

**Automotive Technology**  
**2019-20 Annual Program Review Update**  
**Submitted By: Dave Capitolo**

**Program Mission Statement: Mission:**

The mission of the De Anza College Automotive Technology Program is to inspire, excite, and train our automotive technology students to achieve a valuable place in our local and global community; by serving a widely diverse student population including career oriented students, lifelong learners, and those who choose our program to enrich their own knowledge base. We do this by focusing on integrity, personal achievement, service to our community, and excellence in all we do.

**PLO:**

Students will be prepared to successfully enter the transportation or industrial maintenance industries and/or continue their education

**Response:**

Auto Tech offers an academically challenging and multicultural environment in which our students are challenged with critical thinking situations in advanced automotive repair. Our students participate in community service events and are fully engaged in the entire learning process. Auto Tech students appreciate the nurturing they receive in order to keep them focused on their goals, whether it be employment or continuing education.

Auto Tech students gain much-needed experience in the college's core competencies through their education. Our employers are stressing the importance of communication skills so that technicians can communicate with other employees and customers, through written and verbal communication. Employers also express the need for their employees to be able to find the required information to successfully diagnose vehicle problems, because of the extreme differences in various makes of vehicles. Critical thinking skills have always been a part of the automotive repair industry, even more now with emerging technologies. Our students are also exposed to cultural differences and global concerns through their work at De Anza College and club activities.

**I.A.1 What is the Primary Focus of Your Program? Career/Technical**

**I.A.2 Choose a Secondary Focus of Your Program? Transfer**

**I.B.1 Number Certificates of Achievement Awarded: 131**

**I.B.2 Number Certificates of Achievement-Advanced Awarded: 30**

**I.B.3 #ADTs (Associate Degrees for Transfer) Awarded:**

**I.B.4 # AA and/or AS Degrees Awarded: 45**

**I.B.5 Trends in # Degrees Awarded:** The number of Certificates of Achievement is up 83% from 17-18. This increase is due to the popularity of our new General Service Technician (GST) certificate of achievement. This certificate was created to give students of our introductory classes an award to work toward. These students previously had nothing to show for their successes. The implementation of the GST is not only giving students an award, but it also gives our department a marketing tool for showing a pathway to prospective students.

The number of Certificates of Achievement Advanced is down compared to 17-18 partly because of the high number of first and second year students we have in the day program. These first and second year students are still working on English and math proficiency. Program Review tool has 19, but the CCC webs site has 30

The program review tool shows a three-year to four-year decline in AS degrees for our department. 18-19 appears to be the beginning of a new cycle in which the number of AS degrees is up. Students often earn all three AS degrees as they complete their general education during their final year of the day program. There is a possibility that the number of AS degrees may decline as the next group of students complete general education.

**I.B.6 Strategies to Increase Awards:** 1. The strategy of creating the General Service Technician (GST) certificate has proven to be successful based on the number of awards. We will continue to encourage students to complete the required courses for the GST certificate. The number of GST awards should be consistent because the enrollment in our introductory classes continues to increase.

2. Auto Tech is also making more of an effort to coach students who complete the GST and encourage them to either attend evening classes or day classes. Now that the GST students have successfully completed the certificate, we want to make sure that they keep the enthusiasm up and persist in more classes.

3. Auto tech is planning a dual enrollment agreement with the FUHSD. With this plan, we will host high school students from the district in a two-day per week introductory class. Students will receive college credit for our first introductory class (Auto 50A) during their fall semester and Auto 51A during their spring semester.

**I.C.1. CTE Programs: Review of Perkins Core Indicator and SWP Outcomes Metrics:** Planning for 20-21 based on Perkins Core Indicator Report (indicators 5a and 5B) for Automotive Technology (TOP code 0948): The Auto Tech department continues to have an 8% female enrollment distribution for the last several years. The majority of this non-traditional enrollment is from our introductory classes. We have increased our marketing efforts on campus in an effort to recruit more female students and more students who represent the ethnic make-up of the campus student body. The CTE cohort participation number is considerably lower, which represents the female enrollments from our full-time day program. In order to be counted in this CTE cohort, a

student has to participate in 12+ CTE units within three years for courses at a level above the introductory level. We need to work on promoting female students from our introductory classes to persist in the day program or take evening classes, in order to increase the cohort sample size. Auto Tech is developing plans for research to figure out how to attract non-traditional students and to identify barriers that prevent non-traditional enrollment and persistence.

**I.C.2 CTE Programs: Labor Market Demand and Industry Trends:** Employment of automotive service technicians and mechanics is projected to grow 7% from 2016 to 2026, about as fast as the average for all occupations. Job opportunities for qualified jobseekers should be very good. - Bureau of Labor Statistics, U.S. Department of Labor. Total annual openings in CA is 7,610. - Employment Development Department (EDD) CA. The estimated employment is 74,100. EDD. At our latest advisory committee meeting on December 17, 2019, our advisory committee was pleased with the overall existing certificate and degree offerings. They were pleased with the De Anza Auto Tech graduates that they've hired. One advisory member employs 5 De Anza Auto Tech graduates. In addition to the employment opportunities through the EDD, auto tech also receives over 225 local employment requests each year. These local requests are not part of any data from EDD or LMI but substantiate the need for educating automotive jobseekers.

**I.D.1 Academic Services & Learning Resources: #Faculty served:** NA

**I.D.2 Academic Services & Learning Resources: #Students served:** NA

**I.D.3 Academic Services & Learning Resources: #Staff Served:** NA

**I.E.1 Full time faculty (FTEF):** 9.1

**I.E.2 #Student Employees:** 1 Tutor, down from 2 last year

**I.E.3 Full Time Load as a %:** 62.1% After 19-20 school year this percentage will be 45%, due to losing three full-time faculty

**I.E.4 # Staff Employees:** 3, no change from last year

**I.E.5 Changes in Employees/Resources:** The Auto Tech department has suffered a major loss of full-time faculty in the past few quarters. Between Spring 2019 and Winter 2020 three full-time faculty have left (one to SRP, one to promotion, and one to retirement), reducing the number from 7 to 4. The remaining faculty are all now working maximum overload to continue to grow our enrollment and continue to serve our students' needs. Our part-time faculty is working at maximum load as well. With this effort we have been able to slightly increase enrollment in both fall 19 (2%) and winter 20 (8%) compared to last year. We continue to support our students by hiring TEAs, offering help with guided pathway, and help with certificates and degrees. We have submitted applications for all desired classes for non-credit approval as well as applications for all non-credit certificates. We are still waiting on their final approval. We are also counting on new full-time faculty being awarded by the IPBT this winter.

**II.A Enrollment Trends:** Auto Tech enrollment is on the rise. The 2018-19 school year was the highest enrollment in several categories since the 2015-16 school year and the trend is continuing as of

Fall 2019. We have built pathways that are working by offering courses based on student need rather than faculty preference. For the first time in the Program's existence, we have offered multiple sections of Auto 60 due to the massive number of students earning a General Service Technician (GST) Certificate. In the 2018-19 school year, 106 students earned a GST certificate. Our flexibility with regards to scheduling classes for our student's needs has been the key strategy.

**II.B Overall Success Rate:** 1. What could be factors that influence differences in success rates? Success rates in auto tech have remained unchanged over the last five years, in the low 80% range. We still have a 4% equity gap that needs attention, but fewer students from both targeted and non-targeted groups are withdrawing from classes. The "19 or less" age group appears to have the most room for improvement for success rates. This may seem inconsequential, but each year this group makes up between 10% and 15% of all grades awarded. More research is needed to help solve this.

2. What strategies does your department have in place to increase or maintain current success rates? We have three new part-time faculty that are more energetic and willing to help students succeed. These faculty are taking over classes in the evening that have typically had low success rates. We are also promoting more leadership in the evening classes to help find ways to increase persistence and improve success.

**II.C Changes Imposed by Internal/External Regulations:** Marketing efforts continue in an effort to help increase enrollment. We are still mailing fliers to over 2,000 automotive repair shops in the nearby counties. We will continue to mail these marketing fliers each quarter. Faculty have also been to many outreach events at local high schools and adult schools. High schools include Lincoln, Yerba Buena, Palo Alto, Gunn, Fremont, Homestead, Gunderson, Apollo, and the Del Mar high school district. Adult schools include Mountain View/Los Altos, Palo Alto, and Sunnyvale-Cupertino. We have also purchased marketing items to attend these events such as flags, tents, banners etc. Lastly, faculty have set up booths around the De Anza campus advertising our introductory program. We have done this the last two quarters with great success for the introductory classes that serve all students on campus. With this planned, auto tech will need the flexibility to offer more sections to keep up with the projected enrollment increase.

We could not continue to build on our noncredit enrollment work because of the lengthy process of approving new courses and certificates. We lost about 20 noncredit students because we could not get the next noncredit course approved in time. These were all first-time college students that will probably not come back. Noncredit curriculum is a mirror of the same for-credit course, and should have a much shorter approval process. We have noncredit applications for the remainder of our evening classes submitted and waiting for approval.

We are forced to change our schedule of classes because of personnel attrition. This is after losing three full-time faculty all within the last two years. Of particular importance is changing course offerings because of losing three full-time faculty and having to ask for permission for part-time

faculty and full-time faculty to exceed 0.667 load.

Auto tech has worked through a 50% drop in the B budget over 10 years. Auto tech has struggled through this low operating budget, with broken and obsolete tools, vehicle maintenance, and equipment maintenance/repair. We find it difficult to afford repair parts for our vehicles, which is how our students gain the needed experience.

**III.A Program Success:** We have hired three new part-time faculty to help us get through our current personnel struggles. We were fortunate to have hired a former student who is Latino and who is showing exceptional skills in helping students succeed. This faculty is already having an impact on all students, especially on the Latinx students who are really starting to look up to him. We have also hired a local Vietnamese shop owner to help with evening classes part-time. This faculty brings many years of experience and many repair scenarios to share with students. The third part-time faculty is also a former auto tech student from De Anza who understands our mission and is helping our evening students persist.

**III.B Enrollment Trends - Equity Lens: 1. What could be contributing to the differences? What differences?**

The biggest enrollment differences between auto tech and De Anza are with Latinx and Asian students. We have about 20% more Latinx enrollments when compared to the school. Our Asian student enrollment percentage is about 25% less than the school. Our Latinx student enrollment has increased 11% over the past three years, apparently as a result of our extensive outreach at high schools. Our considerably lower percentage of Asian enrollment makes it clear that Asian students are less interested in CTE classes, and more interested in academics. This is supported by the following percentages of Asian student enrollments in the following divisions: 55% in Bus/CIS, 51% PSME, 41% Bio/Health, 41% Soc Sciences, 49% Language Arts, 42% ICS. More research is needed for ideas of recruiting Asian students and figuring out why these students choose academics over CTE. Enrollment percentages for other ethnic groups in auto tech is similar to the same ethnic groups for the college enrollments.

NB: Auto Tech did contact the Men of Color counselor to ask if we could talk to their group of students about the low number of African Americans that want to enter the automotive trade. He said that they concentrate on transfer and 4-year success and did not think they could be of help to us.

**2. What strategies does your department have in place to increase or maintain enrollment of these student groups?**

Our Program has participated in over 20 Outreach events in the last three years and continue to do so on an annual basis. Many of our students find out about our Program via Outreach events. Many of them never knew De Anza has an Auto Tech Program. We have focused our Outreach on Sunnyvale and Campbell, as well as several areas of San Jose. We also offer non-credit classes which many targeted students are attending. We recently offered a non-credit Smog class in which 80% of the class was made up of the targeted student population.

**3. Are there other trends that you see when drilling into the data that may be important to explore?**

African American, Latinx, Filipinx, and Pacific Islander students make up 51% of our entire Program. There has been a steady upward trend as the population of this targeted group has grown 8% since 2014-15. During this time, the Latinx population has been the largest growth at 6%. As stated in number one above, Asian students are more prone to enroll in academics versus CTE programs. Future collaboration with the CTE and Workforce Education division seems to be a beneficial partnership.

**III.C Success, Non-Success and Withdraw Rates:**

**1. What differences do you see in successful course completion rates?**

It appears that subgroups with low sample size have larger PPG differences with the rest of the campus.

**2. What are your thoughts on these differences?**

It may be possible to reduce this gap if the groups were identifiable

**3. What strategies might be helpful in closing gaps in successful course completion?**

The Disproportionate Impact Tool shows that the Auto Tech program has only one disproportionate group, foster youth. The department works very hard at our equity balance in all of our efforts and it shows in the data. Foster youths are the most difficult to identify, so this will be the most difficult to build a strategy for. We looked through the resources available in the Equity department but cannot find anything related to foster youths. Auto Tech could benefit from any strategies are available from De Anza, other than early registration.

**III.D Equity Planning and Support:**

**III.E Departmental Equity Planning and Progress:** Consultation is always welcome to help us with learning more about the identification and the needs of foster youth, recruiting non-traditional students, and closing our equity gap.

**III.F Assistance Needed to close Equity Gap: Yes**

**IV. A. SLOAC Summary:** Citing the lack of SLO completion, we were able to get approval through IPBT for the purchase of a new piece of equipment so that students can successfully complete learning outcomes. It is installed and will be used this school year and the SLO can

**IV.B Assessment Planning:** Auto 53A, Auto 60

**V.A Budget Trends:** Limited B budget prevents us from running our department to full potential and being

able to purchase the needed parts to repair our fleet of district owned vehicles. The repair of our vehicles is the best way for our students to gain the much-needed experience and boost in confidence.

Many of our vehicles remain unrepaired as we often do not have the funds at the end of the year. Request restoring our current B budget of \$18,000 back to our 2012 budget of \$30,000.

**V.B Funding Impact on Enrollment Trends:** The district budget crisis is always a barrier for us as we have to worry about class cancellation every quarter. In some cases we are asked to cancel a class that is short of the minimum required, making it difficult for students to complete required classes for certificates and degrees.

**V.C.1 Faculty Position(s) Needed:** Replace due to vacancy

**V.C.2 Justification for Faculty Position(s):** Auto Tech recently had two full-time faculty hires approved by IPBT. Grateful for these, we will now be able to have more confidence in increasing our evening and afternoon enrollments and offerings. We also lost one faculty to the early retirement (Spring 19) which also hurts our full-time teaching and department/college participation. We will also be losing another full time faculty at the end of the 20-21 school year to retirement. This faculty cares enough about the future of auto tech and will be announcing his retirement early so we can plan accordingly for his replacement.

**V.D.1 Staff Position(s) Needed:** Replace vacancy

**V.D.2 Justification for Staff Position(s):** Our evening tool room technician will be resigning at the end of the 19-20 school year. This position is critical to running our tool room in the evening hours. This staff member assists students with checking out the proper tools for lab work, helps with securing the building each night, helps with the set-up of lab demonstrations, and helps maintain computers and certain equipment.

**V.E Equipment Requests:** Equipment resource requests listed on spreadsheet

**V.F Facility Request:** See Spreadsheet

**V.G Other Needed Resources:** Resource requests listed on spreadsheet

**V.H.1 Staff Development Needs:**

**V.H.2 Staff Development Needs Justification:**

**V.I Closing the Loop:** As always we continue to monitor enrollment trends, student success for both targeted and non-targeted groups, and employment. We also send annual surveys to alumni for education and employment data. We are very proud of our number of completers and will continue to encourage students to earn certificates and degrees. We will also make this process more structured by documenting our guided pathways, including all school support groups. We expect our success rates and equity gap to improve after the hiring of two full-time faculty.

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**#SLO STATEMENTS Archived from ECMS:** 30