

Cerritos College CTE Program Review, Fall 2016

Program: Automotive Technology

Division: Technology

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Program Description

For over 30 years, Cerritos College Automotive Mechanical Repair has had one of the most successful Automotive Training Programs in the region. Overall course completion rates for automotive students have ranged from 88-90% with institution set standard at 83%. Today, we are one of the most comprehensive Automotive Training Centers in the country. Cerritos College offers certificates, degrees and special programs in automotive repair, collision repair, alternative fuels, smog training, advanced transportation technology and automotive management.

Our most popular programs are the nationally authorized technician programs for General Motors, The Ford Motor Company, Chrysler and various import manufacturers (ITTP). The programs prepare students for the workforce by providing classroom and hands-on instruction as well paid on-the-job training.

In addition, Cerritos College operates an Advanced Transportation Technology & Energy Center (ATTE) partially subsidized by the state to encourage the development of alternative fuel sources. Just recently, Cerritos College became California's CTE Strategic Hub for developing secondary and post-secondary pathways in alternative fuels. Programs under this initiative start at the high school level and filter into industry of alternative fuels.

Cerritos College's expansion is attributed to its industrial and educational partnerships, in particular Southeast ROP, ABC and Norwalk/La Mirada Unified School Districts and Northwood University.

In partnership with the Southeast ROP and ABC and Norwalk/La Mirada Unified School Districts, Cerritos College is now home to the Automotive Career Institute (ACI). ACI is a program that provides high school students with comprehensive training and experience in mechanical and collision repair.

Cerritos College's most recent partnership with Northwood University has opened avenues for students interested in Automotive Business Management. Through this partnership, students can take Northwood University courses at Cerritos College to earn a Bachelor's degree.

The goal of the Automotive Technology Department is to supply qualified technicians and managers to the industry. Through our partnerships with the Southland Motor Car Dealers

Association, Greater Los Angeles Motor Car Dealers Association, The Ford Motor Company, General Motors, Import Vehicle Manufacturers and Fiat Chrysler Automobiles we will expand management training, alternative fuels training, and cooperation with outside entities to provide total employment needs, from entry level technicians to middle management positions.

The Cerritos College automotive program is comprised of 6 full-time faculty members and 12 part-time adjunct faculty members with plans to hire several more adjunct faculty to meet the needs of our ever expanding course offerings.

The student population is mostly made up of male students with a very small number of female participation. As this has been traditionally a male dominated field.

Institutional Data

All instructional data was provided by the Cerritos College department of Institutional Effectiveness, Research, & Planning. The data includes course completion and success rates, retention rates, FTES findings, enrollment rates and SLOs. However, SLOs need updating due to advisory board recommendations, changing technology, and industry standards.

All but two courses are measured with SLOs – Auto-73 & 212 are not measured as of yet. However, these classes are work experience and automotive laboratory course. Current SLOs are measured using the direct assessment. Industry standards change continuously and SLOs also need to be changed and updated continuously. In some cases, eliminated and replaced. For example, in Auto-160 Automotive Electricity, SLO #2 (Ignition system function) is no longer part of auto electrical systems, but has been reengineered by manufacturers to be part of the electronic engine management system. The SLO applies to a different class with current technologies (Auto-180/181).

The department has consistently used National Automotive Technical Education Foundation (NATEF) and Automotive Service Excellence (ASE) standards as our parameters for measuring SLOs and relevant curriculum. Also, NATEF and ASE are used to satisfy industry standards and practices.

WSCH:

For Automotive Mechanical Repair program was below 525 for the last 6 years. The high was in 2011-2012, with hours at 416.43. The low was in 2015-2016, with hours at 364.22. There is a slight downward trend.

A major factor which contributes to the low numbers in WSCH is that a large portion of the Automotive Mechanical Repair program is a Career and Technical Education (CTE) program that requires students to obtain work experience hours off site. Although there is a high demand for this specialized program it is sometimes difficult to get a student

placed (in a dealership or independent shop) due to various factor that are beyond our control such as; students without driver licenses, bad driving records or legal status. These and more have a direct effect on the student's ability to complete a program. The Co-op is an essential part of our corporate programs, legal status and mobility are important.

Though we are most definitely the premier school in Automotive Mechanical Repair in southern California, there are other public and private schools that offer Automotive Mechanical Repair programs within a 10 mile radius of Cerritos College. Students have options.

FTES:

The Automotive Mechanical Repair program has a slight upward trend over the last 6 years. The high was in 2014-2015, with numbers at 384.75. The low was in 2012-2013, with numbers at 305.57.

The upward trend could be attributed at the fact that we have had the opportunity to add more sections such as Auto 100: Automotive Maintenance and Repair. As well create new courses such as auto 101: Automotive Tools and Equipment.

MAJORS:

Over the last 6 years, the Automotive Mechanical Repair program had a steady upward trend until a slight drop last year (2015-2016). The high was in 2014-2015 with 567 students declaring the major, and the low was in 2010-2011 with 342 students.

Many students have expressed that it is tough to declare a major in Automotive Technology. Especially for students on financial aid because of the Co-op (work experience) students are afraid they may lose their financial aid or will not qualify for financial aid. This misconception makes it difficult for many students to commit to Automotive Mechanical Repair. Especially the auto 100 students whose numbers are about 140 students, by far the course with the most sections and the one with the most non experienced automotive students, because many local high schools no longer have an automotive program and Cerritos College is their first experience in this field. A student survey as to how these courses can better serve the student population is needed.

ENROLLMENT (Fill) RATE:

Over the last 6 fall terms, the Automotive Repair Program has had high fill rates. Rates have been between 96-104%. This program is stable and has no significant directional trend. The majority of AUTO courses exhibit high fill rates. These rates are higher than completion rates because non-corporate students may enroll in corporate classes (GM,

Ford, FCAP, ITTP). Corporate students need to enroll in their scheduled courses, therefore enrollment can be inflated over 100%. The ITTP usually starts approximately thirty students even though the maximum is set at twenty-four because previous experience has shown regular levels of attrition. ITTP pool of interested students is averaging about fifty per spring semester start.

We have corporate program courses (Ford, GM, FCAP, ITTP) that set in stone and must be taken in certain order to be able to complete the program in a timely manner. We also offer some course only in the fall and others only in the spring to assure they are on track to complete whatever certificate they are seeking. Over saturation can prevent a course from filling thus causing it to be cancelled. We also have an ACE Plan (Automotive Career Education Plan) where we can actually plan a course for completion for our generic students who are not enrolled in our corporate programs.

COURSE COMPLETION (retention) RATE:

Auto Repair has exhibited high and stable completion rates across the last six fall terms, ranging from 88-90%. Nearly all the AUTO courses have high completion rates over the last fall terms.

The department completion rates are 88-90% because of how both corporate and general course offerings are structured. Courses are set up to be taken in a sequence to ensure completion. All corporate programs are scheduled at the same start time to ensure consistency throughout the two year program. Evening classes are scheduled with the same start time on opposing days to ensure student schedule consistency. The general technician certificate is the most declared certificate in our department, therefore course offerings are equally distributed throughout the week for easy enrollment to limit scheduling conflicts.

SUCCESSFUL COMPLETION (success) RATE:

Auto Repair has exhibited high and stable success rates across the last six fall terms, ranging from 75-83%. Across time, AUTO courses have had high success rates. The exceptions are AUTO 110 (71%) and 150 (62%) which had lower-than-average success rates compared to other AUTO courses.

Auto 110 and auto 150 are the first advanced courses taken right after the entry level courses which can be an overwhelming challenge to students.

GRADE DISTRIBUTION DATA (disaggregated):

The pass rates of Auto Repair students stayed consistently high during the last 6 fall terms, where the substantial majority successfully completed their courses versus not passing. The majority of students received an A or B grade, which stayed consistent during the past 6 fall terms. Of the students who did not pass their AUTO course, the

majority did so because they withdrew from the course. The program is dominated by male enrollments, and females that do enroll in courses tend to have lower pass rates, because some withdraw from the class. Traditionally automotive is a male dominated profession. Students between the ages of 20-24 had the highest pass rates.

Compared to White students, the success rates of Hispanics were 5% higher, Asians were 2% higher, and Black students were 6% higher. Compared to fall 2010, Hispanic students exhibited higher success rates on average, which coincides with campus wide population. Fall 2015 had a 6% higher success rate than Fall 2010. This may be due to having two outreach part-time employees helping with recruitment, processing, dealership contact, direct student contact, and orientation.

The majority of automotive students are Male Hispanics aged 20 to 24.

COURSE COMPLETION (retention) RATE: 83%:

The Automotive Repair program retention rates were above the institution set standard of 83% for the last 6 years. In the last six fall terms, rates ranged from 88-90%.

It should be noted that many of our students are not on transfer track and are seeking a certificate and subsequent employment which can translate into not completing the certificate if they find employment. Employers may not wait for the student to complete their education, but rather offer the student a fulltime employment opportunity to fill the needs of the business. Sometimes students will return years later to complete their certificate or degree.

Course Success Rate: 71%:

The Automotive Repair program success rates were above the institution set standard of 71% for the last 6 years. In the last six fall terms, rates ranged from 75-83%.

The majority of our students are enrolled in our evening program because they work during the day and they are generally more motivated because they are retraining, enhancing, and/or seeking advancement. This category would have most of the incumbent workers/returning students.

SWOT Analysis

Strengths

1. All 6 FT faculty members maintain consistent teaching assignments. This allows faculty to master their craft.
2. Adjunct faculty maintain specificity in course assignment and expertise in their area of automotive.
3. All Faculty are required to achieve a minimum of 20 hours of automotive training annually as mandated by NATEF (National Automotive Technician Education Foundation).

4. All faculty members earn and maintain ASE (Automotive Service Excellence) certifications in all the areas that they teach. ASE and NATEF are nationally recognized as third party accreditation organization.
5. The Automotive Repair program retention rates were above the institution set standard of 83%.
6. Through faculty Co-op dealership visits/meetings Cerritos Automotive Department is able to expand and strengthen our relationships which in turn opens employment opportunities for our students.
7. Years of partnership has translated into approximately 43% of the technicians employed at the Cerritos Auto Square alone.
8. Through grants and department budget we have been able to increase equipment, tools and supplies for student use and faculty teaching aids. The department has purchased up-to-date diagnostic tools; wheel alignment, emissions diagnosis, Snap-on scan tools, Electrical Meters, Amatrol Electrical Training boards and Corporate specific special tools.
9. Recently we acquired 12 new work station computers for student to access online training, service information and general use. More than doubling computer access in all automotive lab work stations.

Weaknesses

1. ITTPs fleet of vehicles is the oldest in our fleet and we are not receiving new vehicles regularly as GM, FCA or Ford.
2. Female students are underrepresented.
3. Need more input from our advisory meeting participants. Constructive criticism.
4. SLO should be reevaluated on advancements in technology and updated as needed.
5. Component for instruction are often 5 or 6 model years behind. Updated and matching sets of components are needed for consistent instruction.
6. Recent economic growth has negatively impacted enrollment in the auto department.
7. Lack of student end of semester survey deters the department from cultivating short-term solutions to student attrition due to joining the workforce.
8. Department lacks morale and motivation.
9. The faculty suffer ineffective communication.

Opportunities

1. Marketing of the entry level Auto-100 course to the Cerritos College general population can help the student obtain knowledge of how to maintain their own vehicle.
2. Additional marketing to local high schools has always been an opportunity for increased and maintenance of enrollment in automotive classes; it is imperative

that the automotive department faculty and staff expand high school visits and presentations, promoting opportunities in the automotive industry.

3. Perkins, Strong Workforce, and CEC grant funds are available to the department for growth of needed equipment, including updating current training aids and tools.
4. Attendance of the annual CAT (California Automotive Teachers) conference by many faculty members helps to supportive networks and increases awareness of current trends in teaching at the high school level.
5. Maintaining and expanding corporate and dealership connections can assist with obtaining an aging fleet of vehicles. This can be achieved through advisory meetings and personal meetings at the dealerships or local corporate headquarters.
6. On-campus job, major, and health fairs are opportunities to increase recruitment and department notoriety.
7. Promotion of Northwood University can assist with enrollment in the automotive management courses and guide students to the management certificate. Further, students will be exposed to opportunities of earning a Bachelor's degree on the Cerritos College campus.

Threats

1. Universal Technical Institute (UTI), a private trade school focusing on automotive technology, recently opened a Long Beach campus. This school is a direct competitor to the Cerritos College auto department and can impact recruitment.
2. Students entering the department are demonstrating a lack of basic and study skills, specifically with reading comprehension and math analytics. Incoming students are often under-prepared for college-level coursework. Additionally many CTE programs have been eliminated or downsized in high schools and middle schools.
3. Rio Hondo College recently began offering a Bachelor's degree in Automotive Technology, which could impact Cerritos because the department currently focuses on Northwood University as a Bachelor's degree alternative. Northwood fourth year tuition rates are much higher than community college pricing.
4. Cypress College Automotive Department has been leading local community colleges with certificate completions.
5. As students complete automotive classes, they are often able to find employment prior to completing their degree or certificate. Students may choose to dedicate their available time to additional work hours and not complete their schooling.
6. The majority of general automotive classes are offered during the evening; however, many morning students are unable to enroll in evening classes. Course

offerings are not disbursed equaling between morning and evening times. Students may seek morning classes at other community colleges.

Goals of the Program

Ref	Goals	Action to be taken	Completion Date	Person assigned
	Mid-Range			
S4	Faculty will achieve ASE certification in additional areas, not just the areas that they teach.	Faculty will attempt to achieve two additional ASE certs in alternative areas.	Spring 2018	Vega
S6	Faculty Co-op dealership visits/meetings will expand in geographic region and to dealerships not currently visited, which will help employment opportunities for students.	Required dealership (Co-op) visits, faculty will find one additional dealership to meet with each semester per instructor. A total of seven additional visits will be completed each semester. They will each explaining the automotive program at Cerritos College. They will give information about the corporate programs to the service and general managers.	Spring 2019	Mulleary Baron
S8	Apply for Workforce Development and IPII grants.	Purchase updated and new equipment for instruction.	Fall 2017	Vega Roper
W1	ITTP's aging fleet of vehicles needs to be updated with two current model year vehicles for instruction. With a possibility of additional vehicles after the deadline.	The ITTP coordinator will connect with corporate entities, such as Audi, Subaru, and Toyota, and seek newer vehicle donations.	Fall 2019	Glick
W2	Implement recruitment efforts towards female students.	Offer an open house for female high school students and their parents during the Spring semesters. Contact educational	Spring 2018	Vega Mulleary

		<p>partnerships office on campus to discuss strategies for improving outreach to area high schools. Talk to CTE office to collaborate with other programs on outreach efforts. Attend recruitment events and college fairs offered at local high schools. Conduct presentations at Bellflower, Artesia, Downey, Norwalk, and Garr high schools because these schools currently have automotive courses in the local region. Continue participating in on-campus recruitment events such as senior preview day and manufacturing day.</p>		
W3	Obtain more input and guidance from our advisory meeting participants.	Seek two more advisors for meetings. Develop questionnaire for advisory members to be completed prior to bi-annual meetings.	Spring 2018	Taylor
W4	Create and update SLOs.	Create SLOs for Auto-212. Update SLOs for Auto-160, 161, 180, 181, 280.	Spring 2019	Mulleary Roper
W5	Update vehicle components with current model year parts or no older than three years.	Faculty will connect with vehicle manufacturers (Ford, GM, FCA, etc.) seeking new vehicle components such as engines, transmissions, and other drivetrain parts.	Spring 2018	Glick Mulleary Bender

		Grant funds will be used to purchase items that are not obtainable from the manufacturers.		
W6	Increase enrollment. Offer courses that are disbursed equaling between morning and evening times, giving morning students an opportunity to complete a certificate or degree.	Offer courses that are needed for certificate and degree completion that have not been offered in recent semesters. Expand and adjust class sections of high demand courses. These classes include Auto-110,120,130,160. Schedule adjustments will be made to offer consecutive certificate courses in consecutive semesters.	Spring 2018	Vega
W8	Improve faculty morale and motivation.	Assist faculty in adapting to changing trends and new opportunities. Motivate faculty to take 10 additional online and in-person courses outside of their usual teaching areas, including hybrid, Electric Vehicle, and alternative fuels technologies.	Fall 2018	Vega
W9	Improve faculty communication	Adhering to the scheduled department meeting calendar and schedule additional night meetings once per semester with all part time faculty.	Spring 2019	Vega
O4	Increase attendance of faculty to the CAT (California Automotive Teachers) conference in Fall semester by three.	Request conference funds from Perkins for attendance to the CAT conference in Southern California.	Fall 2017	Vega

O7	Promotion of Northwood University and the connecting Automotive Management Certificate. Increase enrollment to 100% (30 students) per class for each of the four management courses, Auto-190, 193, 194, 195.	Meet with on-campus Northwood representatives and request presentations for every class at the beginning of Fall and Spring semesters. Four faculty members can learn the presentation and present to all classes, promoting the business opportunities in the automotive field.	Spring 2018	Supple
T1	Counter the threat from UTI.	In marketing material and presentations, emphasize the low cost of Cerritos College compared to private colleges. Meet with high school counselors and show the major differences between private and public education, emphasizing Cerritos College's accreditation. (UTI is not accredited.)	Fall 2018	Coronado Rios
T4	Alter and establish updated certificates to compete with surrounding colleges on completion statistics.	Faculty will reevaluate certificates, removing or adding classes as advancements are achieved in the automotive field. Faculty will submit for adjustment to current certificates and add new certificates as determined.	Spring 2018	Vega Mulleary
	Long Range			
O7	Increase transfer to Northwood University.	Maintain enrollment in Automotive management course at minimum of 85%.	Spring 2020	Supple

S6	Maintain contact with current dealership base and expand contacts to non-participating dealerships.	In addition to increasing dealership contacts by one per semester, per instructor, this process is a perpetual task.	Spring 2099	Mulleary Baron
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