

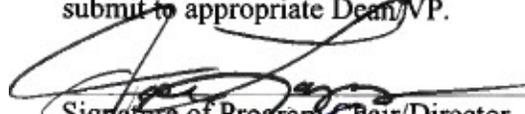
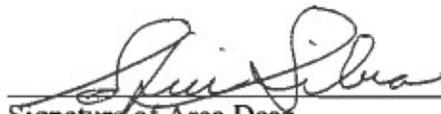
**IMPERIAL VALLEY COLLEGE
PROGRAM REVIEW COMPLIANCE FORM AND REQUEST FOR RESOURCES**

PROGRAM/DEPARTMENT Industrial Technology Department- Automotive Technology ACADEMIC YR. 2013

Comprehensive Program Review Annual Assessment Request for Resources (check all that apply)

Please analyze your Program Review data as well as your SLO/SAO assessment findings in order to update to your Comprehensive Program Review report as needed. All changes to area needs and subsequent requests for additional resources must be reported at this time.

If your program is scheduled for a Comprehensive Program Review all forms are to be completed and submitted to the appropriate Dean/VP. If you are completing the annual Program Review Assessment only and have no changes to area needs, sign below and submit this form to appropriate Dean/VP. If your needs have changed as a result of your annual assessment of program review data, please complete the appropriate Request for Resources form(s) and submit to appropriate Dean/VP.

 _____ Signature of Program Chair/Director	<u>2/19/2013</u> _____ Date	 _____ Signature of Area Dean	<u>2/20/13</u> _____ Date
 _____ Signature of Area Vice President	<u>2/22/2013</u> _____ Date		

Please attach the following documents to this Program Review Compliance form if you are requesting additional resources:

- ✓ Comprehensive Program Review
- ✓ Data Analysis Form
- ✓ SLO/SAO Assessments
- ✓ Request for Resources Forms

Academic Program Evaluation –AUTOMOTIVE TECHNOLOGY
Division – EWD
Department - ITEC

AUTOMOTIVE COURSES:

TERM	Enrollment	Fill Rate	# of Sections	Mass Cap	Avg. Class Cap	Avg. Class Size	FTES	FTEF	PRODUCTIVITY	Completion Ra	Success Rate
Fall 2009	221	127.01%	10	174	17.4	22.1	47.02	4.11	11.44	84%	72%
Spring 2010	204	103.03%	11	198	18	18.55	41.62	4.44	9.37	90%	76%
Fall 2010	249	116.36%	12	214	17.83	20.75	51.81	4.85	10.68	89%	72%
Spring 2011	222	112.12%	11	198	18	20.18	46.36	4.51	10.28	82%	67%
Fall 2011	190	95.96%	11	198	18	17.27	40.15	4.51	8.9	88%	51%
Spring 2012	152	80.85%	11	188	17.09	13.82	30.26	4.17	7.26	82%	65%
% Change Fall Semesters 09 - 11	-14.03%	-24.45%	10.00%	13.79%	3.45%	-21.86%	-14.61%	9.73%	-22.20%	4.76%	-29.17%
% Change Spring Semesters 10 - 12	-25.49%	-21.53%	0.00%	-5.05%	-5.06%	-25.50%	-27.29%	-6.08%	-22.52%	-8.89%	-14.47%

PROGRAM COMPLETION

Number of certificates completed Between Fall 2009 and Spring 2012	Number of Associate Degrees Completed Between Fall 2009 and Spring 2012
7	2

AUTOMOTIVE TECHNOLOGY COURSES

A.S. DEGREE: Required Courses: AUT 110, 125, 130, 150, 155, 160, 170, 180, 210, 220, 230

CERTIFICATE: Required Courses: AUT 110, 125, 130, 150, 155, 160, 170, 180, 210, 220, 230

AUTOMOTIVE TECHNOLOGY COURSES – ENROLLMENT, FILL RATES & WAIT LISTS

COURSES	Course Cap	Enrollment - # Sections						Fill Rate						Wait Lists		
		F 09	S 10	F 10	S 11	F 11	S 12	F 09	S 10	F 10	S 11	F 11	S 12	S 12	F 12	S 13
AU T 070	18			18 - 1						100%						
AUT 085	18			26 - 1	25 - 1					144.44%	138.89%					
AU T 110	18	38 - 2	21 - 1	18 - 1	21 - 1	23 - 1	15 - 1	105.56%	116.67%		116.67%	127.78%	83.33%			
AU T 120	18		11 - 1		17 - 1	14 - 1	15 - 1		61.11%	100%	94.44%	77.78%	83.33%			
AU T 125	18	28 - 1	40 - 2	27 - 2	25 - 1	34 - 2	19 - 1	155.56%	111.11%	102.78%	138.89%	94.44%	105.56%			
AU T 130	18	25 - 1	23 - 1	21 - 1		18 - 1	36 - 3	156.25%	127.78%	116.67%		100%	81.82%			
AU T 150	18	16 - 1		24 - 1	21 - 1	11 - 1		88.89%		133.33%	116.67%	61.11%				
AU T 155	18	27 - 1	22 - 1	37 - 2	19 - 1	20 - 1		150%	122.22%	102.78%	105.56%	111.11%				
AUT 160	18	14 - 1	23 - 1		19 - 1	17 - 1	19 - 1	77.78%	127.78%		105.56%	94.44%	105.56%			
AU T 170	18	20 - 1	15 - 1	21 - 1		19 - 1	15 - 1	111.11%	83.33%	116.67%		105.56%	83.33%			
AU T 180	18				21 - 1		14 - 1				116.67%		77.78%			
AU T 210	18	26 - 1	24 - 1	21 - 1	20 - 1	19 - 1	9 - 1	162.50%	133.33%	116.67%	111.11%	105.56%	50%			
AU T 220	18	27 - 1		26 - 1	14 - 1	15 - 1		168.75%		162.50%	77.78%	83.33%				
AU T 230	18				20 - 1		10 - 1				111.11%		55.56%			
AU T 235	18		13 - 1						72.22%							
AU T 250	18		12 - 1						66.67%							

AUTOMOTIVE TECHNOLOGY COURSES - PRODUCTIVITY

COURSE	FTES						PRODUCTIVITY												
	F 09	S 10	F 10	S 11	F 11	S 12	F 09	S 10	F 10	S 11	F 11	S 12	F 09	S 10	F 10	S 11	F 11	S 12	
AU T 070			4.32						0.2						21.60				
AUT 085			4.46	4.29					0.2	0.2					22.30	21.45			
AU T 110	10.43	5.76	4.94	5.76	6.31	4.11	0.54	0.27	0.27	0.27	0.27	0.27	19.31	21.93	18.30	21.93	23.37	15.22	
AU T 120		3.02		4.66	3.84	4.11		0.27			0.27	0.27		11.19			17.26	14.22	15.22
AU T 125	5.76	8.23	7.61	5.14	7	3.91	0.27	0.54	0.54	0.27	0.54	0.27	21.93	15.24	14.09	19.04	12.96	14.48	
AU T 130	4.29	3.94	3.60		3.09	6.17	0.20	0.20	0.20		0.2	0.60	21.45	19.70	18.00		15.45	10.28	
AU T 150	3.29		4.94	4.32	2.26		0.27		0.27	0.27	0.27		12.19		18.30	16.00	8.37		
AU T 155	5.55	4.53	7.61	3.91	4.11		0.27	0.27	0.54	0.27	0.27		20.56	16.78	14.09	14.48	15.22		
AUT 160	2.40	3.94		3.26	2.91	3.26	0.20	0.20		0.2	0.2	0.2	12.00	19.70		16.30	14.55	16.30	
AU T 170	3.43	2.57	3.60		3.26	2.57	0.20	0.20	0.20		0.2	0.2	17.15	12.85	18.00		16.30	12.85	
AU T 180				4.32		2.88				0.27		0.27				16.00		10.67	
AU T 210	4.46	4.11	3.60	3.43	3.26	1.54	0.20	0.20	0.20	0.2	0.2	0.2	22.30	20.55	18.00	17.15	16.80	7.70	
AU T 220	7.41		7.13	3.84	4.11		0.27		0.27	0.27	0.27		27.44		26.41	14.22	15.22		
AU T 230				3.43		1.71				0.2		0.2				17.15		8.55	
AU T 235		2.23						0.20						11.15					
AU T 250		3.29						0.27						12.19					

AUTOMOTIVE TECHNOLOGY COURSES - COMPLETION & SUCCESS RATES

COURSE	Completion Rate						Success Rate					
	F 09	S 10	F 10	S 11	F 11	S 12	F 09	S 10	F 10	S 11	F 11	S 12
AU T 070			83%						72%			
AUT 085			85%	88%					81%	76%		
AU T 110	84%	81%	94%	90%	91%	80%	84%	76%	83%	86%	39%	60%
AU T 120		100%		76%	100%	87%		73%		53%	21%	40%
AU T 125	79%	85%	78%	92%	85%	95%	36%	63%	43%	64%	44%	68%
AU T 130	100%	96%	100%		94%	78%	92%	83%	95%		44%	69%
AU T 150	81%		96%	76%	91%		50%		54%	71%	45%	
AU T 155	81%	100%	95%	79%	90%		78%	77%	86%	53%	55%	
AUT 160	79%	91%		89%	88%	63%	57%	91%		74%	76%	58%
AU T 170	70%	60%	81%		68%	87%	70%	53%	67%		63%	87%
AU T 180				76%		79%				48%		50%
AU T 210	85%	96%	76%	80%	89%	100%	85%	79%	67%	60%	74%	78%
AU T 220	89%		100%	57%	87%		81%		81%	57%	47%	
AU T 230				90%		80%				85%		80%
AU T 235		100%						92%				
AU T 250		100%						92%				

Recent Enrollment Demand: High _____ Medium X _____ Low _____

Projection for Future Demand: Growing X _____ Stable _____ Declining _____

Opportunity Analysis: (Successes, new curriculum development, alternative delivery mechanisms, interdisciplinary strategies, etc.)

The Automotive Department provides education that combines structure on-the-job training with classroom instruction and responds to labor market needs and maintain objectivity of degrees and certificate programs. This will assure our students, employers, and the community that our programs will fit and meet the requirements of today's technology.

The automotive program is fully certified by the National Automotive Technicians Education Foundation (NATEF). This certification ensures the student will receive training in automotive repair that meets automotive industry standards. Upon completion of the program a student will be prepared for an entry-level position in the automotive industry.

The program is established on a firm foundation of fundamentals. Preparing students to be lifelong learners is essential to success in the automotive industry. The primary reason students attend the automotive program is to gain the skill needed to get a job in the automotive industry. There needs to be follow up to identify the number of students that gained employment from their experience. Faculty serves as professional models by maintaining membership and participation with California Automotive Teachers Association and the Mobile Air Conditioning Society (MACS). Each year the full and part-time Instructors attend The California Automotive Conference where they have an opportunity to exchange curriculums and ideas with other automotive instructors.

All automotive Instructors are (ASE) certified with more than 20 years of experience in the automotive field. Our faculty attends at least one dealership workshop (40 hours) each year. NATEF certification drives our curriculum. NATEF has tasks and objectives that must be met.

Summary of Program "Health" Evaluation: (Including consideration of size, score, productivity and quality of outcomes)

The mission of the Automotive Technology department is to train future automotive technology students for job entry positions and provide upgrade training for experienced technicians. Success rate is impacted by students leaving early with job opportunities. Most students start at job entry levels at independent and dealership shops. Eventually, some students start their own auto business. These include but are not limited to repair shops, consulting, parts department, specialized areas such as vehicle inspection and evaluation. Women have been trained by this program and have secured employment. 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. 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.

The Automotive Program is in the process of updating its curriculum. Developing new certificates of achievement which consist of 13-16 units that will provide student retention, completion and success rates. These courses are in the process and completion is anticipated.

Instructors and Staff.

Currently, we have two full-time Automotive Faculty for the 2009-2012 Academic Year to teach classes during day schedule. In addition, we have 4 adjunct faculty members, who teach flexible schedules in the fall and spring semesters, as well as summer section. We offer between 12 - 14 classes per semester with a flexible schedule. Our doors open from 8:00 am to 10:00 pm, Monday through Thursday and Friday from 8:00 - 4:30 pm and Saturday from 8:00 am to 2:00 pm. We teach face to face.

Enrollment

Enrollment in career and technical education courses shall not exceed the number of individual work stations. Career and technical education laboratory classes which use equipment that has been identified by the U.S. Department of Labor for hazardous occupations shall be limited to a maximum of 20 students per laboratory.

In the Automotive Program, the enrollment is steady between 70 -100 percent with 18-20 students per class. Also, our Mayor/ Certificate consist of 39 units. In addition; the department is developing certificates of achievement 13-16 units to provide further retention, completion, and success rate. The program does not have a waiting list but acquire crashers every semester.

Student Learning Outcomes Assessment –completion

Course	SLO's	Cycle Assessment Completed	ISLO Linked To
AU T 070	<ol style="list-style-type: none"> 1. Identify the major parts of an automotive brake system. 2. Explain the operating principles of steering systems. 3. Perform fundamental electrical test. 	Identified	<ol style="list-style-type: none"> 1. ILO1, ILO3, ILO4 2. ILO1, ILO3, ILO4 3. ILO1, ILO3, ILO4.
AU T 075	<ol style="list-style-type: none"> 1. Identify and locate the most important parts of a vehicle. 2. Identify common automotive hand tools. 3. Select the right tool for a given job. 	Identified	<ol style="list-style-type: none"> 1. ILO1, ILO4 2. ILO1, ILO3, ILO4 3. ILO1, ILO3, ILO4
AU T 085	<ol style="list-style-type: none"> 1. Explain the interaction of automotive systems. 2. Describe the purpose of the fundamental automotive system. 3. Describe the type of skills needed to be an auto technician. 	Identified	<ol style="list-style-type: none"> 1. ILO1, ILO3, ILO4 2. ILO1, ILO3, ILO4 3. ILO1, ILO3, ILO4
AU T 110	<ol style="list-style-type: none"> 1. Identify and interpret engine concerns; determined necessary action 2. Perform cylinder cranking and running compression test; determined necessary action. 3. Remove cylinder head; inspect gasket condition; install cylinder head and gasket; tighten according to manufacturer's specifications and procedures. 4. Disassemble engine block; clean and prepare components for inspection and reassembly. 	Identified	<ol style="list-style-type: none"> 1. ILO1, ILO2, ILO3 2. ILO1, ILO2, ILO3 3. ILO1, ILO2, ILO3 4. ILO1, ILO2, ILO3
AU T 120	<ol style="list-style-type: none"> 1. Describe engine size measurements based on bore, stroke, displacement, and number of cylinders. 2. Explain engine compression and how it affects engine performance. 3. Explain engine torque and horsepower ratings. 4. Explain volumetric efficiency, thermal efficiency, mechanical efficiency, and total engine efficiency. 	Identified	<ol style="list-style-type: none"> 1. ISLO1, ISLO2, ISLO4 2. ISLO1, ISLO2, ISLO4 3. ISLO1, ISLO2, ISLO3, ISLO4 4. ISLO1, ISLO2, ISLO4.
AU T 122	<ol style="list-style-type: none"> 1. Describe safety practices to be follow when performing engine bottom and service. 2. Explain how to measure cylinder and piston wear. 3. Identify and interpret engine top end, and engine blueprinting system concern; determined necessary action. 4. Students will create an engine layout to determine engine components needed to repair with modern engine equipment. 	Identified	

AU T 125	<ol style="list-style-type: none"> 1. Identify and interpret brake system concern; determine necessary action. 2. Diagnose pressure concerns in the brake system using hydraulic principles. (Pascal's Law) 3. Diagnose poor stopping, noise, vibration, pulling, graving, dragging or pedal pulsation concerns; determine necessary action. 4. Identify and inspect electronic brake control systems components; determine necessary action. 	Identified	<ol style="list-style-type: none"> 1. SLO1, SLO2, SLO3 2. SLO1, SLO2, SLO3 3. SLO1, SLO2, SLO3 4. SLO1, SLO2, SLO3
AU T 130	<ol style="list-style-type: none"> 1. Identify and interpret electrical/electronic system concern; determine necessary action. 2. Use wiring diagrams during diagnosis of electrical circuit problems. 3. Demonstrate the proper use of a digital multimeter (DMM) during diagnosis of electrical circuit problems, including; source voltage, voltage drop, current flow, and resistance. 	Identified	<ol style="list-style-type: none"> 1. ILO1, ILO2, ILO3 2. ILO1, ILO2, ILO3 3. ILO1, ILO2, ILO3
AU T 150	<ol style="list-style-type: none"> 1. Describe the action of basic electric circuits. 2. Compare voltage, current, and resistance. 3. Explain different kinds of automotive wiring. 4. Perform fundamental electrical tests. 	Identified	<ol style="list-style-type: none"> 1. ILO1, ILO3, ILO4 2. ILO1, ILO3, ILO4 3. ILO1, ILO3, ILO4 4. ILO1, ILO3, ILO4
AU T 155	<ol style="list-style-type: none"> 1. Identify and interpret suspension and steering system concerns; determined necessary action. 2. Diagnose steering column noises, looseness, and binding concerns (including tilt mechanisms); determine necessary action. 3. Inspect, remove, and replace shock absorbers. 4. Inspect tire condition; identify tire wear patterns; check and adjust air pressure; determine necessary action. 	Identified	<ol style="list-style-type: none"> 1. ILO1, ILO2, ILO3 2. ILO1, ILO2, ILO3 3. ILO1, ILO2, ILO3 4. ILO1, ILO2, ILO3
AU T 160	<ol style="list-style-type: none"> 1. Identify and interpret engine performance concern; determined necessary action 2. Retrieve and record diagnostic trouble codes, OBD monitor status, and freeze and frame data; clear codes when applicable 3. Diagnose emissions or driveability concerns without store diagnostic trouble codes; determined necessary action 	Identified	<ol style="list-style-type: none"> 1. ILO1, ILO2, ILO3 2. ILO1, ILO2, ILO3 3. ILO1, ILO2, ILO3
AU T 170	<ol style="list-style-type: none"> 1. Research applicable vehicle and service information such as engine management system operation, vehicle service history, service precautions, and service technical bulletins. 2. Locate and interpret vehicle and major component identification numbers. 3. Check for module communication (including CAN/BUS systems) errors using a scan tool. 	Identified	<ol style="list-style-type: none"> 1. ILO1, ILO2, ILO3 2. ILO1, ILO2, ILO3 3. ILO1, ILO2, ILO3

AU T 180	<ol style="list-style-type: none"> 1. Identify and interpret drive train concerns; determine necessary action. 2. Diagnose clutch noise, binding, slippage, pulsation, and chatter; determine necessary action. 3. Remove and reinstall transmission/transaxle. 4. Diagnose constant-velocity (CV) joint noise and vibration concerns; determine necessary action. 	Identified	<ol style="list-style-type: none"> 1. ILO1, ILO2, ILO3 2. ILO1, ILO2, ILO3 3. ILO1, ILO2, ILO3 4. ILO1, ILO2, ILO3
AU T 210	<ol style="list-style-type: none"> 1. Identify and interpret heating and air conditioning concern; determined necessary action. 2. Perform A/C system test; identify A/C system malfunctions. 3. Diagnose A/C system conditions that cause the protection devices to interrupt system operation. 	Identified	<ol style="list-style-type: none"> 1. ILO1, ILO2, ILO3 2. ILO1, ILO2, ILO3 3. ILO1, ILO2, ILO3
AU T 220	<ol style="list-style-type: none"> 1. Diagnose fluid loss and condition concerns; check fluid level in transmissions with and without dipstick; determine necessary action. 2. Inspect and replace external seals, gaskets, and bushings. 3. Disassemble, clean, and inspect transmission/transaxle. 4. Assemble transmission/transaxle. 	Identified	<ol style="list-style-type: none"> 1. ILO1, ILO2, ILO3 2. ILO1, ILO2, ILO3 3. ILO1, ILO2, ILO3 4. ILO1, ILO2, ILO3
AU T 230	<ol style="list-style-type: none"> 1. Diagnose the causes of emissions or driveability concerns with store or active diagnostic trouble codes; obtain graph, and interpret scan tool data. 2. Access and use service information to perform step-by-step diagnosis. 3. Inspect and test ignition primary and secondary circuit wiring and solid state components; perform necessary action. 	Identified	<ol style="list-style-type: none"> 1. ILO1,ILO2,ILO3 2. ILO1,ILO2,ILO3 3. ILO1,ILO2,ILO3
AU T 231	<ol style="list-style-type: none"> 1. Use advance diagnostic techniques to trouble-shoot difficult problems. 2. Use scan-tool snapshot and data stream values to find problems not tripping trouble codes. 3. Define the fundamental terms relating to automotive emission control. 4. Explain the sources of air pollution. 	Identified	<ol style="list-style-type: none"> 1. ILO1, ILO3, ILO4 2. ILO1, ILO3, ILO4 3. ILO1, ILO3, ILO4, ILO5 4. ILO1, ILO3, ILO4, ILO5
AU T 235	<ol style="list-style-type: none"> 1. Identify and interpret Electrical/ Electronic systems concern; determine necessary action. 2. Diagnose electrical/electronic integrity of series, parallel and series-parallel circuits using principles of electricity (OHM's law). 3. Demonstrate the proper use of a digital multimeter during diagnosis of electrical circuit problems, including: source voltage, voltage drop, current flow, and resistance. 	Identified	<ol style="list-style-type: none"> 1. ILO1, ILO2, ILO3 2. ILO1, ILO2, ILO3 3. ILO1, ILO2, ILO3
AU T 240	<ol style="list-style-type: none"> 1. Describe the typical difference between a minor tune-up and major tune-up for diesel engines. 2. Identify all the steps or procedures to perform a diesel engine tune-up. 3. Remove and reinstall different types of diesel pumps and injectors. 4. Test, service and analyze the fuel system and electrical circuits. 	Identified	<ol style="list-style-type: none"> 1. ILO1, ILO2, ILO3 2. ILO1, ILO2, ILO3 3. ILO1, ILO2, ILO3 4. ILO1, ILO2, ILO3

AU T 250	<ol style="list-style-type: none"> 1. Identify and interpret transmission/ transaxle concerns; determine necessary action. 2. Perform pressure tests (including transmissions/transaxles equipped) with electronic pressure control. Determine necessary action. 3. Perform lock-up converter system tests; determine necessary action. 4. Remove and reinstall transmission/transaxle and torque converter; Inspect engine core plug rear crankshaft, dowel pins and mating surfaces. 	Identified	<ol style="list-style-type: none"> 1. ILO1, ILO2, ILO3, ILO4 2. ILO1, ILO2, ILO3, ILO4 3. ILO1, ILO2, ILO3, ILO4 4. ILO1, ILO2, ILO3, ILO4
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Program Learning Outcomes Assessment

1.Outcome #1: Describe the purpose of the fundamental automotive systems.(Identified)

2.Outcome #2: Describe the type of skills needed to be an auto technician.(Identified)

3.Outcome #3: Correctly answer ASE certification test questions that require a knowledge of the major parts and systems of a vehicle. (Identified)

Program learning outcomes will be assessed by fall 2013.

Success Rate of Program Learning Outcomes& Success Rate of Student Learning Outcomes

Students learn the principles of operation, construction, and testing procedures of various systems and components to enhance their trouble shooting skills and knowledge. Students are tested and must demonstrate their competence in each of the ISLOs, all areas are touch in the courses but some are brief and not assessed.

Critical Thinking, Information Literacy, Global Awareness.

This training category has been an integral and natural part of the automotive program. 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. Handling and disposal of chemicals/materials in accordance with local, state, and federal safety.
8. Environmental regulations.

Automotive repair requires critical thinking, information literacy, and global awareness.

Communication and Responsibility

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.

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 recognition to the 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.

The automotive program will keep monitoring SLO's progress including adjunct faculty.

Student Learning Outcomes Assessment Example;

Course: AUTO-AIR CONDITIONING AUT-210		Semester data collected: FALL-2012	Date this form was completed: 10/25/12
# of sections offered: 1	# of sections assessed: 1	Data Collected from: (Check all that apply) FT Faculty <input checked="" type="checkbox"/> PT Faculty _____ Day _____ Evening <input checked="" type="checkbox"/> Hybrid/Online _____ Weekend _____	
1. People involved in summarizing & evaluating data (minimum of two)		Ricardo Pradis/Jose Lopez	
2. Please list the SLO(s) that was (were) assessed. Include the description listed on the Course Record of Outline.		Outcome 1. Identify and interpret heating and air conditioning concern; determined necessary action. Outcome 2. Perform A/C system test; identify A/C system malfunctions. Outcome 3. Diagnose A/C system conditions that cause the protection devices to interrupt system operation.	

3. Data results

Briefly summarize the data. (Please see instructions).

Outcome 1.

20 % of the students quickly identify the five components of A/C system, with competent conclusions and new insights. Shows leadership in helping organized the team.

40 % of the students can usually solve an air conditioning concern and come up with an acceptable solution. Mostly uses correct procedures and tools.

30% of the students can identify A/C components with supervision. Motivated, but sometimes requires a push. Not a self-starter.

10% of the students does not understand important items many incorrect conclusions. Difficulty determining what needs to be done. Requires reminders for shop clothing and/or eye protection

Outcome 2.

30% of the students can perform an A/C system test with correct procedures and tools. Anticipates problems before they occur.

30% of the students can perform an A/C test and come up with an acceptable solution.

30% of the students can perform the work under supervision.

10% of the students do not participate with the team leaving work for others to do.

Outcome 3.

40% of the students quickly understand the functions of protection devices and complete task without supervision.

30% of the students had problems understanding the basics of electricity but approach the problem prepared with a positive attitude.

20% of the students had problems using correct diagnostic procedures and tools.

10% of the students does not prepare for lab but completes worksheets and repair orders during lab times.

<p>5. How did the SLO(s) contribute to student acquisition of the Institutional Learning Outcome(s) (ILOs)?</p> <p>For example, if ILO #1 (communication skills) was identified as being related to this SLO, then please write a sentence or two supporting the relationship.</p> <p>IVC's 5 ILOs: ILO1 = Communication Skills ILO2 = Critical Thinking Skills ILO3 = Personal Responsibility ILO4 = Information Literacy ILO5 = Global Awareness</p>	<p>The students are assigned a task that let the students get their hands dirty. The tasks give detailed instructions on various hands-on learning activities. Before assigning a task, we discuss it with the class. Present a verbal summary or demonstration of the task procedures. The outcome of these worksheets is designed to measure student achievement and comprehension on ILO1, ILO2, and ILO3</p>
<p>6. Next Steps</p> <p>Was the process effective? Will you change the outcome/assessment (e.g., alter the SLO, assessment, faculty discussion process, strategy for providing SLO to students)? If so, how?</p>	<p>This was a very effective process that helps the student understand real work experience. Proper repair and service of a vehicle demands a high level of professional competency and skill. We decided not to change this particular outcome.</p>

7. After Thoughts

Feel free to celebrate, vent, or otherwise discuss the process

This process will help the student to take on the Automotive Service Excellence (ASE) a national examination for the professional technician.

Future Goals of Program

1. It is predictable that less new cars would be sold and more old cars will be service due to the economy.
2. Funding to the department for facility improvement, equipment enhancement, and program expansion. An example of the program expansion based on industry demand is a new Diesel Technology program.
3. Strong partnerships and articulation agreements with high schools.
4. 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.
5. Manufacturers produce more hi-tech equipment at a rapid rate, requiring new test equipment and knowledge. This requires the program to keep abreast with the equipment/knowledge requirements in order to provide updated training as part of the departmental mission statement.
6. Update training is a constant requirement for faculty and funds should be provided. Faculty seeks training on their own time and at their own expense.

Job Outlook

Employment of automotive service technicians and mechanics is expected to grow 17 percent from 2010 to 2020, about as fast as the average for all occupations. As the number of vehicles in use continues to grow, more entry-level service technicians will be needed to do basic maintenance and repair, such as brake pad replacements and oil changes. The increasing lifespan of late-model cars and light trucks will further increase demand for qualified workers.

Employment projections data for automotive service technicians and mechanics, 2010-20							
Occupational Title	SOC Code	Employment, 2010	Projected Employment, 2020	Change, 2010-20		Employment by Industry	
				Percent	Numeric		
SOURCE: U.S. Bureau of Labor Statistics, Employment Projections program							
Automotive Service Technicians and Mechanics	49-3023	723,400	848,200	17	124,800		

The modernization of automotive program will bring lab space, classrooms, and a better learning environmental in which The student will be able to complete the program certificate and/or major. Modernization will also bring motivation for student retention and success. Certificate Programs approved by the Advisory Committee;

- ❖ Engine and Machinist specialist (18 units)
- ❖ Automotive Transmission Specialist (15 units)
- ❖ Automotive Suspension / Wheel Alignment Specialist (12 units)
- ❖ Automotive Brake Specialist (12 units)
- ❖ Engine Performance and Drivability Specialist (16 units)
- ❖ Automotive electrical / Electronics and Air conditioning Specialist (13 units)
- ❖ Emission Control / Computer System Specialist (20 units)

Other Future Programs

- ❖ Alternate fuel
- ❖ Automotive Parts
- ❖ Hybrid Drive System
- ❖ Electric Cars
- ❖ Instrumentation
- ❖ Emission Control State License
- ❖ Lamps/Brake State License
- ❖ Internship course
- ❖ Diesel Technology

Resource requests from annual program review

In summary, the department has identified in the planning process to;

1. Improve the almost 50 year old facility, which includes but is not limited to modernizing the lab and providing “smart classrooms” with built-in overhead video projectors, sound, and equipment. Start of modernization is projected by spring 2014 and completion estimated by fall 2015.
2. Define a method to identify the number of students that gained employment. An instructor or counselor with experience in automotive industry is needed for job placement.
3. Form stronger partnerships with industry and articulate regional occupational centers and high schools. Continue advisory Committee meetings and visit high schools, plan organize, and conduct fieldtrips to local dealerships, independent shops, and service centers.
4. Continue to seek training for faculty. Full and part-time instructors will be attending manufacture’s workshop and training seminars. These workshops consist of California Automotive Teachers association, Rio Hondo College, L.A. Chrysler training center, Toyota, Honda, and automatic transmission Re-builders Association, Training will consist of one or two weeks of training.
5. Complete requirements for National Automotive Technicians Education Foundation (NATEF) certifications. These achievable goals will bring the Automotive Technology Department to the forefront of automotive technology education. 30 hours per instructor. 2 instructors needed during summer.
6. Create new Diesel Technology program tied to a national Automotive Service Excellence (ASE) certification.
7. Established additional certificates for students who do not complete all the courses but choose to specialize. The department is in the process of developing certificates of achievement.

8. Procure new tools and equipment to provide a safe and efficient learning environment. Tools and equipment will integrate and represent the latest technology and meets NATEF requirements.

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.