Eastern Center for Arts and Technology

Program Review
Final Report

Automotive Technology
Program

2013
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Job prospects for Automotive Service and Repair Technicians are expected to be excellent, particularly for those with training from an accredited technical school or with formal apprenticeship training.

The U.S. Department of Labor, Bureau of Labor Statistics, predicts a 17% shortage, nationally, of Automotive Service and Repair Technicians. The employment pool of all occupations is projected to grow 14%, by the U.S. Department of Labor, through 2020. This puts the Automotive Service and Repair Industry need for technicians 3% ahead of all other occupations.

Pennsylvania labor statistics compiled by Economic Modeling Specialists, Inc., predict that Automotive Service and Repair Technician employment is expected to grow through 2020. The demand for technicians will increase as the population, economy, and alternative modes of transportation grow. The U.S. Bureau of Labor Statistics, Occupational Outlook Handbook, reports that for the Occupational Title of: Automotive Service Technician and Mechanics, there were 723,400 workers in 2010, and that the number would grow to 848,200 employed, in 2020. Attendees of technical schools or formal automotive training centers will have the best opportunities at success in the automotive industry. Graduates from EASTERN will enjoy a head start, and have the basic knowledge and skills, to enter post-secondary and factory training programs. With this training they will have the fundamentals to continue in Dealerships, Franchised and Independent Service Centers, as Class A and Master Automotive Technicians. Service work tends to remain relatively stable through lulls in the economy. The age of vehicles still being driven daily is at an all time high. This increases the need for competent, trained technicians to keep them operating safely, and in a state of good repair.

The Center for Workforce Information and Analysis reports that Automotive Service and Repair Technicians in the Tri-County area (Bucks, Montgomery, and Philadelphia Counties) demand is expected to grow 7.03% through 2014. The U. S. Bureau of Labor Statistics looks favorably to increased employment opportunities straight through 2020, for qualified Automotive Service and Repair Technicians. Growth can be expected locally in annual job openings with 30% of the jobs due to business growth, and 70% due to attrition and the retirement of incumbent technicians. Employers prefer to hire those with technical school or apprenticeship training. Many technicians still learn the trade informally on the job, but those days are coming to an end, due to the complex technologies designed into the vehicles of today.
Summary of Graduate Placement

According to data compiled by EASTERN in July 2011, Automotive Technology students from the 2010-2011 graduating class had a 92.3% placement rate. Overall, Automotive Technology students for the years of 2009, 2010, and 2011 have had an 82.6% placement rate. Automotive Technology students from 2010-2011 graduating class entered post-secondary related education, at a rate of 76.9%. For 2010-2011, 46.4% of Automotive Technology students achieved the EASTERN completion standard of a final grade of 70% or higher, and completion of all tasks in the career objective. EASTERN’S Key Indicators of Program Success (KIPS) Data for 'PDE Standard of Competent and Above' indicate that the Class of 2010 scored 92.3%, the Class of 2011 scored 58.8%, and that the Class of 2012 scored 81.2%. The Automotive Technology OAC has reviewed the NOCTI Testing Scores and provided their comments on the data and has voiced their opinions on ways to increase performance.

Student placement in secondary education and related employment has been above average when compared to the overall placement rate for EASTERN.

Program Viability

Currently the Automotive Technology Program at EASTERN is experiencing steady enrollment. Great effort has been placed on marketing the Automotive Technology Program and the benefits it could provide for students in their future. EASTERN’S Career Expo has given visiting students and counselors more insight to the Automotive Technology Program through demonstrations in the shop. Postcards have been sent to parents and students encouraging them to visit and seriously consider Automotive Technology as a lucrative and promising career. The postcards further remind parents of growth and professional career opportunities in the Automotive Technology field.

Open House had local dealerships displaying current model vehicles and the diagnostic equipment and capabilities. EASTERN has displayed traditionally powered gasoline vehicles, along with Hybrids, 100% Electric propelled vehicles, and Compressed Natural Gas powered vehicles. This exposed parents and students to the industry and educational opportunities available at EASTERN. The Open House exposure was highly effective. That day several students completed enrollment cards for the upcoming school year. It is expected that registration for the upcoming class will rise over the previous years. There has been a return of economic stability to the Automotive Industry, and this should encourage students to seek out an Automotive Career.
The Automotive Technology Occupational Advisory Committee recommends and supports the continuation of the Automotive Technology Program at EASTERN. This recommendation is due to the (1) continuing market demand for technicians, (2) improved placement rates of graduates. Input from local Dealerships, Independent, and Franchised Service Facilities all support the demand for technicians in the industry.

During our NATEF/ASE Reaccredidation this past year the NATEF On-Site Team recommended that the Shop gain more floor space. Additionally, the Outside Storage Area should be enclosed and weatherproofed. Also, that the Alignment Machine is replaced with a modern 4-wheel system, and that better access be provided to the Alignment Equipment. The Team went on to say that the Program is well organized and sequenced. They stated that the Program's Training Mock-Ups were excellent and that 'Real World Instruction' (Live Work) was well managed.

Summary of Industry Trends

Trends indicate that the Automotive Service and Repair industry is responding to a market that is influenced by concerns for energy conservation, environmental responsibility and technological advancements in new vehicles. As the Profit Margins on New Car Sales continue to dip, there has been resurgence in the importance of Service and Repair at the Dealership level. Manufacturers are requiring Dealers to place the Service Department at the front end of the dealership. Maintenance and Light Repair (MLR) are now the profit generators for dealerships, not new car sales. There will be an increased need for both Advanced Level 'B' Technicians and Entry Level 'C' Technicians as the MLR Trend continues. Retiring Master 'A' Technicians are also adding to the need for qualified new Technicians.

Concern for the rising costs of fuels and the diminished supply of oil, has prompted the development of new energy-saving Hybrid, Electric, CNG, and Hydrogen Fuel Cell Vehicles. An emphasis on better energy management should lead to new technology in fuel cells, batteries, and alternative fuels. Basic knowledge of electrical and electronic controls, Ohm's Law and motor controls will be of utmost importance to basic Technician's skills. Qualified technicians must keep current with industry trends and technological advances in electrical/electronic systems, CVT transmissions, Drive by Wire, direct fuel injection systems, forced induction systems, Wheel Alignment with Stability Control, ABS / Traction Control, telematics, and energy management systems with continuing education on new vehicle Service and Repair techniques and procedures.
Environmental responsibility is an important aspect of the Automotive Service and Repair Industry. As the threat of Global Warming continues to hover over our heads, technicians are increasingly being held responsible for the proper handling of recyclable materials used in the industry. Technicians need training in conservation, recovery, and recycling of harmful chemicals, and materials. Systems are being modified to take advantage of new environmentally friendly "Green Systems".

Technicians need to possess "Communication Skills" to work with customers. It is essential that they are able to understand *The Three C’s* - "Concern, Cause, and Correction". Further, communication with employers is equally important. A "business sense" is an essential skill as a technician grows within the industry.

Career Development and "Soft Skills" will be of utmost importance to EASTERN'S graduates as the Job Market becomes increasingly competitive. Not only knowing your automotive repair skills, but also knowing how to market yourself to employers will give our students a competitive edge, and enable them to grow and advance in their career.

As employers require higher levels of education, Pennsylvania's SOAR / POS will enable our graduates to gain college credits for the Tasks they have mastered at EASTERN. This will enable our graduates to save both time and money in their quest to advance their careers. By attaining high Scores on the NOCTI / SOCAT students can receive College level credits at institutions that have Articulation Agreements with the state of Pennsylvania. Several of our graduates are now taking advantage of this opportunity.

Industry training is important to keep pace with industry trends. Students need to be educated and certified in current advancements and technologies to make them employable and an asset to the industry. To assure that students are current the instructor must stay current in new energy conservation methods, along with environmental and technological advances.
Recommendations:

Based on industry trends, the Committee makes the following recommendations

Recommendation 1: The Occupational Advisory Committee recommends the curriculum of the program for both the Automotive Technician Trainee and Under Car Specialist career paths be aligned with the PA Dept. of Ed. POS/SOAR. Also, that EASTERN'S Career Development and Soft-Skills Tasks be included in the program's Task Grid.

Recommendation 2: The Occupational Committee recommends that both first and second year students complete training provided by SP2P on Personal Safety and Environmental Hazardous Waste Training. They recommend that second year students update their credentials during their Senior Year. SP2P training will enhance student's awareness to safety in their industry, and be an asset to their Employment Portfolio.

Recommendation 3: Based upon the NATEF/ASE Reaccredidation On-Site Team's findings at their visit, it is recommended that the Shop Space be increased, and that outside storage should be enclosed and weatherproofed.

Recommendation 4: The Occupational Advisory Committee recommends that the Program be provided with better access to Alignment Equipment. They note that the PA Program of Study has placed much more emphasis on Steering and Suspension Tasks.

Recommendation 5: The Occupational Advisory Committee recommends that the obsolete Alignment Equipment be updated to a Laser Type 4-Wheel Alignment System. They list this as a high priority purchase. This was also a finding of the NATEF Reaccredidation On-Site Team, and highly recommended at their Exit Conference.

Recommendation 6: The Occupational Advisory Committee recommends that the instructor attend classes on new and emerging automotive technologies, to include: Hybrids, Alternative Fuels, Electrical and Electronic Systems, and Telematics. Also, that training is provided for the new Alignment Equipment, upon its installation.
Implementation Timeline

Phase One- 2013-2014

Summer- 2013

Rewrite Automotive Technician Trainee Curriculum  Cost: $1480.
Rewrite Under Car Specialist Curriculum
Incorporate EASTERN'S Career Development and Soft Skills Tasks with PA Dept. of Education POS/SOAR Task Grid
NATEF Annual Summer Training  Cost: $3500

Fall- 2013

Introduce SP2P Personal Safety and Hazardous Training to First Year Students for Mechanical Safety and Pollution Prevention

Winter- 2013

Second Year Students to Update SP2P Personal Safety and Hazardous Training and obtain new Certifications for Mechanical Safety and Pollution Prevention

Phase Two- 2014-2015

Summer 2014

Instructor attend Training on Alignment and Telematics
Purchase and Install Replacement Alignment Equipment

Equipment: Hunter 4- Wheel Alignment System  Cost: $35,000.00
NATEF Annual Summer Training  Cost: $3500

Phase Three- 2015-2016

Summer 2015

Instructor attend Training on new and emerging automotive technology and systems
NATEF Annual Summer Training  Cost: $3500