence the outcomes that are now in place have impacted learning and success. For example, all employer supported learners have continued their education according to records kept in the division office. Students come to take specific courses for work as well as programs for certificate

and degree completion. Connecting students to work while they attend school will have great benefits to the regional economy.

Five years ago, we did not have clear program web pages, we did not have computer labs, we did not have adult chairs and tables, we did not have as much equipment and software that we have today. All these improvements have helped the completers to see wage gain and improved employment. We receive these data reports from the Center of Excellence.

4.5 What challenges remain to make your department/office outcomes more effective?

The division is still a long way from having services, data, technology and systems, safe and secure classrooms that match the requirements for 2025 and beyond. If the division or college had a school-to-work department as large as the counseling department, we could begin to make real plans for much greater effectiveness for learners. The faculty, staff and division office work within their means to connect learners to work and employers to learners.

4.6 Describe how the department's/office's outcomes are linked to [college goals](#).

The division works to provide access to high quality technical education programs to all our learners.

The division absolutely delivers workforce training. The division works within the community and region with partners to execute the best learning programs possible based on need.

The division encourages field trips, work-based learning, and guest speakers to talk to our learners about education and work. The division hires individuals who are certified and have recent occupational experience to deliver the curriculum.

The division office works tirelessly to find spaces for instructors to deliver lab (real world) based activities to instill teamwork, problem solving, critical thinking, and cooperative work as the learners would experience at in the work environment.

Members of the division track and support student progress when standard systems do not allow for monitoring progress.

The division has a diverse set of departments with caring instructors of various academic and technical backgrounds. Some members of the division are veterans, and others professional prepared technicians or engineers who are certified or licensed in their field. The division, faculty and staff help and support learners when the learners need assistance. There is a mini food pantry in the welding department. The division has developed equipment check-out and loan (use) of equipment when learners have challenges with financial aid. The division works to support students who do not speak English as a first language by finding individuals to aid in communication so they can better navigate the college. When students struggle, the division responds because the members of the division are accountable. There is no measure for all these supports, there are many. Every learner has basic needs, and the division works to support basic needs where it is possible, which includes safety and security. Learners who are violators, those that bully, or call names are immediately removed and processed so that the learning environment always remains as expected, professional.

4.7 Describe how the department's/office's outcomes support the achievement of the [institution level SLOs](#).

The division supports SLO's this level by providing support to learners and faculty to have the learning environments they need for critical thinking, creating, and learning. In addition, the division supports individual learners who might find challenges such as where to obtain resources, or how to access someone who is able to help them if the division office cannot. The division supports learners to be advocates for their education.

4.8 A. What methods are used to assess the department/office's effectiveness to the population that interacts with your department/office?

The members of the division gather information and solve problems for faculty and students. Through this process the division makes improvements and requests resources or directs a need to where the support is available. The effectiveness of solving the large challenges in the program review have not been precisely measured. For example, the computer lab implementation across the division was successful. Requesting additional faculty and classified staff for the division was not successful.

B. What do the results of the above methods of assessment indicate about the effectiveness of the department/office?

The division office must solve any number of problems quickly and effectively everyday hour by hour. The members of the division service area must be creative given the resources we have. The current challenge with staffing in the division and across the college is that not all people can respond rapidly. For example, if something is not working, the division members often must find a rapid solution to keep the faculty and the learners in business. Because the college is an enterprise consisting of many systems, not all problems are able to be solved without the support from other areas.

C. How were the assessment results used to make improvements to services provided by this department/office? Please provide examples.

The division used feedback from faculty, staff, students and outside stakeholders to understand where we lack structure and effectiveness. We gain an understanding of where to improve.

Areas included improvements to computer access and software. Improvements to outside stakeholders include better communication and providing clarity about the college promise, direct billing, scheduling and more. During the pandemic we pivoted and created a high flex classroom, drive thru accommodations for learners, more equipment that was able to be loaned and more. These things were not planned, we had to assess quickly and get results.

4.9 At least one outcome listed in 4.1 should address the following:

A. List the outcome that focuses on individual student learning or actions.

The increase in computer and software had a direct impact on the number of students who have been able and continue to be able to use these necessary tools. We also know we have increased the number of students who have employer supported education benefits.

B. Identify methods to assess outcomes in such a way that the data can be disaggregated.

When we can get the data that is coded properly, we can disaggregate by program, and any other element that is in the data base. So, we can look at program success, we can look at employment and more.

C. Identify a process for using outcome assessment data to improve your department's/office's services.

We used scheduling data to determine the need for additional computer labs. With the additional labs we were able to schedule so that coordinators could build schedules that now better meet learner needs. For example, we can now schedule three construction classes on the same night at the same time so students and instructors can get on a common schedule. To be clearer, a working person wants a schedule to be consistent such as every Thursday night. In the past, because we had a lack of computer spaces, we had to schedule at times that were not consistent.

D. Identify a process for assessing outcomes and collecting data that can be used to build dashboards (where applicable).

It would be fantastic to have an incumbent worker dashboard. If learners would identify who their employer is when the register, we can tap into more resources and more people to build support for the learners. We have some data from our alumni tool, but it is after the fact data and cannot be considered real time data, it is often 3-5 years old.

4.10 Outcomes Equity Analysis

A. Looking at the one outcome from 4.9, do you find significant differences by race, ethnicity, gender, and other categories? Describe here what the data shows. What strategies will you use to close the attainment gaps among groups of students? What kinds of professional learning would help?

There are significant differences across the division as indicated through our core indicator reports in data mart. <https://misweb.cccco.edu/perkins/main.aspx> . Strategies that we use are found in Perkins Projects. For example, the division supported a non-traditional (gender) project in the automotive department. The result was an increase in female participation in the program. We use the data and the Perkins funds to develop strategies to make improvements to core indicators.

5.0 Evaluation of Progress Toward Previous Strategic Action Plans

5.1 List the strategic action plans from your last self-study/program review.

In summary:

Maintain staffing levels of division office at the same level and increase direct support positions in areas that have positions under 100%.

Outreach and student recruitment.

Develop a program guide for the division programs.

5.2 Describe the level of success and/or progress achieved in the strategic action plans listed above.

The division was able to move two classified members from 11 month to 12 month employment. There are three positions remaining that are less than 12 month employment which causes limitations to service areas.

The division hired a CTE coordinator. The coordinator worked with faculty and deans across the college to conduct outreach activities. Events and activities included high school outreach, CTE days on campus, manufacturing month, a booth at the farmers market in Fullerton, and a large number of requests from the community.

The development of a guide turned into an entirely new web site for all CTE programs at Fullerton College. SWP marketing funds were used to create a web landing page for all CTE programs with links to specific program information. In addition, a phone number was added to take calls regarding the CTE programs.

5.3 How did you measure the level of success and/or progress achieved in the strategic action plans listed above?

The division was able to move two positions to full time status. This has increased coverage hours in cosmetology to provide better support for the department.

The outreach activities were tracked and assessed. We could look at the following data:

Number of participants

High School Faculty

Program interest frequency – we learned which programs were the most popular with visitors

We conducted about five zoom outreach activities which were poorly attended. This told us potential students do not want to talk about CTE programs on Zoom, they want to see the spaces and hear from the instructors.

We collected names and emails from the farmers market to follow-up with more information.

We collected the information from phone calls and collected information on returned calls.

We collected information from the new CTE web site. We analyzed clicks and we were able to share the information with faculty and some stakeholders.

As we collected job information it was shared with faculty and students. Some programs started a job board in the classroom.

5.4 Provide examples of how the strategic action plans in the last cycle contributed to the continuous quality improvement of your department/office.

The activities helped us to learn where the gaps are. We also learned where we can potentially gain more learners. We learned that we still need to improve how we interface with business and industry. We learned faculty are extremely busy and have little time to visit high schools and attend outside events. We learned having CTE support help increased the amount of information and the quality of

information that faces the public. We learned our systems are at times challenging to get the data or supports we need. The simple task of building and maintaining web pages is a full-time job yet we do not have full time support in this data rich part of our enterprise.

5.5 In cases where resources were allocated toward strategic action plans in the last cycle, how did the resources contribute to the improvement of the department/office?

All the fiscal resources were secured through Strong Workforce Funding. Without the funding there would be little to no improvement. At best we would try to maintain the past systems. The fiscal and human resources were essential to all the improvements.

5.6. If funds were not allocated in the last review cycle, how did it impact your department/office?

The last cycle was impacted by the pandemic.

6.0 Strategic Action Plans (SAP)

Using the tables below, list the strategic action plans (SAPs) for your program. These plans should follow logically from the information provided in the self-study. Use a separate table for each SAP.

SAPs for this three-year cycle:

STRATEGIC ACTION PLAN # 1		
Strategic Action Plan Name:	Facility development for the future.	
List College goal/objective the plan meets:	College Goal #:4 Objective #:2	
Briefly describe the SAP, including title of person(s) responsible and timeframe, in 150 words or less.	The dean and faculty will present a proposal of how technological change will impact the diminished effectiveness of facilities that are outdated and not serving the learners as other college districts. The team to work on this will be the dean, faculty, institutional research, college president and chancellor and potential board members.	
What <i>Measurable Outcome</i> is anticipated for this SAP?	We will examine other institutions that planned and made facilities improvements for CTE areas and get the data on student enrollment, jobs, and the related costs for such improvements.	
What specific aspects of this SAP can be accomplished without additional financial resources?	Faculty and administrators as well as institutional researchers will find programs of excellence and learn from other leaders. Faculty, administrators and researchers will travel to these places and interview faculty and administrators regarding their goals for student learning. In some cases we can use Zoom to reduce travel costs.	
If additional financial resources would be required to accomplish this SAP, please complete the section below. Keep in mind that requests for resources must follow logically from the information provided in this self-study.		
Type of Resource	Requested Dollar Amount	Potential Funding Source
Personnel		
Facilities		
Equipment		
Supplies		

Computer Hardware		
Computer Software		
Training		
Other	\$15,000 (annual)	
Total Requested Amount	\$45,000	The dean will work to find the funds. SWP or economic development

STRATEGIC ACTION PLAN # 2

Strategic Action Plan Name:	New Full-time faculty	
List College goal/objective the plan meets:	College Goal #: There is no goal in to support a request for new faculty. The work of the faculty supports each goal of the college. Objective #: Each objective	
Briefly describe the SAP, including title of person(s) responsible and timeframe, in 150 words or less.	The faculty and dean will present an annual argument to hire full time faculty across the division. The argument will challenge the college and district to use other funding sources to hire technical education faculty.	
What <i>Measurable Outcome</i> is anticipated for this SAP?	Hire cosmetology, cinema/film, hire construction, hire architecture/interior design.	
What specific aspects of this SAP can be accomplished without additional financial resources?	This SAP will require funding. The scope of the effort is to find new ways to secure human resources. The current methods do not work.	

If additional financial resources would be required to accomplish this SAP, please complete the section below. Keep in mind that requests for resources must follow logically from the information provided in this self-study.

Type of Resource	Requested Dollar Amount	Potential Funding Source
Personnel	\$800,000	District /state revenue
Facilities		
Equipment		
Supplies		
Computer Hardware		
Computer Software		
Training		
Other		
Total Requested Amount	\$800,000	Public, private and program revenues

STRATEGIC ACTION PLAN # 3

Strategic Action Plan Name:	Build clearly defined methods that connect business, industry and the college into a collaborative mutually beneficial structure to support learner success.	
List College goal/objective the plan meets:	College Goal #: 3 Objective #:2	
Briefly describe the SAP,	The dean, an employer engagement director and the office staff will	

including title of person(s) responsible and timeframe, in 150 words or less.	engage more employers who wish to strategically partner to grow a high quality technical workforce in our region. The partnerships will have access to information and resources that allow all parties to support learners in their pursuit of education and family sustaining wages. This effort will need to be ongoing. Within the first year there must be at least three partners that have a direct relationship with the college that includes coding and tracking of learners.	
What <i>Measurable Outcome</i> is anticipated for this SAP?	We want to see how school and employer support contribute to student success. Success will be defined as course and program completion, learner satisfaction, student debt avoidance, and employer satisfaction.	
What specific aspects of this SAP can be accomplished without additional financial resources?	The division will need support and funds to develop the information, the assessments and to support areas of the college that may be impacted with more work. This is a good application of employer engagement fund and regional SWP funds.	
If additional financial resources would be required to accomplish this SAP, please complete the section below. Keep in mind that requests for resources must follow logically from the information provided in this self-study.		
Type of Resource	Requested Dollar Amount	Potential Funding Source
Personnel	\$220,000	Strong Workforce/EWD
Facilities		
Equipment		
Supplies		
Computer Hardware		
Computer Software		
Training		
Other		
Total Requested Amount	\$220,000	

7.0 Long Term Plans

Describe the long-term plans (four-six years) for your program. Please consider future trends in your narrative. Identifying financial resources needed for these plans is optional.

Over the next four to six years the division will see another significant increase in retirements. The district should be planning for replacements now. In addition the technical facilities will continue to be outdated and our peer institutions will surpass Fullerton College in CTE delivery. The future in our region is contingent upon technological change. There is no plan in place that supports learning programs when new laws are passed or new technologies adopted. A college learning program must be creative in how they will keep pace with these changes. For example, California has passed legislation to rid the state of gasoline automobiles in 2035. What is the plan for our campus when such a law will be eased into effect over the next 12 years? The leadership of the college has to see these impacts and determine if the college will or will not continue to have learning programs in these areas. Buildings will also have to be energy neutral in 2035. Is there a plan on how to move forward over the next 10 years to address these changes? If the college would respond to all changes, not just some changes faculty in the career area classes would feel supported. The is the feeling a double standard exists and that the college is districted by a few.

There are two huge impacts that are hitting the technology and engineering division. 1. A lack of full-time faculty. 2. Technological change and government policy that will change how we deliver and teach technical education.

7.1 Describe in detail your need for additional resources as listed above (if applicable)

The college and district will need to put a plan and resources in place to support the education and employability needs of the community. This must be considered an investment. It would be supported by community members outside the college. The college needs an advisory board.

8.0 Self-Study Summary

This section provides the reader with an overview of the highlights, themes, and key segments of the self-study. It should not include new information that is not mentioned in other sections of this document.

The technology and engineering division strives to improve how instruction is delivered that leads to measured learner success. The effectiveness of the division office was able to pivot during the pandemic to support the division in new ways. We know the k-12 population in our district is declining. We know our services must be extended to a greater portion of the community. We know college students are taking on more and more debt. It is in our best interest to building relationships with community partners that support learners, provide learners income and pay for their education.

The division suffers from a lack of full-time faculty in key areas. The district will need to hire faculty soon before the next round of significant retirements that will occur between 2024 and 2027. Engaged faculty are the key to the future programs of the college. The college should examine ways to become more efficient to allow for the increase in CTE human resources.

The college must account for the impact of technology on technical preparation programs. Fullerton College has excellent faculty and is well connected to the community. The district needs to develop a technology plan (not a computer technology plan) that moves the college twenty-five years forward. The plan must include new space, new infrastructure, funding and support to have an effective college from 2030 to 2040.

9.0 Publication Review

Fullerton College is committed to assuring integrity in all representations of its mission, programs, and services. As such, during the program review self-study process departments/offices are required to document their publications (websites, brochures, magazines, pamphlets, etc.) that are used to promote programs and services to the campus community and community at-large. This review should specify when the publication was last reviewed, if the information in the publication is accurate, and if the information correctly represents the college's mission, programs, and services.

Information on the college's graphic standards is available here: <http://news.fullcoll.edu/campus-communications/web-help/graphics/>.

In the far-right column please provide the URL where the publication can be accessed. If it cannot be accessed via the Internet, please provide a sample of the publication with your program review self-study. If you have any questions about what type of publication should be included, please contact Lisa McPherson, Director of Campus Communications at lmcpheron@fullcoll.edu.

For publications that you have identified as inaccurate, please provide the action plan for implementing corrections below.

Publication	Date last reviewed	Is the information accurate?	URL of publication
Technology and Engineering Web site.	2022	yes	https://cte.fullcoll.edu/

Routing & Response Page

Originator → IMS → Program Review Chair → Appropriate President's Staff Member

Originator: *Electronically submit completed Program Review to Division Dean/IMS for review.*

Appropriate Immediate Management Supervisor (IMS): *Select one and provide response if necessary. Forward electronically to appropriate Vice President's Office.*

RESPONSE

Kenneth Starkman

Dean

Feb 16, 2023

Printed name of IMS

Title

Date

I concur with the findings contained in this Program Review.

I concur with the findings contained in this Program Review with the following exceptions (include a narrative explaining the basis for each exception):

Area of exception:

I do not concur with the findings contained in this Program Review (include a narrative explanation):

Appropriate President's Staff Member: *Print Program Review, sign, and route both hard copy and electronic version to Program Review Chair.*

ACKNOWLEDGING RECEIPT

José Ramón Núñez



Vice President, Instruction

Feb 16, 2023

Printed Name

Signature

Title

Date



Fullerton College Mission Statement

MISSION

Fullerton College advances student learning and achievement by developing flexible pathways for students from our diverse communities who seek educational and career growth, certificates, associate degrees, and transfer. We foster a supportive and inclusive environment for students to be successful learners, responsible leaders, and engaged community members.

VISION

Fullerton College will transform lives and inspire positive change in the world.

*Approved by Fullerton College
President's Advisory Council and
accepted by President Schulz
May 2017.*

VALUES

Community

We promote a sense of community that enhances the well-being of our campus and surrounding areas.

Diversity

We embrace and value the diversity of our entire community.

Equity

We commit to equity for all we serve.

Excellence

We honor and build upon our tradition of excellence.

Growth

We expect everyone to continue growing and learning.

Inclusivity

We support the involvement of all in the decision-making process.

Innovation

We support innovation in teaching and learning.

Integrity

We act in accordance with personal integrity and high ethical standards.

Partnership

We work together with our educational and community partners.

Respect

We support an environment of mutual respect and trust that embraces the individuality of all.

Responsibility

We accept our responsibility for the betterment of the world around us.