



Fullerton College Program Review and Planning Self-Study for Instructional Programs Fall 2021

Statement of collaboration

The program faculty members 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 program faculty involved in the comprehensive self-study.

Participants in the self-study

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Authorization

After the document is complete, it must be signed by the Principal Author, the Department Coordinator, and the Dean prior to submission to the Program Review and Planning Committee.

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A Note on terminology

“Program review” is the blanket term for all parts of this process. This document is a comprehensive “self-study.” Fullerton College defines “program” as a course of study leading to a degree or certificate. A department may contain more than one program. With consultation with the Program Review and Planning Committee, a department may decide to write a separate self-study for each program within its department.

1.0 Executive Summary (Please write this section last, but include it here at the front of the self-study, on a page all by itself.)

The Fullerton College Automotive Program has accomplished a lot since the last self study of 2017/2018. Three of the four strategic action plan goals were completed with significant progress towards the fourth strategic action plan goal. All courses have been reviewed and revised through the curricunet process. The department has completed the institutional directive of curriculum mapping for all degree and program certificates. The automotive department faculty are currently revising the PSLO’s in collaboration with the guided pathway committee.

The automotive program has increased its program awards and degrees since the last program review. The faculty continue exploring innovative ways to increase student success and retention, both of which have been impacted by the Covid 19 Pandemic. Four out of five instructors have completed the Online Teacher Certification Course and collaborated with each other and with other departments to enrich the Online learning experience for the automotive students. All automotive courses are state approved for in-person, online, and hybrid delivery mode.

Reducing the achievement gap for our Latinx automotive students is addressed in our new strategic action plans. Specifically, the proposed strategic action plan two addresses the needs of English Language Learner students and will bring inclusive and equity minded technology to our classrooms to help close the achievement gaps and help students attain course success. Our proposed strategic action plans also address program facility needs that are recommended by the Automotive Advisory Committee and substantiated by the Orange County/Los Angeles County Center of Excellence Labor Market research.

The Fullerton College Automotive is looking towards the future in automotive technology by developing and implementing new courses on the latest hybrid, electric, and alternative fuel vehicle technology. By planning for the future, the automotive program at Fullerton College will remain relevant and a first choice for students to begin or enhance their career in the automotive industry.

2.0 Mission

Please explain briefly how your program contributes to the College's mission, vision, core values, and goals. Highlight any new contributions since your most recent self-study. If your department has a mission statement, please share it. If not then please consider discussing one with your colleagues.

The Fullerton College Automotive Program courses offer students educational and career growth, certificates, degrees, and transfer units towards a four-year college or university. There are eleven state approved program certificates and an A.S. Degree available for students to earn and attain. All of these transform a student's life by preparing them for employment in the essential automotive industry.

3.0 Students

Because there is a nearly infinite amount of student data that can be studied, please focus your analysis on the trends that stand out. The Office of Institutional Effectiveness (OIE) is providing data that will help you zero in on bottlenecks, gateways, and student equity issues. As per accreditation standards, OIE data will be broken down by race, ethnicity, gender, and other demographic categories. One of the purposes of this section is to identify inequities and make plans to remedy them.

3.1 Enrollment demographics

1. Using the data provided by the OIE, briefly describe the enrollment trends in the program over the past five years.

The data provided by the OIE show a decrease in enrollment over the past five years. In the first two reporting years of 2016 - 2018, the enrollment had very little variation. Enrollment dropped significantly in 2018 – 2019. It then increased significantly between 2019 – 2020. From 2020 – 2021 enrollment again decreased because of the Covid-19 Pandemic causing a shift from on-campus learning to online learning and a temporary suspension of courses that require a significant amount of in-person lab in the curriculum content. Specifically, AUTO 70 and 73 were cancelled because the lab portion is a component that could not be performed by the students because of the remote learning directive from the district. In addition, the enrollment data indicates that unique student enrollment did not significantly decrease, but rather students enrolling in multiple automotive courses did because some classes were not offered in the schedule as mentioned previously in this overview. The largest enrollment decrease over this five-year period was in our gateway course that also serves as an elective course for non-automotive program majors. This decrease in the automotive gateway course enrollment is a result of the overall drop in Fullerton College enrollment during the pandemic because many non-automotive majors enroll in AUTO 131 as a CSU transferable elective credit course. Four automotive courses during the pandemic show increased enrollment since Spring of 2020 during which the Pandemic began disrupting on campus course offerings. The automotive courses showing increased enrollment from AY 19/20 – AY 20/21 are AUTO 55, AUTO 81, AUTO 82, and AUTO 84.

2. Using the data provided by the OIE, describe the student population the department serves. Do you have a way of determining which students are majors, for example through a gateway course? Please explain.

During the AY 20/21, The OIE data indicates all race and ethnic groups are enrolled in the Fullerton College Automotive Program except for American Indian/Alaskan Native. The largest ethnic group enrolled in the automotive program is Latinx at 63.3%. Age group 20-24 years comprises 41% of the automotive student enrollment. 84.9% of all automotive enrolled students identify as male, 11.5% identify as female, and 3.7% identify as other than male or female. Of all the automotive students, 88.7% of males identify as Automotive Technology Majors and 8.1% of females identify as Automotive Technology Majors. The automotive department received funding to recruit non-traditional students to the automotive program since the last program review. We are devoting planning, resources, and funding to increase the enrollment numbers of female and LGBTQ students in the Fullerton College Automotive Program.

Additional data concerning Automotive Technology Majors show the following student populations represented: Special Admit Students 12%, Fulltime Students 37%, College Grads 4%, DSS Students 9%, Foster Youth 1%, LGBT Students 4%, Low Income Students 86%, Veterans 2%. OIE data indicates the academic goals of the Automotive Technology Major Students are A.S. Degree with transfer 54%, Certificates of Achievement 22%, and Career Development 8%. The gateway course for Automotive technology at Fullerton College is AUTO 131 Automotive Fundamentals. When all offered automotive courses are compared individually, AUTO 131 has the highest total enrollment each semester over the last five academic years. However, the OIE data does not indicate how many of these students are automotive majors.

3. Which classes have the highest demand and why? Are they offered regularly -- at different times of the day and week, in different formats (in-person, on-line, hybrid)? Please explain.

AUTO 131 Automotive Fundamentals is the automotive course in highest demand. It is offered Mondays thru Saturday in the morning, afternoon, and evenings. It is a required course for the A.S. in Automotive Technology Degree and multiple automotive program certificates. This course also satisfies elective credit for GE A.A. degrees and transfers as a CSU elective credit. The transferability to CSU makes this course desired among non-automotive technology majors. Since Spring of 2020, AUTO 131 has been offered online and as a hybrid course. The OIE data also indicates that AUTO 60, AUTO 65, AUTO 82, and AUTO 83 are in high demand by students because they are requirements of multiple automotive program certificates.

4. Please describe how course offerings match students' preparation and goals.

Courses offered during the days are those courses required for the A.S. in Automotive Technology Degree and most automotive program certificates. The OIE data shows 54% of the automotive major students have a goal of and A.S. Degree and 22% are actively pursuing automotive program certificates. Offering these core classes during the day and each semester matches student goals and objectives as identified in the OIE data. The AUTO 55 course offering was moved from evenings to days beginning in AY 2019. This schedule change increased enrollment in each academic semester since and will help increase the completion rate of the

Automotive Business Management and Automotive Service Advisor Program Certificates. All students can enroll in evening course offerings, but they are popular with students already working in the automotive industry who seek career development and enhancement. The OIE data indicates 10% of enrolled students have an educational goal of career development.

5. Does enrollment vary by semester? Please describe how course offerings are adjusted to meet student demand and help students reach their academic goals.

Enrollment is nearly identical for Fall and Spring semesters over the past five years. The OIE data shows only a difference in six students between Fall and Spring semesters over the past five years. Additional course offerings in the summer session have been offered periodically over the last five years. AUTO 131 is offered in the summer as a gateway course to assist incoming students with general knowledge to prepare them for advanced classes in the Fall semester. AUTO 65 was offered in two summer sessions over the past five years. This course is a foundational course that will also prepare incoming students for advanced courses in the Fall semester.

3.2 Student Achievement and Equity (and student demographic profile)?

1. Using the data provided by the OIE, briefly describe student achievement rates in your program over the past five years: completion, success, degrees/certificates, transfer, licensing, job placement, wage improvements (not all of these measures apply to every program).

The OIE data indicates a reduction in local program certificates and an increase in state approved certificates. This reflects the changes made to the automotive program certificates in which all automotive certificates are now state approved and generally have a higher unit count. This higher unit count will require more classes to be completed in the AY 20/21 and beyond. The automotive department will most likely show an increase in student awards, increased enrollment, and a higher completion rate based on the program certificate and A.S. Degree course requirements. The OIE data shows AY 20/21 as the second highest for A.S. in Automotive Technology Degrees being completed and the second highest in state approved program certificates over the past five years. The A.S. Degree and State approved certificate completion both increased from academic AY 19/20 to AY 20/21. In fact, the State approved certificate completion is now over twice the number of local certificates at the conclusion of this five-year OIE data reporting time frame.

2. Please pay special attention to equity issues -- where a group of students has an achievement rate that is below average. What factors can explain this?

OIE data shows achievement gaps in course completion and course success among Latinx, Non-LGBT, and Non-Veteran students. This achievement gap could be caused by the fact that Latinx student population is significantly larger than any other ethnic group and therefore, a larger number of students not receiving degrees or certificates may appear. Non-LGBT and Non-Veteran student populations are also significantly higher than the groups they are compared to. However, the OIE data shows that all three of these student population groups with achievement gaps show completion rates at the 80% level and above. The Latinx student

population achievement gap may also be attributed to language barriers. The proposed strategic action plans address solutions to this factor and achievement gap.

3. Does the department have regular discussions about equitable grading, attendance, late work, and extra credit policies, or about other strategies for helping students succeed? Could reforming classroom policies help more students succeed? Please explain.

The Automotive Technology Department faculty and staff meet during the semester flex-day sessions to discuss equity gaps, strategies to improve success and completion rates of students, inclusion, and teaching methodologies to help all students reach their protentional and be successful. During the Pandemic, the automotive faculty have shared ideas concerning the use of Canvas LMS to create a uniform pattern that a student would experience when enrolled in multiple automotive courses at the same time. Developing and implementing standardized policies for late work and extra credit could prevent students from withdrawing from the courses and attempting to catch-up throughout the semester to become course completers. This idea will be explored and discussed in future department meetings.

4. Please write a brief Equity Action Plan. What strategies can you implement to close this gap in student achievement within the next five years? What professional learning, curriculum development, or other forms of support does your department need?

The Automotive Department Faculty could enhance the success rate of students and reduce the equity achievement gaps by attending professional learning workshops pertaining to the student populations deemed lower achieving by the OIE data. We should then discuss strategies learned in workshops and uniformly implement them in our courses. The Automotive Department faculty can start by surveying our students pertaining to their hardships faced in life while attending the automotive program. Understanding the individual barriers or shared barriers of our population groups with achievement gaps may help us create standardized policies to help these students overcome and reach success.

3.3 Student Achievement and Pathways

1. Using the data provided by the OIE, briefly describe how students have moved through the program over the past five years: unit accumulation, prerequisites, corequisites, substitutions, gateway courses, and bottleneck courses. (Not all of these measures apply to every program.) The OIE data shows the highest automotive program enrollment numbers and percentage being in AUTO 131 which is our gateway course. After this gateway course completion, it appears that the students are enrolling in advanced automotive courses at Fullerton College. Over the five-year period reflected in this OIE data, there have been 992 student enrollments in AUTO 131 compared to 1,670 student enrollments in the other automotive courses combined. This data indicates we are retaining our initial gateway students and attracting students enrolling directly into advanced automotive courses. Currently, our gateway course is an advisory course. The only automotive courses with prerequisites are AUTO 50, Auto 70, and AUTO 73. AUTO 131 listed as an advisory prevents bottlenecking of students at a gateway level. In many cases, students enrolling immediately after high school have already completed ROP automotive programs in grades 9-12.

2. For transfer degree programs: Are your current requirements in line with the Transfer Model Curriculum, or have you added extra steps, such as prerequisites? If you added extra steps, please explain.

The Fullerton College Automotive Technology Program is aligned with the AA GE Transfer Model Curriculum with no extra steps added.

3. Please provide an update on the curriculum mapping you have done, perhaps in collaboration with Counseling. Are all programs (degrees and certificates) mapped? Based on course offerings for the last two to three years, could a student complete the map(s) you have created? If so, please demonstrate this with some facts from your schedules. If not, how will you address these discrepancies?

In collaboration with the Fullerton College Counseling Department and Guided Pathways Committee, the Automotive Department has completed all curriculum maps for the A.S. in Automotive Technology Degree and the eleven program certificates. All courses required of these program awards and degree are currently offered and all students enrolled can pursue and complete them. The maps are specific to the semester a course, or courses, are recommended to be completed because some classes are offered every other semester. However, the Automotive Service Advisor Certificate requires CIS 148 that is no longer offered in the schedule. The CIS Department chair recommended replacing this course with CIS 100 which we will do through the Curricunet Program revision process.

4. Do the data reveal differences among your AA, ADT, or certificate programs (in enrollment, completion, or success, for example)? Please explain.

The Fullerton College Automotive Department offers an A.S. Degree that transfers as lower division credit towards the four-year Bachelor's Degree in Automotive Technology offered at Rio Hondo College.

The OIE data reflects a near identical A.S. and state approved certificate completion rate. This is because many of the state approved certificate are designed to be completed as the requirements for the A.S. degree is completed. In addition, the number of local certificates completed are much fewer than the state approved certificates. This is because the certificates were revised during the five-year reporting period to be state approved and recognized on the student transcripts. The increased course work and unit count on these revised program certificates will better prepare the students for industry employment. Asian students have a nearly equal course success rate as White students but have less enrollment numbers when compared to white students. The Latinx student population has the largest enrollment numbers and the highest achievement gap in course success. However, the percentage of Latinx students experiencing course success is not the lowest among the student groups represented. The lowest success percentage is the unknown ethnic/race/ancestry student population.

3.4 Faculty

1. Using the data provided by the OIE, briefly describe the faculty workload over the past five years: FTF (full-time faculty), PTF (part-time, or "adjunct" faculty), FTEF (full-time equivalent faculty), WSCH per FTEF (weekly student contact hours). (Not all of these measures apply to every program.)

The OIE data shows that Fulltime faculty are teaching 93.3% of the automotive sections. This percentage rose from 61.8% in AY 16/17 to 93.3% in AY 20/21. This increase in section teaching by fulltime faculty is a result of hiring a 5th fulltime instructor in AY 17/18. The faculty WSCH has decreased slightly starting in AY 17/18 and is also because of the addition of a 5th full time instructor in AY 17/18.

2. If your department plans to request hiring a full-time faculty member, this is the place to make the argument. Please discuss hiring needs in reference to data analyzed in sections 3.1 to 3.4. Currently, the Automotive Technology Department has no plans to request an additional fulltime faculty member. In the event of a retirement of any of the current faculty members, the Automotive Technology Department will request that a fulltime faculty instructor(s) be hired to replace the vacated position(s).

3.5 Covid-19

Using the data provided by the OIE, briefly describe how the Covid-19 pandemic affected your department and how your department has adjusted. Did you make temporary changes? Or have you adopted new, long-lasting practices that enhance teaching?

As reflected in the OIE data, automotive student enrollment has declined since AY 19/20 during which the pandemic lockdown and remote learning practices began. To maintain enrollment, all automotive faculty began a rigorous transition to remote learning using the Canvas LMS system starting in March of AY 2020. Four out of five fulltime instructors became Online Teacher Trained and Certified. The Automotive Department's active adjunct instructor also obtained Online Teacher Training and Certification. All automotive courses were initially conducted under the temporary emergency online addendum but have now been revised and officially state approved for in-person, online, and hybrid modes of delivery. During AY 2021, a few automotive courses were conducted in a hybrid learning format. The Automotive Dept Faculty have shared techniques and ideas for using Canvas in the most effective way for students to learn.

3.6 What has not been asked?

Please tell us about other ways your department has been successful, ways that the previous questions might have missed.

During the pandemic, the Automotive Department devoted funding to purchase equipment such as Go Pros to help us record instructional videos for students to view on Canvas. We collaborated with the Fullerton College Library to support us with educational videos accessible as "Films on Demand" which could be uploaded to our Canvas Modules. This collaboration with the Fullerton College Library also provides a limited number of electronic copies of textbook chapters that students could use while awaiting financial aid to purchase books. We also

encouraged and assisted students to request Loaner Laptops for online learning through a program provided by Fullerton College.

The AUTO 55 Automotive Business Management instructor also collaborated with the Fullerton College Academic Computing Technology Department to provide the automotive students with remote access to the automotive classroom desktop computers. Being able to log in remotely to the automotive campus computers allows the students to utilize software and programs unique to the automotive courses and assists with remote classroom activities and lessons.

4.0 Outcomes

4.1 Program Student Learning Outcomes (PSLOs)

Since the last self-studies, the College adopted new Institutional Student Learning Outcomes (ISLOs) and new design principles for PSLOs. Please describe your department's PSLO revisions to date, and your PSLO plans.

Beginning in AY 19/20, a full time Automotive Faculty Member attended PSLO redesign training and began the process of reviewing and revising the automotive PSLO's. Currently, the A.S. in Automotive Technology Degree, Automotive Technology Certificate, and Automatic Transmission Specialist Certificate PSLO's have been revised and submitted for approval. The Automotive Department expects to complete and submit the remaining 10 PSLO revisions by the end of the Fall 2021 semester.

4.2 PSLO Assessment

The new PSLO design principles encourage departments to use PSLOs as a way of gauging student learning once they have completed a degree or certificate, not just when they have completed a single course. Please describe how PSLOs are assessed or will be assessed in your department.

The redesigned PSLO's will assess students through their applied automotive skills on course projects, adherence to safe work habits, and communication of skills performed on industry recognized documents. The skills performed will be derived from the combination of required courses for each distinct automotive program.

4.3 CSLO Assessment

Briefly describe the timeline your department uses to assess CSLOs on a regular basis and how you use the results to make improvements. This discussion should be based on SLO data, which is available on Elluminate. (Your division's SLO reps can help with this.) Please include relevant CSLO charts or graphs in an Appendix. Since the last self-study, you should have assessed the CSLOs of every course that you have taught, at least once. If that is not the case, please describe how you will accomplish this as soon as possible.

At this time, the Automotive Department does not have a systematic procedure, coordinated effort, or schedule to assess Course Student Learning Outcomes (CSLO). Each instructor adjusts the CSLO's assessment activity as each semester progresses and is aided by the various and

everchanging lab activities that are unique to each semester. Each instructor uses the assessment results and associated reflection entry to determine patterns of deficiency and success among the student results. A course of action to improve the success rates is planned before the next assessment is given.

Since the 2017/2018 Program Review Self-Study was completed, the automotive department CSLO assessment data reflects three courses that have assessed all CSLO's and two courses with all but one CSLO assessed. Most of the other automotive courses have completed at least one CSLO assessment since 2017/2018 with exception of courses assigned to adjunct instructors, courses taught every other semester, and a few fulltime faculty courses offered each semester that were cancelled for low enrollment. All automotive courses have been revised through the Curricunet process since the last program review with many of them incorporating revised CSLO's. It appears that the CSLO's listed in Elumen may not be consistent with the current CSLO's listed in curricunet for each recently revised course and could affect the completion data. Another contributing factor in the deficiency of CSLO assessment is the Covid 19 pandemic and the subsequent transition to remote learning. The remote learning environment was not deemed effective for AUTO 70 and AUTO 73 due to the high amount of lab activity in the curriculum. This caused these two courses to be removed from the class schedule beginning in Fall 2020 and continuing at the time of this 2021/2022 Program Review Self-Study.

To become more effective in conducting the CSLO assessments, the Automotive Department will review and correct the CSLO listing in Elumen with the Curricunet information. An automotive department plan and timeline will then be developed to conduct the CSLO's regularly to ensure that all are conducted within the time frame leading to the next Program Review Self-Study. The Automotive Department will also retroactively enter CSLO assessment data from the academic years from the 2017/2018 Program Review through the current 2021/2022 Program Review in the event assessments were completed, but not recorded by an instructor in Elumen.

4.4 SLO Equity Analysis

1. Looking at CSLO attainment data, do you find significant differences by race, ethnicity, gender, and other categories? Please include some illustrations of this data in the Appendix. 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?

Upon review of the CSLO attainment data, it appears that a significant number of the automotive student population in all demographic groups enrolled in the Fullerton College Automotive Program are meeting expectations. The data also indicates that African American, Asian, Filipino, and Pacific Islander students have a 100% rating of meeting expectations. The student population group with the lowest percentage of meeting expectations is the "unknown" group at 83.3%.

To improve the percentage of student groups not reaching a 100% "meeting expectations" rating, the automotive department faculty will schedule assessments immediately following project completion that reinforce the skills. The automotive faculty will also consider using multiple student projects throughout the semester for the same CSLO to reinforce the skill

attainment among the students. Perhaps the automotive faculty could improve student performance by completing Specially Designed Academic Instruction Delivered in English (SDAIE) training and credentialing through the State of California Commission on Teaching Credentialing. This credential training provides instructors with methods of differentiated instruction to help students from diverse backgrounds learn and master curriculum content. Funding requests for this training may be available through the Staff Development Committee.

2. Compare the equity analysis in this section to the equity analysis in Section 3.2. Are there some groups who have lower completion and success rates AND lower SLO attainment rates than other groups? Can new departmental strategies close both gaps? Please explain. [For example, many departments found that their SLO attainment gaps are quite a bit smaller than their success gaps (or the gaps don't exist). This might mean that many students who get a D or lower in a course are actually learning the material (i.e. attaining the SLOs) but they are winding up with a failing grade for other reasons: absences, tardies, missed assignments, missed exams, poor performance on high-stakes assignments.]

The largest student population in the automotive program is Latinx/Hispanic students. This group has a high CSLO attainment of 94.52% but also shows a large achievement gap concerning course success and completion. This could be caused by a variety of reasons, but perhaps the SDAIE training or workshops on differentiated instruction by the automotive faculty could improve this achievement gap.

5.0 Other Areas of Program Effectiveness

5.1 Your Department and General Education

1. Using the data provided by the OIE, please look at students who take your courses for GE credit.

2. What role does your department play in helping students complete the GE pathway?

The automotive department offers AUTO 131 which serves as the gateway course for the automotive program awards, certificates, and degrees. This course also serves as a GE elective course for non-automotive major student pursuing an A.A. or A.S. to transfer to a 4-year university. The data in 3.1.2 of Appendix A of the Instructional Program Review by the OIE shows that in AY 2020/2021 66% of enrolled automotive students were not automotive majors. The automotive course with the highest enrollment numbers is AUTO 131. A large portion of these non-automotive major enrolled students are satisfying GE transfer credit by completing AUTO 131. Therefore, the Fullerton College Automotive Department helps Fullerton College students in their goal of transferring to a four-year college or university.

3. Do you offer GE courses at a variety of time slots and at a frequency that allows students to fulfill GE requirements?

Six sections of AUTO 131 are offered each academic semester with a summer offering of one section. This regular and frequent section offering accommodates automotive major and non-automotive major student schedules and availability.

4. Please take into account daytime, evening, weekend, and online classes to provide a brief sketch of your GE course availability.

Our GE automotive course is AUTO 131 and sections are offered in the morning, afternoon, evening, and on Saturday during both Fall and Spring semesters. AUTO 131 is offered in the online, hybrid, and in-person teaching modes. One section is offered in the summer session to also assist students with their GE transfer timeline planning.

5.2 Outside Influences on Your Department

1. Describe any laws, regulations, trends, policies, procedures, or other influences that have an impact on your program. Please include any other data that may be relevant to student achievement, learning, and trends within your Basic Skills, CTE, or Transfer Education programs. The Fullerton College Automotive Program is impacted by the California Community College Chancellor's Office Hours and Units Calculation Formula. Specifically, lab portions of our automotive courses require three hours of in class contact time compared to one lecture hour combined with two outside of class hours. This policy creates a significant log jam in classroom availability during the day and evenings and limits the ability to change class times to accommodate student class time needs and preferences. This log jam in the classroom and shop use affects the completion rate of all student degrees and certificates.

2. Make sure you are including all degree and certificate programs, including the College's GE program.

All Fullerton College degree and awards are referenced in the response to 5.1.1.

3. Please also consider not only your courses, but also prerequisite and corequisite courses that might be offered by a different department.

There is no observed direct impact of prerequisites attributed to other programs affecting the automotive program at this time.

4. If AB 705 applies to the program then how are you meeting its mandates?

Although AB 705 specifically targets English and math disciplines, the automotive department does not require prerequisites for most of its classes. In fact, only four automotive courses have prerequisites because they are linked together as a series with a basic and advanced offering in the subject matter. The automotive internship course has a prerequisite requirement designed to provide basic shop safety and knowledge prior to students seeking this cooperative education experience. All other automotive courses list advisory courses that are optional for the student to enroll in. This advisory will not restrict students with prior experience and knowledge of automotive technology from enrolling in an automotive course more appropriate for their

immediate needs. A lack of prerequisites also accelerates the time to complete and attain program certificates and the A.S. in Automotive Technology Degree.

5.3 Your Program's Active and Applied Learning and High-Impact Practices

1. The College wants to create an inventory of faculty efforts to make learning active and applied. Please briefly describe opportunities your students have to apply and deepen knowledge and skills through projects, internships, co-ops, clinical placements, group projects outside of class, service learning, study abroad, and other experiential learning activities that you intentionally embed in coursework, or elsewhere in your program.

The Fullerton College Automotive Faculty offer rigorous and relevant project-based laboratory instruction that students engage in to enhance their learning. In addition to the laboratory curriculum, the automotive faculty collaborate with the Orange County Automobile Dealers Association to conduct hiring events on campus. These hiring events bring local automotive dealership representatives to meet, inform, and screen Fullerton College automotive students for employment. Fullerton College Automotive Faculty have reintroduced AUTO 51, Internship in Automotive, to the class schedule to offer outside of class learning opportunities for the students and provide a link to industry employment. The automotive faculty also plan and lead student field trips to industry workplaces to expose employment opportunities to the Fullerton College automotive students.

2. Are there institutional barriers hindering your department's ability to offer or enhance these learning experiences for students? Please explain.

The district lab/lecture inequity also impacts the automotive program and contributes to the lack of automotive classroom and shop availability. The automotive courses require extensive lab hours. These lab hours are tallied at three-fourths of an hour of unit load credit and requires an automotive instructor to be in the classroom longer to meet fulltime unit load requirements. This limits the classroom and shop availability during the day when scheduling class availability for students. Ultimately, this hinders the completion of automotive awards and degrees.

The physical layout of the automotive program building also adversely affects the class schedule planning. Currently, the five fulltime instructors are sharing three classrooms and a lab size that is difficult to accommodate more than one class at a time. Expanding the automotive classroom and shop area could allow flexibility in class time offerings in the schedule and assist students with completion of their automotive program awards and degrees. Some students working in the industry would like to enroll in courses to expand their knowledge base, but the physical limitations of the shop do not always allow flexible class time offerings to assist these students. Non-automotive major students enrolling in AUTO 131 to satisfy CSU elective credit would also benefit from an expanded automotive building and subsequent class section offerings to help accommodate their availability to enroll.

6.0 Planning

6.1 Progress on Previous Strategic Action Plans

1. Please briefly describe the goals (Strategic Action Plans, SAPs) from your last self-study. How much progress have you made on them? If you have reached a goal, explain how it allows ongoing improvement, especially if you received additional funding.

FC Automotive Strategic Plan #1 included a request to expand the existing automotive facility to include: 12 parking spaces, a storage room, and a classroom. The ongoing progress includes the purchase of a 15ft storage cargo container to store some instructional supplies on wheels (powertrain lift table, brake lathes, brake parts washers, tools carts, car dolly etc.) within the auto shop parking area. The container is equipped with interior lighting, ventilation, roll up door, and a loading ramp. Although this container will certainly help storing some of our portable equipment, we still lack enough storage space to fully satisfy the program needs. We have not made any progress on an additional dedicated parking lot area for our laboratory units or additional classrooms.

FC Automotive Strategic Plan #2 included a request to purchase one alignment rack and two car lifts for the existing garage (automotive facility). During the Fall of 2017, two additional above ground car lifts were installed in the Fullerton College automotive lab/shop. The lifts represent two additional workstations where students perform their class projects. The automatic transmission and powertrain classes found these two lifts especially useful when removing transaxles and other long-term projects that require the removal of subframes and suspension components. In early Spring 2021, we received funding via the Strong Work Force Initiative Program (New Car Dealership High Volume Preparation) to purchase a new alignment rack. The alignment rack installation is expected to be completed by the end of November 2021.

FC Automotive Strategic Plan #3 included a request to purchase two vehicles for the existing courses. Status Completed. During the 20-21 fiscal year, The Fullerton College Automotive Department was awarded a Perkins grant for an Automotive Non-Traditional High-Volume Project. In the Spring 2021 semester, The Fullerton College Automotive Department completed the purchase of six additional laboratory vehicles that will modernize the vehicle fleet and align with the funding project purpose and request. We expect to purchase two additional vehicles by the end of 2021 with the remaining balance of our Strong Work Force Initiative Program (New Car Dealership High Volume Preparation) funding. Due to COVID 19, The Fullerton College Automotive Program had a limited onsite course offering during AY 2020/2021, however, both department faculty and students agree in the benefits of working and practicing vehicle repairs on the newer laboratory vehicles. Additionally, The AUTO 55 Automotive Business Management instructor created instructional videos using these new vehicles for the students to view on Canvas and complete interactive assignments focused on these new laboratory vehicles.

FC Automotive Strategic Plan #4 included a request to purchase Microsoft Office software for program computers. Status Completed. Due to COVID 19, collaboration between the Fullerton College Automotive Program and the Fullerton College Academic Computer Technology Department began offering Office 365 on all campus owned devices to support the remote/online instruction. Fullerton College Automotive students and faculty can check out a

laptop at the beginning of the semester and use the new and updated Microsoft software for their class assignments.

2. If additional funds were NOT allocated to you in the last review cycle, how did the LACK of funds have an impact on your program?

The Fullerton College Automotive Department received several sources of extra funding during the last review cycle. Allocations include Regional Strong Workforce (Round 2 year 2 19/20) Automotive Collaborative in the amount \$40,000.00, VTEA Automotive Non-traditional High-Volume Perkins Grant project in the amount of \$336,124, and (20-21) Strong Workforce Initiative Local Program (Round 2 Year 4) in the amount \$181,626.00 which supported the New Car Dealership High Volume Preparation Program.

6.2 New Strategic Action Plans

Please write brief, concrete plans that you will accomplish over the next four years. Your plans might include requests for additional funds. The Program Review Committee will read these and either endorse the request or ask for more information. Please keep in mind that the Committee's endorsement does not guarantee additional funding. The President's Advisory Council and Faculty Allocation Committee play major roles in allocating funds and prioritizing new faculty hires.

Please number each of your plans. This will help keep track of them. Also, make sure that each funding request includes the following elements:

1. It is supported by the data and analysis in previous sections of this self-study.
2. It fulfills a part of the College mission, vision, goals, or objectives.
3. It explains how the request helps the College attain student equity.
4. There is a measurable way to tell if the extra funding will be effective.
5. It considers whether you can reach this goal (or parts of it) without additional funding.
6. Please give a dollar amount, or best estimate. If you can identify a funding source, then please name it. If you can put the request into one of the following categories, please do so: Personnel, Facilities, Equipment, Supplies, Computer Hardware, Computer Software, Training, Other.

FC Automotive Strategic Plan #1

Develop curriculum for new automotive courses and certificate programs in hybrid, electrical vehicle (EV) technology, and alternative fuel vehicles. These courses will fill current industry needs for qualified entry level technicians in these emerging automotive technology areas and was recommended by the Fullerton College Automotive Advisory Committee. Electric vehicle technician, hybrid vehicle, and alternative fuel programs all received recent endorsement by the Orange County Center of Excellence (COE) for Labor Market Research. The COE endorsed these programs based on their labor market study.

The data provided by the OIE indicates a decrease in Fullerton College automotive student enrollment over the past five years. During this time, no new courses were added to the

Fullerton College Automotive Program Curriculum. The automotive faculty are committed to improving student retention by offering high demand course offerings such as hybrid, electric vehicle technology, and alternative fuel vehicles. The implementation of new and improved courses supports the Fullerton College mission of advancing student learning and attainment of educational goals, degrees, certificates, and career growth. We intend to help Fullerton College attain student success by adding new courses centered on electric vehicle, hybrid vehicle, and alternative fuel concepts. To accomplish this, the automotive program instructors recommend hiring an adjunct instructor with recent hybrid, electric vehicle, and alternative fuel technology experience to teach these new courses. The estimated hiring cost is \$50,000/year. Ideally, the adjunct faculty member would assist in developing class curriculum and provide a list of training aids and equipment necessary to teach these courses. Once this new class is developed, state approved, and introduced in the class schedule, the automotive faculty will review future OIE program statistical reports to see changes in automotive student enrollment trends.

Currently, the Fullerton College Automotive program possesses a fleet of five hybrid laboratory vehicles, only one electric vehicle (EV), and no alternative fuel vehicles. The automotive faculty recommend purchasing additional hybrid, electric vehicles, and alternative fuel vehicles as instructional aids and for project-based learning. The vehicle and equipment estimated cost is \$150,000.00. Instructional supplies to support these proposed courses would also be needed and estimated at \$45,000.00. We may be able to use recently allocated AY 21/22 Regional Strong Workforce Initiative Program funds to begin the vehicle and equipment acquisitions for these proposed courses. If no additional funding is received, these courses cannot provide the instruction content of these courses. This could lead to a loss of Fullerton college automotive students to colleges offering robust electric, hybrid, and alternative fuel courses.

FC Automotive Strategic Plan #2 Provide Spanish and other language translation devices, computer software, or interpreters to Fullerton college automotive students that identify themselves as English Language Learners. Based on the data provided, the Latinx student population has the largest enrollment numbers and the highest achievement gap in course success. Providing language interpretation services and software on our campus computers will support the Fullerton College mission of developing flexible pathways for students from diverse populations. These additional services and software would help close the achievement gap and encourage employees in the local automotive workforce who identify as English Language Learners to enroll in the Fullerton College Automotive Program. Any existing language barrier is a deterrent to their enrollment and addressing it would be inclusive and equity minded. Currently, we don't offer any formal translation service for students other than sign language through the Disability Support Services Office. This program improvement will most likely require additional personnel and computer software. The estimated cost for interpreter services; \$45-150 /hr. and the estimated cost for computer translation software is \$5,000.00.

FC Automotive Strategic Plan #3 The automotive shop coordinator needs a fulltime laboratory assistant to aid with various tasks and monitoring of the automotive tool room. The automotive faculty propose hiring an Automotive Department lab Clerk to support existing and new program class offerings. The estimated cost of this classified position is \$4000.00 per month (classified salary range 31). The significant financial investment in student tools and equipment require a dedicated employee to monitor and track student use and return of these items. Clerical duties require the current shop coordinator to leave the automotive department during the day to take care of interdepartmental business and leaves the toolroom unattended and

inaccessible. This slows down student projects and coursework and inhibits student progress and learning.

6.3 Optional: Long-Term Plans

Your department might have more plans than just immediate requests for funding. If so, please describe them here.

To accommodate program growth and support the inclusion of alternative fuel courses such as hybrid and electrical vehicle technology, the Fullerton College Automotive Program must expand and improve current shop and storage facilities. The Automotive Advisory Committee suggested and endorsed improvements and expansion to the Automotive Technology building including, but not limited to, a roof covering for our existing outdoor vehicles lift stations, additional classrooms, shop work areas, and storage buildings or rooms. Automotive instruction requires the use of specialized equipment such as tool-carts, engine stands, A/C recovery machines, etc. Large automotive tools and equipment on wheels cannot be stored in drawers or cabinets or left outside exposed to the elements. Additional access to a large storage space or room to protect the tools and equipment from the elements as well as ergonomic concerns is needed. In addition, the automotive program will benefit from extra laboratory space for new course offerings such as the hybrid, electric vehicle (EV), and alternative vehicle courses previously mentioned.

Here is a summary of key facilities projects for consideration:

- roof structure for outdoor student workstations, estimated cost based on other recent building improvement projects \$500,000 - \$750,000
- convert adjacent grass area into extra vehicle lift area /ADAS room/automotive classroom/storage space estimated cost \$1,000,000 +
- request enclosed parking lot area for laboratory vehicles. Estimated Cost \$100,000.00+
- shop exhaust extrication system estimated cost \$75,000+

7.0 Executive Summary

Please provide the reader with a brief overview of the highlights, themes, and key elements of this self-study. Please don't include new information you did not discuss earlier. Although you will likely write this section last, please remember to put this summary at the front of your report.

The executive summary is found at the top of this Program Review Document.

8.0 Publication Review

The College wants to maintain integrity in all representations of its mission, programs, and services. Please help this effort by reviewing your publications: professional social media profiles, websites, brochures, pamphlets, etc. Please tell us the date they were last reviewed and if you found them to be accurate in all representations of the College and program missions and services. Information on the college's graphic standards is available [here](#).

1. For each of your program's publications, please provide the URL where the publication can be viewed. If the publication cannot be accessed via the Internet, please contact Lisa McPherson, Director of Campus Communications at lmcpheon@fullcoll.edu.
Fullerton College Automotive Department program publications:
<https://cte.fullcoll.edu/department/automotive-technology/>
<https://techeng.fullcoll.edu/technology-and-engineering/automotive/>
2. If you find an inaccurate publication, please explain how you will make corrections.
To make corrections to any of our program publications, we contact Martha Payán-Hernández, M.A. Director Career and Technical Education (CTE) Strategic Recruitment & Outreach MPayan@fullcoll.edu or Lisa McPherson Director of Campus Communications at lmcpheon@fullcoll.edu
3. If your department maintains a social media presence then please describe it here. What do you use it for? How do you monitor it? Who is in charge of it? In what ways is it benefiting the College and your program? Does it follow the [District's social media guidelines](#)?
Currently our department relies on the CTE Fullerton College Social media portal. Facebook, Instagram, Twitter, and YouTube accounts are used to advertise and promote the various technical education programs including the Fullerton College Automotive Technology Department. Social media presence helps us reach out to high school students, advertise specific program events, and promote our program in general. The person in charge of the CTE social media accounts is Martha Payán-Hernández, M.A. Director Career and Technical Education (CTE) Strategic Recruitment & Outreach. The CTE social media portal follows all the district's social media guidelines.
4. If your program regularly communicates with the wider community, please describe how. What feedback do you get from the community?
We maintain communication with the wider community by participating in the Orange County Automobile Dealers Association (OCADA) sponsored annual High School Automotive Technical knowledge competition. Fullerton College Automotive Instructors have served as judges during competition. We also participate in the (OCADA) sponsored student hiring event, in which potential employers come to the College to meet our students. In addition, we offer various automotive services to non-automotive students, and people from the community. Automotive Department customers are delighted by the quality of repairs and generally feel grateful to find out that automotive services are available to them for a discounted price. In addition, we hold an annual advisory committee meeting that help our department learn about current industry trends. Committee members have an active role in approving our program curriculum revisions, curriculum development, and course updates. The Advisory Committee also advises us on physical improvements needed for the automotive program and new tool/equipment recommendations. This input helps us meet current industry expectations for automotive technicians produced by the Fullerton College Automotive Program. Lastly, we keep communication with employers in our area that have hired our program students and graduates. They comment on our students' outstanding job skills when compared to other new hires from other technical trade schools.

Format notes

Cover Page: standardize for each self-study, with signatures

Executive Summary: on a separate page, all by itself, for ease of processing.

Main body of the report

Appendix A: Key Performance Indicator (KPI) data

The Office of Institutional Effectiveness will provide data for departments to analyze. To answer some of the questions on this form, departments will need disaggregated data that focuses on specific groups. The data will be presented to identify equity gaps among groups, so that departments can plan ways to close those gaps. Departments should also be informed how their student populations compare to the overall college population, and the population of the college's service area.

Appendix B: SLO data

This data is still off-limits to the OIE because it is housed in Elumen. The Faculty Senate only allows faculty members to have access to SLO data on Elumen. The Senate's SLO Assessment Committee will work with its division reps to help departments disaggregate SLO data, just as KPI data is disaggregated in Appendix A.

Appendix C: Other data

In addition to the KPI and SLO data, departments may wish to include other data that it finds in Tableau or other sources.

