

## **Automotive Technology Program Review 2008-2009**

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#### **Overview:**

#### **Description of Program:**

The mission of the Automotive Technology (ATEC) department is to train future automotive technology students for job entry positions and provide upgrade training for experienced technicians.

Most graduates start at job entry levels at independent and dealership shops. Other students continue their education at 4 year institutions and usually gain employment with auto manufacturers. Eventually, some graduates start their own auto business. These include but are not limited to repair shops, consulting, specialized areas such as vehicle inspection and evaluation.

Women have been trained by this program and have secured employment as service writers, technicians, clay modelers, and upper management in the automotive industry. Although the majority of students intend to earn a certificate or degree, many gain employment after enrolling in only one or two classes and are therefore not tracked nor identified as program completers.

Tracking of students is almost none existent and ineffective, once students leave the school. Students move, change phone numbers and do not up-date their information to the school. Some students will occasionally keep in verbal contact, but most do not. The program offers A.S degrees and certificate.

Training also prepares students to pass the Automotive Service Excellence (ASE), a national automotive technician certification, recognized by the automotive industry and gives credibility to our trained students.

This program enrollment fluctuates inversely to the national, state and local economic health. Historically, as the economy flourishes, enrollment is down, and when there is a scarcity of employment, the enrollment increases. This spring 2009 enrollment is a classic example of this historical trend. Enrollment in this department has increased. Because the unemployment rate continues to increase, El Camino College - Compton Center will be impacted with students. In addition, the UC and CSU systems are reducing the incoming freshmen classes due to budget cuts and this move will further increase enrollment at El Camino College - Compton Center. These students, denied entry into the CSU and UC, will naturally seek freshmen status at El Camino College - Compton Center and other community colleges.

### **Content Knowledge:**

Students learn the principles of operation, construction, and testing procedures of various systems and components to enhance their trouble shooting skills and knowledge.

### **Critical, Creative, and Analytical Thinking:**

This training category has been an integral and natural part of ATEC.

Students approach every repair job:

1. Using system knowledge or component operational principles
2. Test components and collect data
3. Analyze the collected data
4. Design a repair strategy
5. Implement the repair plan
6. Validate the effectiveness of the repair
7. Automotive repair requires critical, creative, and analytical thinking.

### **Communication and Comprehension:**

ATEC students learn the nuances of dealing with the public who may lack auto knowledge. The student must be able to communicate effectively in order to promote understanding and comprehension by the customer. This communication skill requires practice and time to perfect. In addition, students learn to deal with public preconceptions that many repair shops and technicians are dishonest. The technicians must fill out work orders, indicating the required repair. It includes but is not limited to describing and verifying the complaint, recording the analysis of the collected data, conclusion, and confirmation of the completed successful repair.

### **Professional Growth and Personal Growth:**

ATEC students are schooled in ethical repair practices and are taught the state laws and regulations of auto repair. Faculty serves as professional models by maintaining membership and participation in groups, such as California Automotive Teachers, Automotive Service Council, and Society of Automotive Engineers (SAE), a special organization specifically including instructors and other qualified members. SAE provides an avenue to automotive related information. ATEC faculty encourages students to take Automotive Service Excellence (ASE) national certification tests. These ASE tests consists of take a written test, proctored twice a year at local designated sites and is written to indicate knowledge, skills and experience. This national certification must be renewed every 5 years Community and Collaboration Student's thinking, values, and behavior have changed in the last decade. They are more aware of world events, enjoy electronic devices, and are computer savvy. And most have established goals but lack the requirements to achieve these goals. Student needs are addressed by the program awareness with individual teachers, who develop individual classroom and lab strategies that support or knowledge to gain employment. Based on this trait, some teachers form teams consisting of 3-4 students to capitalize on their gregarious interaction, caring for each other and helping each other. Other teaching methods include awarding highest team quiz scores, thereby promoting camaraderie through group studying and learning

the effectiveness of dedication to goals. There are other simple effective teaching methods implemented.

### **Status of Previous Recommendation:**

Department chairs that have knowledge in the discipline area understand the program demand and instructor needs to be productive. The dean is deemed to be omniscient, omnipresent, etc. and is expected to manage effectively and efficiently all departments. This However, the I&T Dean and Associate Dean can not possibly handle effectively and efficiently all responsibilities. At the very least, it is prudent to establish several I&T division group leaders responsible for several departments and be given release time. El Camino Compton Center instructors are presently updating (ASE) Automotive Service Excellence Certifications. Our goal is to get National Automotive Technician Education Foundation (NATEF) certification at El Camino Compton Center. Instructors in the Industry and Technology areas need lab/tool room assistance to help monitor shop safety and assist in shop procedure. In our automotive area, we have individual area and limited space in the area to set up several demonstration procedure per student. We have no storage room or area for storing. We need all the space we have for automotive technology. An example of this, is when we tried to have Diesel in with automotive. As automotive technology increase with students, we need our space in the shop area.

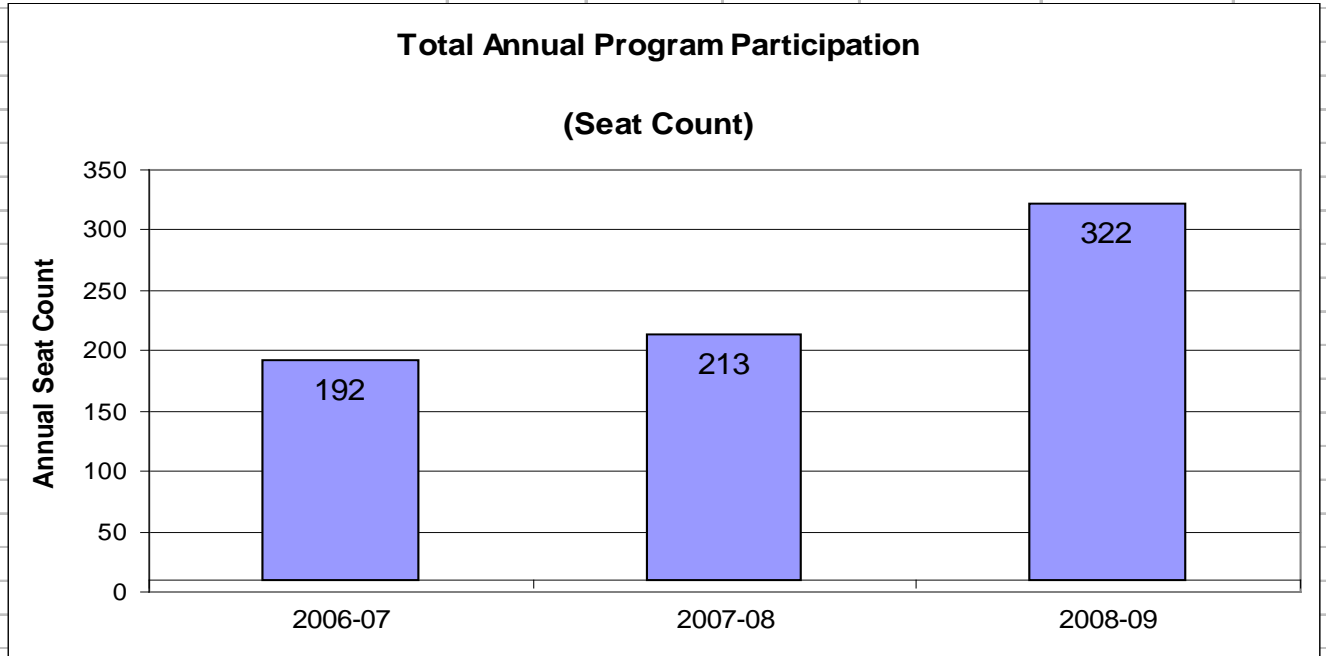
### **Analysis of Institutional Research Data**

**Total Annual Program Participation (3-year Trend)**

**Years: 2006-07 to 2008-09**

**Program: ATEC**

	2006-07	2007-08	2008-09	3 Yr Average
Annual Seat Count	192	213	322	242



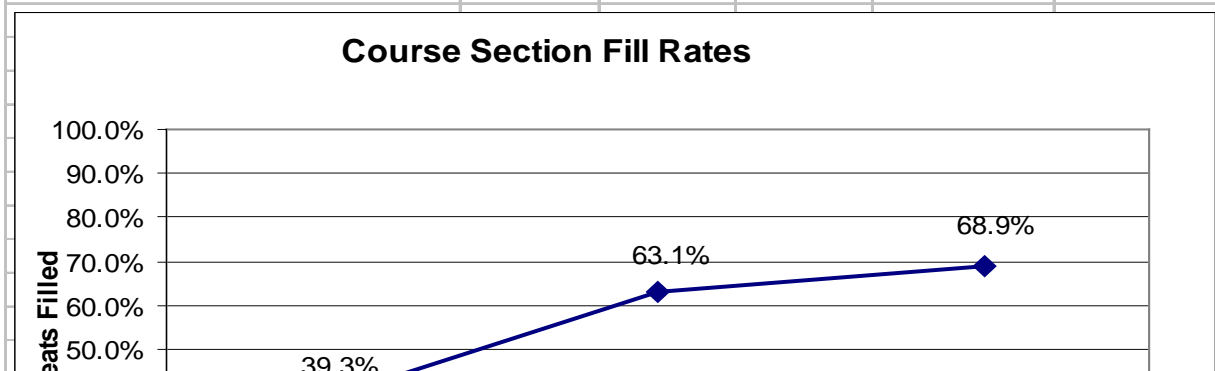
**Course, Section, Seat Counts**

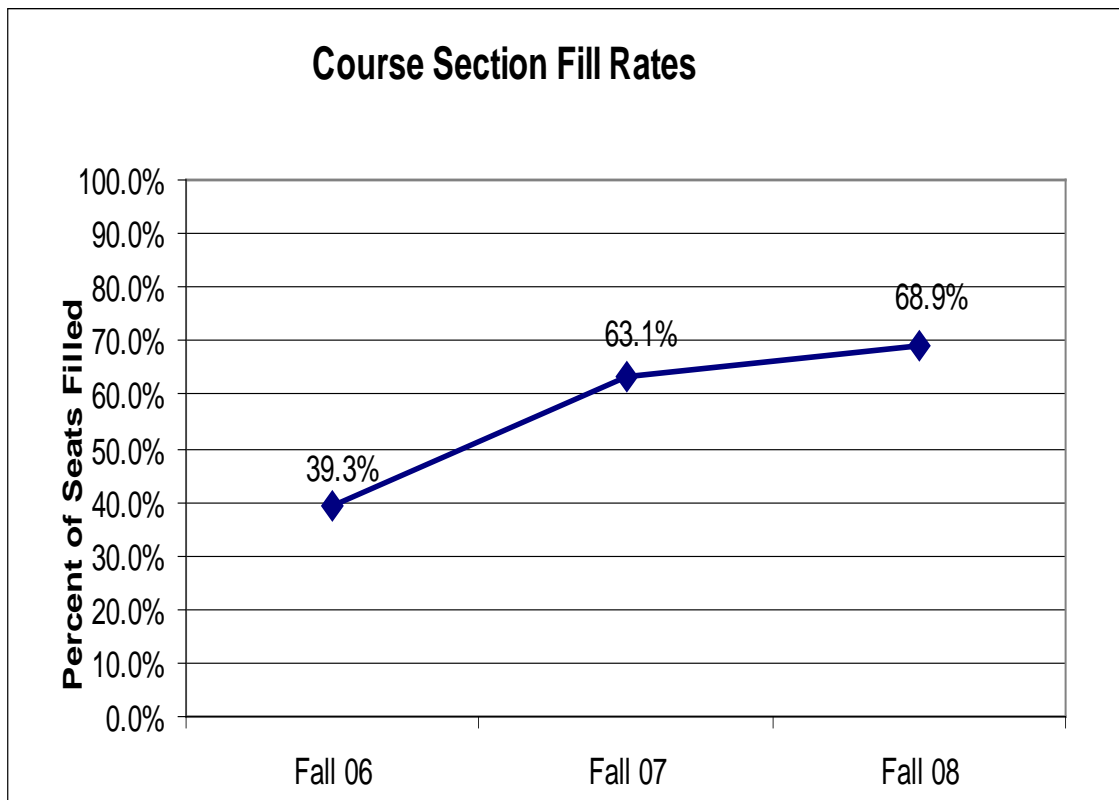
**Years: 2006-07 to 2008-09**

	2006-07	2007-08	2008-09
Sections	16	13	17
Seats	192	213	322
Unduplicated Students	125	128	221
Seats/Unduplicated Students	1.5	1.7	1.5

**Course Fill Rates**

	Fall 06	Fall 07	Fall 08
	39.3%	63.1%	68.9%





**Curriculum:**

Course, Content, and Articulation

All ATEC courses except ATEC 81 Automotive Air Conditioning require updating to be in compliance. These courses are in the process of being revised and completion is anticipated by the end of spring 2009. Student survey indicates an interest in hybrids, electric vehicles and alternative fuels. These courses will enhance student knowledge base and provide more opportunities for employment as well as provide industry with better trained entry level technicians. No courses should be deleted from the current course offerings. El Camino College Compton Center Automotive instructors uses the El Camino College catalog.

**Student Learning Outcomes (SLOs)**

Program SLOs has been completed spring 2009 during flex activities and have been all courses have been completed at level one, evidenced by the inclusion of required safety instruction and student testing.

**Facilities and Equipment:**

The automotive department has abandon vehicles, and vehicles in the automotive area that is not in compliant with the rules and regulations. Automotive vehicles need to be towed at the owner expense. This is a on going problem that has been mentioned before with no action taken. The department has a state of the art automotive training facility, not a junk yard. The automotive department equipment needs update, repair and installation.

**Staffing:**

Current staffing consists of two full-time and one time instructor. Appear to meet the present needs only for the present semester. Enrollment data indicates increased enrollment may necessitate restoring the part time instructor to his full-time position. One of the full-time instructor is on sick leave. There has been an emphasis on “Green Technology” and a recent submission of a grant for Hybrid and Electric Car program implementation. Therefore, natural program expansion is anticipated within the next five years.

**Planning:**

The next four years of planning will be significant for this department and program goals because of the recession, which affects budgets, funding, and enrollment and provides opportunities.

1. Required facility maintenance will be limited. Basic facility repairs are coming from department funds rather from the institution.
2. New equipment procurement will be delayed because the division has been informed that there is a lack of funding. Request for equipment will be submitted without expecting approval because of budgetary reduction.
3. Enrollment is on the rise since many students report losing their jobs and seek training .
4. Closures by Chrysler and GM will affect available dealership jobs and the repair industry. It is predictable that less new cars would be sold and more old cars will be repaired, resulting in increase sales in the after market parts field.
5. Stimulus incentives offer some funding opportunities. The recent submission of a grant for Hybrid and Electric Cars may bring welcomed funding to the department for facility improvement, equipment enhancement, and program expansion for promoting Green Technology. The grant includes opportunities for building strong partnerships and articulation agreements among the high schools, ECCCC, the 4 year institutions and supported by industry. It is an exciting time to rebuild programs and form linkages.

The automotive industry is a continuing evolution of new technologies. Every year there are more cars featuring new electronic equipment such as built in GPS and radar assisted parking and braking, and the list continues to grow annually. Manufacturers produce more hi-tech equipment at a rapid rate, requiring new test equipment and knowledge. This requires the ATEC program to keep abreast with the equipment/knowledge requirements in order to provide updated training as part of the departmental mission statement. Update training is a constant requirement for faculty and increased funds should be provided. Faculty seeks gratis training on their own time and at their own expense and occasionally share transportation costs and request reimbursement from departmental accounts. The department should consider a name change to reflect the changes in our mission and evolution of transportation technology. It may be renamed Advanced Transportation and Energy to encompass automotive, trucks, hybrids, alternative fuel, marine, and renewable energy fuel vehicles. This name change has not been yet been discussed officially.

Develop green technology as evidenced by the recent collaborative submission of a Hybrid and Electric Vehicle grant. Form stronger partnerships with industry and articulate with 4-year institutions, regional occupational centers and high schools. Continue to seek training for faculty. Complete requirements for National Automotive Technicians Education Foundation (NATEF) certifications. These achievable goals will bring the ECCCC Automotive Technology Department to the forefront of automotive technology education

**Conclusion:**

The future department goals are to 1. Achieve NATEF certification, 2. Repair and modernize the facilities and procure new tools and equipment to provide a safe and efficient learning environment, 3. Establish more green technology courses such as Alternative Fuels, Hybrids, Electric Cars, This department has voiced its concerns and observations, can respond to the identified challenges and is working towards providing an improved learning environment for students as they gain knowledge and skills.