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

For 2017-18 Submitted by:: Dave Capitolo

APRU Complete for: 2017-18

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 Achievment Awarded: 45

I.B.2 Number Certif of Achievment-Advanced Awarded: 47

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

I.B.4 # AA and/or AS Degrees Awarded: 42

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, Pep Boys, Auto Nation, Stevens Creek Subaru, CarMax, Local 1101 Union, City of San Jose, Tesla, and local independent repair shops. We have also begun to form new partnerships with the Fletcher Jones group and Nissan North America.

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 over 200 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 jobs 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. We are exploring the idea of starting a dual enrollment program with local high schools in our service area. Dual enrollment offers us the opportunity to hold classes for high school students in the afternoons, that will lead to guided pathways for interested students. De Anza College lacks a dual enrollment champion that can lead programs in this effort though. Curriculum is close to being approved for non-credit classes which will allow us to offer enhanced non-credit classes for students who otherwise would not have enrolled in classes. Our target audience is students from local adult schools from within our consortium of the Adult Education Block Grant (AEBG). We also have plans of hiring some bi-lingual tutors to help these adult school students succeed and improve their English skills.

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 have been the focus on basic mechanical skills and work ethic that De Anza 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. De Anza Auto Tech feels an obligation to help fill this gap. Committee members also stressed the importance of helping prospective employees with resume writing and interviewing skills. Auto tech is adding more soft skills to the curriculum for our career research class, which includes resume writing, cover letter writing, and interviewing skills. The effort of adding soft skills to our curriculum was a result of an advisory committee recommendation and faculty training at New World of Work through the Foundation for California Community Colleges.

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): 10.3

I.E.2 #Student Employees: 2

I.E.3 % Full-time : -5%

I.E.4 #Staff Employees: 3

I.E.5 Changes in Employees/Resources: Reduced B budget continues to negatively impact our students. Auto tech lost some 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. Reinstating this position is critical to the overall success of the students and the safe operation of the evening program.
To help with the reduced support in the evening, evening instruction was partially supported by a TEA that was funded by AEBG. This TEA is no longer employed due to changes in the way that the State requires reporting of AEBG. Previously, we hired evening mentors to help evening students with certificate and degree applications, scheduling, and degree path advice. These positions were also not allowed to continue because of classified union conflicts.

II.A Enrollment Trends: Enrollment has been in a slight decline over the last three years. 16/17 enrollment was down 10% compared to 15/16 enrollment. 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. Recent changes in campus policy now exclude counting our apprentice (APRN) students as part of the classroom seat count totals. Prior to approximately 2012 this was not the case. Each person attending was part of the total seat count regardless of regular or ARPN status. This new policy is affecting evening enrollment numbers by approximately 10% and is a major contributing factor to recent class cancellation trends. Auto Tech has a vested interested in maintaining our prestigious training agreement with the local trade unions as there are many benefits to this relationship.

II.B.1 Overall Success Rate: Our success rates are steady at:
82% for 14/15
80% for 15/16
80% for 16/17

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

II.C Changes Imposed by Internal/External Regulations: Marketing efforts are underway to help increase enrollment. Beginning with the Winter quarter, 2018, we are mailing fliers to over 3,000 automotive repair shops in the South Bay Area. 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 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.

Recently, the process approving new certificates, degrees, and curriculum has been frustrating. Our last proposal for a new certificate, which targets underserved students and students preparing for the workforce, has been in the approval process for since January 2017. The idea for this new certificate was to provide students with a relatively short path to a certificate and employment.

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. We find it difficult to afford repair parts for our vehicles, which is how our students get needed experience.

A recent automotive lift installation project was cancelled. We were set to use SWP funds to purchase and install a flush-mount lift for use in the shop, but were forced to cancel the project due to an absurd quote. The project began in early 2017 with a $51,000 vendor quote for purchase and installation, and a $55,200 quote for architecture and engineering. We were also warned that there may be additional "unknown hard costs" not to exceed 25% of the total project. On January 18, 2018 we were notified that the additional hard costs were going to be an additional $250,000. The total cost to purchase and install a $35,000 vehicle lift is now $356,200, a 335% increase from the original quote to engineer and install the lift. We are now forced to settle for an alternative lift that does not require as much engineering, mostly because of the very poor project management and communication. We also purchased a CNG station that cannot be installed due to similar project management problems and the associated costs.

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. We now host an annual Auto Tech Club Car Show to help offset the loss from the Autocross.

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
884 for 16/17

The new automotive technology facility at Evergreen Valley College may have affected our enrollment of targeted populations this last year, 2015-2016 by attracting students who otherwise would have continued to attend De Anza College. Transportation conditions continue to impact the enrollment of underserved populations, partly because of our larger service area and the difficulty of students to find affordable transportation. We are now

actively engaging in outreach at our local adult schools to help transition adult school students, mostly from our targeted population, to De Anza College auto tech.

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 in which students typically struggle. 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 ethnics 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. The 16/17 success rates are 76% targeted, and 84% non-targeted. For 16/17, our targeted group made up 44% of our total enrollment, compared to 36% 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% (16/17 was 76%)

III.D Departmental Equity Planning and Progress: We have hired 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 our success center, and consequently are minimizing the stigma associated with being tutored. We have also added a state-of-the-art Smart Board that student tutors use weekly to help with the automotive learning environment. The addition of this Smart Board has been very successful.

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%. For 16/17 auto tech had 71 veteran enrollments with a success rate of 87%
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 are being made to reduce the number of withdraws. The 16/17 withdraw rate for the targeted population was 9%
3. Auto Tech has hired 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): 88% (61 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 or advisory committee.

Besides the need for faculty to help with alternative fuels, auto tech is currently struggling with the unavailability of Randy Bryant who served as interim Dean of Bus., CIS, and Applied Technology and is now charged with working to expand CTE programs at the college.
Beginning last fall we have made last-minute changes to teaching loads to cover all classes that Randy taught. This is also a challenge now, being down one full-time faculty along with trying to increase enrollment and grow the department.

V.D.1 Staff Position(s) Needed: Growth position

V.D.2 Justification for Staff Position(s):: Evening classified position responsible for hazardous materials and hazardous waste management, safety, and building security. Evening classes are run without the support of our technician who handles hazardous waste, safety, and building security.

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

V.E.2 Equipment Title, Description, and Quantity: Details are listed in equipment request spreadsheet.

Upgrade the shop exhaust system (1)
Conductance battery testers (5)
New 5-gas emissions analyzers (5)
Replacement vehicles as technology changes
New Hunter Hawkeye alignment machine (1).
New Hunter Mohawk alignment machine (1).
New John Bean alignment machine (1).
Transmissions, special tools, overhaul kits, stands
Floor cleaner machine
Carts for shop
Brake washer
Brake lathe on car
Oil filter crusher

HP Chassis dyno
Car pusher
Electronic shop management software
10years of subscriptions to factory tools
ASE study guides
Subscription to identifix
Update engine lab with new stationary engines
New steering and suspension training display and cutaway
Battery volt amp load testers
Wire terminal test
Wire terminal servicing tools, crimper strippers
Ignition simulator boards ford, gm, Asian, euro
Headlight aiming equipment
Valve adjusting equipment, engines on stands
Coolant flush equipment
Oil extractors
Engine oil analyzer

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.

Shop exhaust system needs to be extended out to the location of where new lifts will be installed. This is needed to keep students from being exposed to harmful exhaust fumes
Conductance battery testers allow students to use battery testing equipment that is being used in the automotive industry and complete SLOs for Auto 60C

New 5-gas analyzers are needed to replace larger, antiquated machines. These analyzers can be used in several classes in our department.

Each year there is a need to newer vehicles for our students to learn some of the new technologies

New alignment machine (Hawkeye) to replace old unit that has reached the end of its service life and is no longer relevant to equipment used by industry. $31,574. Expected service life, 10-15 years. Price includes shipping, set up, training and taxes. No additional college or state expenses are expected as this is a replacement

New alignment machine (Mohawk) to replace old unit that has reached the end of its service life and is no longer relevant to equipment used by industry. $30,262. Expected service life, 10-15 years. Price includes shipping, set up, training and taxes. No additional college or state expenses are expected as this is a replacement.

New alignment machine (John Bean) to replace old unit that has reached the end of its service

life and is no longer relevant to equipment used by industry. $29,000. Expected service life, 10-15 years. Price includes shipping, set up, training and taxes. No additional college or state expenses are expected as this is a replacement.

Remainder of the tool requests are all for student success and to be able to use tools and equipment that exposes our students to the latest tools that shops and dealerships are using.

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.
b. We need to replace classroom E12e with a new facility.
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.
d. Remodel tool room to make better use of the tool storage.
e. Add more parking stalls to the auto tech department.
f. Finish updating the workbenches throughout the remainder of the shop space.
g. Transmission teardown portable workbenches (10)
h. Vehicle lifts (2) are necessary for our chassis students to stay current on the equipment that is used in industry
i. Install audio and video projector and screen in the main lab for guest speakers, outreach events, and to help with disabilities.

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. 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. 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. 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. 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.

d. With the recent upgrades in tools, we need more storage space with added security throughout the tool room. A new system of tool distribution and accounting is also needed to prevent tool loss, prevent theft, and streamline the tool check out process.

e. The district recently required auto tech to sell/dispose of over 40 vehicles so that no student parking stalls are used by school vehicles. Auto tech needs to continue to use vehicles for

instruction. The need for these vehicles increases as our program expands to cover newer technologies. Additional parking can be created by moving the fence along the north side of auto tech.

f. We need to finish updating all work surfaces throughout the shop that includes lockable storage under the benches. The secure storage is needed with the purchase of new tools and equipment through other grants

g. Transmission workbenches: Old benches are worn out from 20 years of use. $9,500 incl tax and shipping

h. Vehicle lifts are necessary for our chassis students to stay current on the equipment that is used in industry

i. This projector and screen will help us host some guest speakers, outreach speakers, industry speakers, and also with certain learning disabilities by being able to display tasks on a large screen

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 inviting and comfortable for the students being tutored
We would like to continue to hire student tutors for our success center using any funds available.
Hire evening support staff for tutoring and mentoring

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.
In a recent survey of former students, the percentage of the respondents that are still working in the industry is 88%. 55% of the respondents are still taking auto tech classes. 93% agreed that the skills they learned at De Anza were adequate for work.

For 2016-17 Submitted by: Dave Capitolo. capitolodave@fhda.edu. 8312

Last Updated: 03/23/2018

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