

 Department Chairs/Program Leads: Please press the edit symbol in the right-hand corner to update. Below, the text in bold corresponds both to the name of the box when editing this page and also to the first-column on the APRU worksheet. If you have questions, please contact: papemary@fhda.edu. 

▼ ▼  **Dept - (B/CS) Automotive Technology** 

**Program Mission Statement:** 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.

**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:** 37

**I.B.2 Number Certif of Achievement-Advanced Awarded:** 38

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

**I.B.4 # AA and/or AS Degrees Awarded:** 57

**I.C.1. CTE Programs: Impact of External Trends:** Employment opportunities for Automotive Technology graduates exist in independent repair shops, new car dealerships, fleets, used car dealerships, vehicle manufacturers, and related service industries. Automotive technology graduates can also apply their newfound skills in other areas such as service writing, shop management, customer service representatives, parts sales, and tool sales.

We continue to maintain existing partnerships with Audi of America, VW of America, the Del Grande Dealer Group, Penske Auto Group, Local 1101 Union, City of San Jose, and local independent repair shops. We have also begun to form new partnerships with Pep Boys, Auto Nation, Stevens Creek Subaru, and CarMax.

According to the CTE Launch Board, there are 158 projected annual openings (2014-2019) with a median salary of \$48,651. In addition to these projections, the auto tech department has received 219 requests for employees from various local dealerships and independent shops in a 12 month period. This is evidence that there is a great demand for job for our students. Auto tech faculty are involved in several regional consortia for alternative fuels and automotive repair.

Auto tech is in the process of increasing alternative fuels course offerings and designing certificate and degree programs in alternative fuel vehicles. We are also exploring possibilities of offering on-line courses for increasing enrollment.

**I.C.2 CTE Programs: Advisory Board Input:** The auto tech advisory board is made up of people from many different areas within the Automotive Industry, providing a wide variety of input. The committee meets about every 6 months to keep current with the program. Members include shop owners, managers, and industry executives from large automotive corporations, local high school and adult school instructors, as well as former students working in the Automotive Industry. Throughout the years some common themes of thought have been the focus on basic mechanical skills and work ethic that DeAnza Auto Tech has consistently promoted. Many have expressed the need for increased communication skills, both written and verbal. We have responded by requiring our students to perform more tasks that enhance those soft skills such as written reports, oral presentations, and “real world” repair orders similar to what they would complete in a shop. We also stress the benefits of continuing education and completion of degrees and certificates that have resulted in one of the highest program completion rates on campus. A major area of growth the committee has identified is the need for alternative fuels training. The increasing proliferation of electric, hybrid, bio-diesel, and CNG powered vehicles creates a very large skills gap in the workforce. DeAnza Auto Tech feels an obligation to help fill this gap. We are using SWP funds to enhance the small program we have already started, with the purchase of additional equipment; however, our faculty already teach at maximum load. The only way to teach new classes (without eliminating any of the other highly successful classes already offered) requires additional faculty as a growth position to expand our program.

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

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

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

**I.E.1 Full time faculty (FTEF):** 10.5

**I.E.2 #Student Employees:** 1

**I.E.3 % Full-time :** 0

**I.E.4 #Staff Employees:** 0

**I.E.5 Changes in Employees/Resources:** Reduced B budget continues to negatively impact our students.

Auto tech lost some Robert A. De Hart Library resources that were used by all auto tech students. We lost a free ASE test preparation database with sample questions that students used in preparation for taking the Automotive Service Excellence (ASE) national certification tests, which is a requirement for most employers.

We would like to restore the hours for the evening tool room technician position the way it was prior to 2009. The position as it stood before 2009 was eliminated due to budget cuts.

Reinstating this position would improve the transition between the day and evening job duties, because of the lack of support staff in the evening. Evening students often suffer because of lack of equity in staff support between the day shift and evening shift.

**II.A Enrollment Trends:** Enrollment has been in a slight decline over the last three years.

15/16 enrollment reflects a seven section decline in the number of sections offered compared to 14/15. Looking at enrollment graphs, this slight decline is in-line with campus wide enrollment trends.

**II.B.1 Overall Success Rate:** Our success rates are steady at:

82% for 12/13

85% for 13/14

82% for 14/15

80% for 15/16

**II.B.2 Plan if Success Rate of Program is Below 60%:**

**II.C Changes Imposed by Internal/External Regulations:** State budget issues are impacting our ability to offer more class sections. SWP funds and marketing efforts are underway to help increase enrollment. With this planned, auto tech will need the flexibility to offer more sections to keep up with the projected enrollment increase.

Auto tech has worked through a 75% drop in the B budget over 10 years. Auto tech has struggled through this low operating budget, with broken and obsolete tools, vehicle maintenance, equipment maintenance and repair, and the relentless industry demands all suffering.

Also worth mentioning is the loss of the venue where we held our annual fundraiser autocross event. Parking lots A and B used to be the venue for this event which brought together many years of alumni and the community. This was the primary source of revenue for the auto tech club and served as a reunion. The event was canceled after the installation of the solar panels. Some benefactors have not donated since the loss of the event.

**III.A Growth and Decline of Targeted Student Populations:** The trend of targeted student population is:

868 for 13/14

934 for 14/15

880 for 15/16

The new automotive technology facility at Evergreen Valley College may have effected our enrollment of targeted populations this last year by attracting students who otherwise would have continued to attend De Anza College. Traffic and parking conditions continue to impact enrollment and attendance.

**III.B Closing the Student Equity Gap:** The Automotive Technology Department has focused on direct student intervention and counseling to reduce the equity gap. We encourage students to enhance college readiness by using the resources of the college. Students have been taking advantage of our Auto Tech Student Success Center to get extra help in classes that students struggle in. Auto tech has hired tutors using Perkin's funds to help student success in courses with lower than normal success rate. Auto Tech has also helped students become more efficient at using DegreeWorks for degree plans and certificate/degree applications.

Opportunities to decrease our equity gap became more evident by researching course section data using the Program Review Tool. The success rate for our targeted ethnic groups in 15/16 was 75%, with the success rate for our non-targeted ethnic groups in 15/16 at 83%. It should be noted that our targeted ethnic group made up 40% of our enrollment in 15/16, compared to 24% campus-wide.

**III.C Plan if Success Rate of Targeted Group(s) is Below 60%:** Auto tech success rate for targeted groups is above 60% (15/16 was 75%)

**III.D Departmental Equity Planning and Progress:** We have hired a student tutors to help students with the automotive learning environment. We also continue to use the Auto Tech Student Success Center to help students succeed. Students have developed small cohorts and are working together in the success center, and consequently are minimizing the stigma associated with being tutored.

Progress and discoveries:

1. In 15/16 auto tech had a total of 53 Veteran enrollments with a success rate of 79% and a retention rate of 90%
2. It was discovered, using the program review tool, that a consistent 10% of the targeted population withdraws. This means that about 10% of the targeted population does not even get the chance for success. Efforts will be made to reduce the number of withdraws
3. The equity gap for the evening program only classes dropped to 3% for 15/16.
4. The equity gap for day program only classes is 4% for 15/16.
5. The equity gap for the introductory classes is 5%. Even though this is a fairly low difference, the overall success rate for targeted and non-targeted is 70% and 76%, respectively. The relatively low success rate is probably because many of these students are enrolling as an elective and are not motivated.
6. Auto Tech is hiring a few mentors for the evening and introductory classes to help students with some decisions and plans, with the goals of increasing the success rates and reducing the number of students who withdraw.

**IV.A Cycle 2 PLOAC Summary (since June 30, 2014):** 100%

**IV.B Cycle 2 SLOAC Summary (since June 30, 2014):** 87% (60 out of 69)

**V.A Budget Trends:** As budgets are continually reduced, the ability to have supplies and equipment available to our students is reduced. This impacts targeted student populations greatly. We have instituted printing alternatives and electronic handouts. Facilities and equipment maintenance and repair always have an impact on available funds to run the department.

**V.B Funding Impact on Enrollment Trends:** Reduced B budget shifts costs to our students.

**V.C.1 Faculty Position(s) Needed:** Growth

**V.C.2 Justification for Faculty Position(s):** The growing need for an alternative transportation fuels technology program. This technology includes diesel, electric / Hybrid, solar fueling, compressed natural gas, and propane. Alternative transportation fuels technologies is a growing segment of the industry and training requirements will increase over the next five years. We would like to increase our job placement percentage to over 90 percent.

Starting our alternative transportation fuels technology program now will position us to support industry demands. By equipping our students with alternative transportation fuels technology training we will enhance their ability to compete for jobs in the transportation industry. This training is also recommended by our advisory committee.

Besides the need for faculty to help with alternative fuels, auto tech is currently struggling with the unavailability of Randy Bryant who is serving as interim Dean of Bus., CIS, and Applied Technology. Beginning this fall we have made last-minute changes to teaching loads to cover all classes. This will also be a challenge next year, being down one full-time faculty along with trying to increase enrollment and grow the department.

**V.D.1 Staff Position(s) Needed:** None needed unless vacancy

**V.D.2 Justification for Staff Position(s)::**

**V.E.1 Equipment Requests:** Over \$1,000

**V.E.2 Equipment Title, Description, and Quantity:** New, as supported by SLOs. Details are listed in equipment request spreadsheet.

Surface texture profilometer for measuring the surface texture of cylinders and cylinder head surfaces, (1)

Transmission dynamometer for testing transmission operation after rebuilding, (1)

New air conditioning equipment for use on new air conditioning systems which have less of an impact on the environment, (1)

Replacement automotive machine shop equipment

- Rottler F9A CNC Boring Machine for sleeving and boring (old machine can then be auctioned off), (1)

- Rottler H85A Automatic Cylinder Hone for new engine block materials, which cannot be machined with existing equipment, (1)

New flush mount vehicle lifts are necessary for our chassis students to stay current on the equipment in use in industry, (2)

- Upgrade the shop exhaust system to extend to the new lift location for improved ventilation

Tire mounting and balancing machines (1 ea)

Conductance battery testers (5)

New 5-gas emissions analyzers to replace larger antiquated machines, (5)

Replacement vehicles as technology changes

**V.E.3 Equipment Justification:** This equipment will be used by our Auto Tech students.

Without this equipment our students will be less prepared for competition in the automotive industry. Some of the equipment now in place has a life expectancy of 5 to 10 years depending on technology changes. Much of our equipment is over ten years old. This equipment promotes the college mission by getting students jobs. The transmission dynamometer is needed to complete the SLO in Auto 93C. The previous dyno was scrapped in 2008 and has not been replaced, making this SLO impossible to complete. This request for a transmission dyno will enable students to complete the SLO.

Our automotive machine shop equipment, listed above, is over 20 years old and needs to be updated to keep up with industry standards. The machine shop equipment is needed for SLOs

in Auto 94A-94F. Students in Auto 94C were not able to complete the SLO for this class because of the new engine block requirements. New manufacturing materials make it impossible to machine modern engines. This equipment request will allow students to machine these parts and also measure the surface finish with the profilometer.

Our tire mounting and balancing equipment is out dated and installed outdoors. Auto 51B is our introductory class that deals with tire installation. New tire equipment is needed in order for students to complete the SLO and do it using equipment that is used in the industry.

For students to be successful in SLOs in Auto 60F, new conductance type battery testers are needed. Our current battery testers are outdated and have to be replaced for all students to make it through this class.

**V.F.1 Facility Request:** a. We need to repair the coating on the floor in the main shop and the floor in classroom E12f. The clear coat is peeling up because of water intrusion under the roll-up doors and the man door in the classroom. Awnings and drains are currently being designed to eliminate the leakage, but the floor damage is done. Wet and peeling floors have been a safety concern for years.

b. We need to replace classroom E12e with a new facility. This will allow us to add alternative fuel classes as requested by our advisory committee. Preliminary ideas and drawings have been submitted to the Facilities Committee for recommendations that include vehicle charging stations, shop space, and classrooms.

c. A plan to complete an outdoor area for student project completion has also been developed. This will provide additional shelter, lighting, and work space outside in an area not previously completed during a renovation. Auto Tech is also in need of an additional automotive lift for the day and evening classes to safely lift some of the newer vehicles with reduced ground clearance.

**V.F.2 Facility Justification:** a. The floor is becoming a tripping hazard and a slipping hazard during rain. Safety is the justification for this need

b. A new building seems so essential, with so much emphasis being put on the industry need for alternative fuels education. Advisory committees, for several years, have advised us on the importance of a quality alternative fuels program. There are also many opportunities for industry partners, grants, and enrollment that help support this need.

c. This area was compromised due to lack of funding, making the area not usable in for lab work. Student tasks are becoming more difficult to complete in Auto 60E because of the lack of space inside and outside the shop. The competition of the outside work area and an additional lift will help students achieve outcomes.

**V.G Equity Planning and Support:** We have paid for our equity work from our B budget. Increase B budget.

New tables and chairs would help make the student success center more comfortable for students being tutored. We would like to continue to hire student tutors for our success

center. We have plans of a Smart Board to help tutors demonstrate lessons.

**V.H.1 Other Needed Resources:**

**V.H.2 Other Needed Resources Justification:**

**V.J. "B" Budget Augmentation:** Restoring our B budget would help to increase our student success rate in targeted populations by providing needed equipment and supplies.

**V.K.1 Staff Development Needs:** Faculty will need to be trained on alternative fuels. These fuels include: Electric, Hybrid, Compressed Natural Gas, Propane, and BIO diesel. Auto Tech faculty also benefits from annual professional development, which is a requirement to be NATEF certified. This directly promotes the ICC - Global, cultural, social and environmental awareness.

**V.K.2 Staff Development Needs Justification:** This training is recommended by or advisory committee and is a mandatory requirement to continue to be NATEF certified.

**V.L Closing the Loop:** We will continue to monitor success rates for both targeted and non-targeted students. We will also track job placement rates and earnings, including increases in earnings. Our success rates and job placement rates are among the best in the state. We will continue to assess the program outcomes with alumni surveys, that will provide data to supplement SWP and core indicators.

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**Last Updated:** 03/24/2017

**APRU Complete for 2016-17:** Yes

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