



## Automotive Technology

### ANNUAL PROGRAM REVIEW and PLAN 2011

#### Faculty and Staff (List all)

Full Time	Adjunct	Support Staff
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## **Automotive Technology**

### **I. Executive Summary**

#### **AUTOMOTIVE TECHNOLOGY**

##### **Program Description**

Automotive Technology, a career technical program, provides the theoretical background and practical experience necessary to gain entry-level employment or advancement in the automotive technology industry. The program has a contract with Toyota Motor Sales, USA, Inc. that provides students with training aides, diagnostic equipment and a dealer network that helps with job placement. The program offers courses that lead to an associate degree in Automotive Technology as well as to certificates of achievement in Automotive Service, Diagnosis, and Repair—Master Technician; Automotive Service, Diagnosis, and Repair—Toyota/Lexus/Scion Technician; Automotive Service, Diagnosis, and Repair—Undercar/Drivetrain Specialist; Automotive Service, Diagnosis, and Repair—Underhood Specialist; and Automotive Research and Development.

The Advisory Council participates in two meetings per year. A typical meeting is divided between a general meeting that includes the advisory councils for Medium and Heavy Truck Technology and Motorcycle Technology and, second, a specialized meeting focused on Automotive Technology. The Advisory Committee includes more than 50 members, including 28 members of the Toyota T-TEN council, with service department managers and shop foremen from dealers throughout the greater Los Angeles area. The Automotive Technology Advisory Council also includes educational partners from local high schools, the University of Southern California, and California State University, Los Angeles; owners of independent automotive repair shops; and business representatives from automotive support and high performance industries.

Courses in automotive technology are offered primarily in the day, with select evening courses available as well.

#### **MEDIUM AND HEAVY TRUCK TECHNOLOGY**

##### **Program Description**

Medium and Heavy Truck Technology, a career technical program, provides the theoretical background and practical experience necessary to gain entry-level employment or advancement as heavy duty truck, bus, and heavy equipment technicians. Courses lead to a certificate of achievement in Medium and Heavy Truck Service, Diagnosis, and Repair Technician.

This program recently revised all curriculum and certificates. The certificate now shares four courses with Automotive Technology.

The Advisory Council participates in a general meeting that includes the advisory councils for Automotive Technology and Motorcycle Technology before dividing into specialized

meetings. The Medium and Heavy Truck Technology Advisory Council consists of 19 members, including representatives from bus lines, trucking companies, truck repair businesses, Metro Transit, the Los Angeles County Fire Department, and the local Air Resources Board.

Courses in medium and heavy truck technology are offered during the day.

## **MOTORCYCLE TECHNOLOGY**

### **Program Description**

Motorcycle Technology, a career technical program, provides the theoretical background and practical experience necessary to gain entry-level employment or advancement as motorcycle technicians. Courses lead to a certificate of achievement in Motorcycle Service, Diagnosis and Repair Technician.

The Advisory Council participates in a general meeting that includes the advisory councils for Automotive Technology and Medium and Heavy Truck Technology, before dividing into specialized meetings. The Motorcycle Technology Advisory Council consists of 16 invited members including owners and other representatives of motorcycle dealerships, power sports businesses, and motorcycle repair shops.

Courses in motorcycle technology are offered in the evening concurrently with auto tech classes, although these offerings have been limited in recent semesters due to budgetary constraints and a limited supply of qualified instructional staff (faculty). Currently underway is a plan to revise the curriculum to allow for dedicated Motorcycle Technology courses offered to completers of Automotive Technology certificates.

### **Strengths/Effective Practices:**

- Self-assessment (most recently through piloting a new T-TEN TMS assessment process) has shown that the Automotive Technology Program has the capability to assess their strengths/weaknesses/opportunities and make the changes necessary to continually improve the program.
- Revised the pre-requisite structure for courses to increase student success as they progress through the program.
- Incorporated a co-op training component into the class sequence that provides guidance and oversight for students at the job site following successful job-placement.
- Piloting an unpaid internship program (as suggested and developed in coordination with the Advisory Committee) so students can gain valuable on-site experience in the industry while offering employers a no-obligation “extended-interview” of student technicians.
- Increased the success rate for students in both Certificate and AS Degree achievement - due to proper sequencing of courses, on-site counseling of students

during the entry-level course, constant tracking of student progress, and superior educational experience.

- Automotive Technology now incorporates all parts of the previous Transportation Technology Department under one cohesive group. This group includes Automobile & Light Truck Technology, Medium & Heavy-Duty Truck Technology, and Motorcycle Technology programs. Core courses are offered that serve as the foundation for each of the separate programs.
- Automotive Technology has updated all current curriculum (and continues to do so on a regular basis) and has deleted all courses not currently offered.
- Automotive Technology Courses have a full complement of Student Learning Outcome objectives (SLOs) that are evaluated on an on-going basis.

### **Weaknesses/Lessons Learned:**

- To offer a full comprehensive automotive program requires the talents of at least five qualified full-time faculty members. The program is currently operating with only three full-time faculty members. This severely impedes the programs' ability to function at the program-developed standard of educational excellence.
- Two courses were found to be weak in the area of substantial student worksheets that achieve the Student Learning Outcomes. One class has addressed this weakness and the other course will address the issue this fall.
- The evening program has fallen victim to continued budget cuts, but more importantly has not found its focus or market yet. Though the High Performance Institute courses provide one avenue for evening students and the reestablished BAR Smog program will serve a definite need of the industry, we have not determined what other courses would serve the evening student population.
- The Motorcycle Program has suffered in the past few years from the construction of the new building and most recently by the lack of a qualified instructor (we have one full-time instructor who is fully qualified, but is over-committed in the automotive program).
- The High Performance Institute certificate in Research and Development has suffered from the inability to offer the Engine Dynamometer course. This is the result of the non-completion of the two dyno cells and is due to combined architect/contractor error during new-building construction. This has severely hurt the student's ability to complete the certificate and has prevented the program from providing a comprehensive sequence of courses for student success. Though fully funded, it is unknown if/when these dyno cells can/will be completed.
- Parking for instructional vehicles is needed next to the automotive shop complex. Because of the limitations provided in the building layout and poor architectural planning, there is insufficient parking for the fleet of instructional vehicles within the compound.

## **Recommendations/Next Steps:**

- Parking for instructional vehicles is needed next to the automotive shop complex. Because of the limitations provided in the building layout, there is insufficient parking for the fleet of instructional vehicles within the compound. According to the College Facilities Master Plan data, there is sufficient parking on campus for the number of students currently attending and for future growth in student count. This means there is sufficient parking available and some of the existing parking along Barranca should be designated and fenced off for instructional vehicles.
- It is time to plan for the expansion of the Medium Heavy-Duty Truck program. It has been incorporated into the Automotive Technology group; there is a specific focus to the instructional goal of the program; and the job market shows high demand for student graduates. Expansion will require planning, investment in equipment, expansion of faculty and a serious look at the current facilities for needed improvements.
- The High Performance Institute Research and Development Certificate requires revision to reflect the changing dynamics of available faculty members, facilities and equipment for required courses, and industry/transfer requirements.
- The LHE lab rate for the core automotive courses needs revision from .75 LHE to .85 LHE to reflect the demands of the laboratory work required for student success (easily comparable to any science course on campus and validated by T-TEN assessment process).
- The Automotive Program needs two full-time faculty. One to replace the recently vacated spot in automobile & light truck program and one to fill the needs of the Medium Heavy-Duty Truck program as it expands. It is recommended that any new full-time faculty have the capability to instruct in more than one area of the Automotive Program.
- With the completion of the new vocational building and the installation of extensive amounts of new equipment, there is a need for an increase in the budget line item for Repairs/Rents/Leases as the current budget amount does not begin to meet the demands for the required service contracts to maintain the existing equipment.
- The Automotive Program (as part of the CTE Division) needs a full-time on-site CTE counselor that is not dependent on Perkins funding. Certificate completion and degree achievement data in the Automotive Program over the last few years has proven the value of having a dedicated counselor for the CTE programs.
- Existing Motorcycle Technology courses are to be scrapped in favor of a “capstone” model in which advanced-level motorcycle-specific training will be offered to completers of Automotive Technology certificates. Capstone courses are to be written and proposed to the Advisory Council this Fall (2011).



## Automotive Technology

### II. Curriculum

Course Number and Title (Courses must be reviewed every six years to remain active)	Date of last Curriculum Committee Review	2010 Course offerings By Term and # of Sections				SLOs Assessed (Semester / year)
		Winter	Spring	Summer	Fall	
AUTO 100 Automotive Technology and Maintenance for the Consumer	S08					
AUTO 101 Fundamentals of Automotive Service, Diagnosis and Repair	S07	1	4	1	4	Fall 2010
AUTO 141 Engine Mechanical Systems	S09	0	0	0	1	Course Deleted
AUTO 142 Drive train Systems	S09					Course Deleted
AUTO 144 Chassis Systems	S09					Course Deleted
AUTO 146 Automotive Electrical Systems	S09	1	0	0	0	Course Deleted
AUTO 148 Engine Control Systems	S09	0	1	0	0	Course Deleted
AUTO 149 Diesel Engine Management Systems	F10					
AUTO 151 Engine Service, Diagnosis and Repair	S07	0	1	0	1	Fall 2010
AUTO 154 Chassis Service, Diagnosis, and Repair	S07	0	1	0	1	Unknown
AUTO 156 Automotive Electrical/Electronic Systems I	F10	0	2	0	2	Fall 2010
AUTO 162 Drive train Service, Diagnosis and Repair	S07	0	1	0	1	Fall 2010
AUTO 166 Automotive Electrical/Electronic Systems II	S07	1	0	1	0	Summer 2010

AUTO 167 Automotive HVAC Service, Diagnosis & Repair	<b>S07</b>	1	0	1	0	<b>Summer 2010</b>
AUTO 168 Engine Control Systems Service, Diagnosis and Repair	<b>S07</b>	0	1	0	1	<b>Fall 2010</b>
AUTO 230A Automotive Service and Repair Work Experience A	<b>F08</b>					
AUTO 230B Automotive Service and Repair Work Experience B	<b>F08</b>	0	1	0	1	<b>Fall 2010</b>
AUTO 230C Automotive Service and Repair Work Experience C		0	1	0	1	<b>Fall 2010</b>
AUTO 230D Automotive Service and Repair Work Experience D		0	1	0	1	<b>Fall 2010</b>
AUTO 281 Advanced Toyota Certified Technician Training	<b>F09</b>		1			<b>Spring 2010</b>
AUTO 290 Introduction to the Automotive Aftermarket	<b>F04</b>					<b>Course Deleted</b>
AUTO 292 Advanced Drive train Development	<b>F04</b>					<b>Course Deleted</b>
AUTO 293 Advanced Steering, Suspension Geometry, Brake Design and Analysis	<b>F04</b>					<b>Course Deleted</b>
AUTO 294 Brake Design and Analysis						<b>Course Deleted</b>
AUTO 295 Engine Design	<b>S09</b>	0	0	1	0	<b>Summer 2010</b>
AUTO 296 Cylinder Head Development	<b>S09</b>	0	0	0	1	<b>Fall 2010</b>
AUTO 297 Cylinder Block Development	<b>S09</b>	0	1	0	0	<b>Spring 2010</b>
AUTO 298 Special Projects	<b>S09</b>					<b>Course Deleted</b>
AUTO 299 Engine Dynamometer Operation and Testing Procedures	<b>S09</b>					
AUTO 695A Special Topics: Automotive Technology	<b>S09</b>					
AUTO 695B Special Topics: Automotive Technology	<b>S09</b>					
AUTO 695C Special Topics: Automotive Technology	<b>S09</b>					
AUTO 695D Special Topics: Automotive Technology	<b>S09</b>					
AUTO 696A Special Topics: Automotive Technology	<b>S09</b>					

AUTO 696B Special Topics: Automotive Technology	<b>S09</b>					
AUTO 696C Special Topics: Automotive Technology	<b>S09</b>					
AUTO 696D Special Topics: Automotive Technology	<b>S09</b>					
AUTO 698A Cooperative Education						
AUTO 698B Cooperative Education						
AUTO 698C Cooperative Education						
AUTO 698D Cooperative Education						
AUTO 699A Cooperative Education						
AUTO 699B Cooperative Education						
AUTO 699C Cooperative Education						
AUTO 699D Cooperative Education						
MOTO 101 Fundamentals of Motorcycle Service, Diagnosis and Repair	<b>S09</b>					<b>Course Deleted</b>
MOTO 141 Motorcycle Engine Mechanical Systems Service, Diagnosis & Repair	<b>F09</b>	0	0	0	1	<b>Course Deleted</b>
MOTO 142 Motorcycle Power Transmission System Service, Diagnosis & Repair	<b>F09</b>					<b>Course Deleted</b>
MOTO 144 Motorcycle Chassis System Service, Diagnosis & Repair	<b>F09</b>	1	0	0	0	<b>Course Deleted</b>
MOTO 146 Motorcycle Electrical System Service, Diagnosis & Repair	<b>F09</b>					<b>Course Deleted</b>
MOTO 148 Motorcycle Engine Management System Service, Diagnosis & Repair	<b>F09</b>					<b>Course Deleted</b>
MOTO 291 Engine Performance Enhancements and Tuning	<b>F05</b>					<b>Course Deleted</b>
MTRK 151 Medium and Heavy Truck Engines Service, Diagnosis, and Repair	<b>F09</b>					
MTRK 152 Medium and Heavy Truck Drive train Service, Diagnosis, and Repair	<b>F09</b>		1			<b>Spring 2010</b>
MTRK 154 Medium and Heavy Truck Chassis Service, Diagnosis, and Repair	<b>S10</b>				1	<b>Fall 2010</b>
MTRK 272 Diesel Engine Troubleshooting		0	1	0	0	<b>Course Deleted</b>



MTRK 282 Allison Tran		0	1	0	0	<b>Course Deleted</b>
MTRK 698A Cooperative Education						
MTRK 698B Cooperative Education						
MTRK 698C Cooperative Education						
MTRK 698D Cooperative Education						
MTRK 699A Cooperative Education						
MTRK 699B Cooperative Education						
MTRK 699C Cooperative Education						
MTRK 699D Cooperative Education						

### III. Degrees and Certificates

Title	Type	Date Approved by Chancellor's Office	Number Awarded 2007	Number Awarded 2008	Number Awarded 2009	Number Awarded 2010
Automotive Service, Diagnosis & Repair-Master Technician	AS	1955	5	8	4	14
Automotive Service, Diagnosis & Repair-Master Technician	C	1955	2	2	0	4
Automotive Service, Diagnosis & Repair-Under hood Specialist	C	2003	0	0	7	21
Automotive Svc Diagnosis & Rpr-Toyota/Lexus/Scion Technician	C	1994	2	2	0	2
Automotive Svc, Diagnosis & Rpr-Undercar/Drive train Spec.	C	2004	0	1	13	24
Medium and Heavy Diesel Truck Technology	AS	1972	1	2	3	0
Medium and Heavy Diesel Truck Technology	C	1972	26	32	24	1
Automotive Research and Development	C	2004	0	0	0	0

**TYPE:** **AA** = Associate in Arts Degree    **AS** = Associate in Science Degree    **C** = Certificate    **S** = Skill Award  
**AA-T** = Associate in Arts for Transfer    **AS-T** = Associate in Science for Transfer

## IV. Sections Offered

	Winter 2010	Spring 2010	Summer 2010	Fall 2010
<b>On-Campus</b>				
<b>On-Campus by Term Length</b>				
Full Term	0	12	0	11
Short Term	4	3	4	3
<b>On-Campus Subtotal</b>	<b>4</b>	<b>15</b>	<b>4</b>	<b>14</b>
<b>On Campus By Schedule</b>				
Morning Before 11:59 am	2	8	1	8
Afternoon Noon to 4:29 pm	1	0	1	0
Evening After 4:30 pm	1	4	2	3
Weekend Friday after 4:30 pm, Saturday, or Sunday	0	0	0	0
Arranged Hours Meeting time beginning is unknown	0	3	0	3
<b>On-Campus Subtotal</b>	<b>4</b>	<b>15</b>	<b>4</b>	<b>14</b>
<b>Distance Education</b>				
Distance Ed Full-term	0	0	0	0
Distance Ed Short-term	0	0	0	0
<b>Distance Ed Subtotal</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Total</b>	<b>4</b>	<b>15</b>	<b>4</b>	<b>14</b>
Course Retention*	97.9%	94.6%	97.3%	96.3%
Course Success**	84.0%	63.9%	80.0%	60.6%

\* Retention is defined as the percent of students receiving all grades except W.

\*\* Success is defined as a student taking a credit course and earning a grade of A, B., C, CR, or P.

## V. Student Demographics

Gender	College 2009-10	2006-07	2007-08	2008-09	2009-10
Female	53.1%	9.9%	8.6%	7.9%	3.6%
Male	44.7%	90.1%	90.8%	88.3%	93.6%
Unknown	2.2%	< 1%	< 1%	3.8%	2.7%

Ethnicity	College 2009-10	2006-07	2007-08	2008-09	2009-10
Asian/Filipino/Pacific Islander	9.0%	14.7%	11.7%	11.1%	9.4%
Black/African American	5.6%	4.0%	4.6%	2.9%	1.8%
Hispanic/Latino	46.2%	51.6%	51.0%	48.7%	50.2%
White	25.1%	23.8%	21.8%	21.1%	24.9%
Other*	14.1%	5.9%	10.9%	16.1%	13.7%

\* Other includes Native American, two or more races, and unknown.

2011 Annual Program Review and Plan: AUTO

## IV. Sections Offered

	Winter 2010	Spring 2010	Summer 2010	Fall 2010
<b>On-Campus</b>				
<b>On-Campus by Term Length</b>				
Full Term	0	2	0	0
Short Term	0	0	0	0
<b>On-Campus Subtotal</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>
<b>On Campus By Schedule</b>				
Morning Before 11:59 am	0	1	0	0
Afternoon Noon to 4:29 pm	0	0	0	0
Evening After 4:30 pm	0	1	0	0
Weekend Friday after 4:30 pm, Saturday, or Sunday	0	0	0	0
Arranged Hours Meeting time beginning is unknown	0	0	0	0
<b>On-Campus Subtotal</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>
<b>Distance Education</b>				
Distance Ed Full-term	0	0	0	0
Distance Ed Short-term	0	0	0	0
<b>Distance Ed Subtotal</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Total</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>
Course Retention*		93.9%		
Course Success**		66.7%		

\* Retention is defined as the percent of students receiving all grades except W.

\*\* Success is defined as a student taking a credit course and earning a grade of A, B, C, CR, or P.

## V. Student Demographics

Gender	College 2009-10	2006-07	2007-08	2008-09	2009-10
Female	53.1%	2.7%	1.6%	2.4%	0.0%
Male	44.7%	97.3%	95.1%	92.7%	93.3%
Unknown	2.2%	< 1%	3.3%	4.9%	6.7%

Ethnicity	College 2009-10	2006-07	2007-08	2008-09	2009-10
Asian/Filipino/Pacific Islander	9.0%	4.0%	4.9%	4.9%	2.2%
Black/African American	5.6%	5.3%	1.6%	4.9%	6.7%
Hispanic/Latino	46.2%	66.7%	70.5%	56.1%	66.7%
White	25.1%	21.3%	13.1%	19.5%	11.1%
Other*	14.1%	2.7%	9.8%	14.6%	13.3%

\* Other includes Native American, two or more races, and unknown.

## IV. Sections Offered

	Winter 2010	Spring 2010	Summer 2010	Fall 2010
<b>On-Campus</b>				
<b>On-Campus by Term Length</b>				
Full Term	0	0	0	1
Short Term	1	0	0	0
<b>On-Campus Subtotal</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>1</b>
<b>On Campus By Schedule</b>				
Morning Before 11:59 am	0	0	0	0
Afternoon Noon to 4:29 pm	0	0	0	0
Evening After 4:30 pm	1	0	0	1
Weekend Friday after 4:30 pm, Saturday, or Sunday	0	0	0	0
Arranged Hours Meeting time beginning is unknown	0	0	0	0
<b>On-Campus Subtotal</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>1</b>
<b>Distance Education</b>				
Distance Ed Full-term	0	0	0	0
Distance Ed Short-term	0	0	0	0
<b>Distance Ed Subtotal</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Total</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>1</b>
Course Retention*	100.0%			100.0%
Course Success**	100.0%			66.7%

\* Retention is defined as the percent of students receiving all grades except W.

\*\* Success is defined as a student taking a credit course and earning a grade of A, B., C, CR, or P.

## V. Student Demographics

Gender	College 2009-10	2006-07	2007-08	2008-09	2009-10
Female	53.1%	13.6%	6.9%	12.0%	0.0%
Male	44.7%	86.4%	91.4%	76.0%	66.7%
Unknown	2.2%	< 1%	1.7%	12.0%	33.3%

Ethnicity	College 2009-10	2006-07	2007-08	2008-09	2009-10
Asian/Filipino/Pacific Islander	9.0%	13.6%	5.2%	0.0%	0.0%
Black/African American	5.6%	0.0%	8.6%	12.0%	0.0%
Hispanic/Latino	46.2%	50.0%	51.7%	44.0%	33.3%
White	25.1%	27.3%	25.9%	28.0%	33.3%
Other*	14.1%	9.1%	8.6%	16.0%	33.3%

\* Other includes Native American, two or more races, and unknown.

## VI. Career Technical Education Programs

### TOP CODE: 0947 DIESEL TECHNOLOGY

#### CORE INDICATORS

Indicator	Negotiated Level	2008-09 (Actual)	2009-10 (Actual)	2010-11 (Actual)	2011-12 (Proposed)
1. Technical Skill Attainment	88.81%		93.48	93.75	88.57
2. Credential, Certificate, or Degree	82.05%		92.00	96.88	100.00
3. Persistence or Transfer	85.96%		62.79	59.57	90.63
4. Placement	81.72%		76.47	86.36	73.08
5. Nontraditional Participation	20.37%		2.17	2.08	0.00
6. Nontraditional Completion	25.99%		0.00	2.94	0.00

### TOP CODE: 0948 AUTOMOTIVE TECHNOLOGY

Indicator	Negotiated Level	2008-09 (Actual)	2009-10 (Actual)	2010-11 (Actual)	2011-12 (Proposed)
1. Technical Skill Attainment	88.81%		68.70	72.34	58.00
2. Credential, Certificate, or Degree	82.05%		23.53	29.27	75.00
3. Persistence or Transfer	85.96%		76.11	61.70	79.59
4. Placement	81.72%		87.88	78.05	81.82
5. Nontraditional Participation	20.37%		6.96	6.38	6.00
6. Nontraditional Completion	25.99%		6.67	10.53	10.00

Core 1 - Skill Attainment, GPA 2.0 & Above:

Core 2 - Completions, Certificates, Degrees and Transfer Ready :)

Core 3 - Persistence in Higher Education :)

Core 4 - Employment: 79.86% Performance Goal

Core 5 - Training Leading to Non-traditional Employment:

Source: CCCCCO MIS Database, EDD Base Wage File, CSU Chancellor's Office, UC Office of the President, 2000 Census, Student Loan Clearing House

## VII. Student Accomplishments

Provide examples of individual student success or instructional strategies that were effective

- Priscilla Ruiz, alumnus, obtained full-time teaching assignment at Bonita High School.
- Mariano Rubio, alumnus, named #1 Toyota Technician in the United States.
- Instructional policy in AUTO 166, 167, 168 resulted in near 100% homework completion rates.
- Toyota T-TEN graduating class at 125% of objective.
- More than double number of Associate degrees awarded.
- Integrated mandatory counseling into AUTO 101 using program specific counselor.
- Integrating T-PORT into cooperative work experience.
- Program revision incorporating Automotive Technology classes led to 80% retention in Medium Heavy Duty Truck program.

## VIII. Student Learning Outcomes Assessment Reflection

**SLO ASSESSMENT RESULTS:** Upon reflection with program colleagues (or self-reflection for programs with one instructor only); please provide a brief narrative to the following:

*Utilizing information garnered from SLO assessment data at the course level; please describe results or faculty recommendations for changes and/or continuations relevant at both the course and program level. **Address GE classes specifically.***

- Excessive proficiency failure rate in AUTO 101 leads to recommendation for better screening process.
- Excessive proficiency failure rate in AUTO 101 increased basic skills prerequisites.



## Automotive Technology

### IX. Progress toward previous goals

During 2010, we accomplished:

	Previous Goals	Progress/ Persons Responsible	Status	Year 1 Strategic Plan Objectives
<b>Goal 1 2004-05</b>	The Program needs to strive for diversity in the faculty whenever the opportunity to hire new faculty arises.	FNIC proposal forthcoming due to loss of full-time faculty.	I	
<b>Goal 2 2004-05</b>	Develop a more comprehensive training program that uses a root series of classes that lead to distinct branch specialties.		C	
<b>Goal 3 2004-05</b>	Add a cooperative training element to the Program that provides in-class training in labor laws and rights and provides guidance and oversight for students at the job site.		C	
<b>Goal 4 2004-05</b>	Develop a new long-range plan that reflects the input of the new faculty dynamic and the expected addition of new vocational buildings.		C	
<b>Goal 5 2004-05</b>	Establish an industry involved committee to develop final plans for new building construction to meet the future needs of the industry.		C	
<b>Goal 6 2004-05</b>	The current Automotive buildings (Tech A, D, and E) have been designated For tear-down and replacement. New buildings will allow the individual Automotive classes to consolidate the lab experience into a more centralized location for improved supervision by faculty. Individual labs will ease scheduling and provide for growth of the program as the student population grows at Citrus College. The Automotive faculty needs to be intimately involved in the planning for of the new buildings. This will ensure the most efficient use of allowable square footage while meeting the goals of the Education and Facilities Master Plans. The faculty needs to continue their discussions with the Building Project Coordinator regarding construction schedules and transition space utilization.		C	
<b>Goal 7 2004-05</b>	Develop a plan for program continuance during proposed construction.		C	



<b>Goal 8 2004-05</b>	The Automotive Program currently has the assistance of a part-time student assistant who handles secretarial work for the Program. With the current and expected workload is recommended that the Automotive Program find a Means to fund a full-time office assistant.	No dedicated office staff – utilize division staff.	I	
<b>Goal 9 2004-05</b>	Develop an assessment process in coordination with the Counseling Department to provide advisement to students in an effort to increase student Retention and success.		C	
<b>Goal 10 2004-05</b>	Develop a plan for increased output of T-TEN completers to meet the demand as established by Toyota Motor Sales.		C	
<b>Goal 11 2004-05</b>	When the new vocational buildings are completed, the Automotive Program would benefit from a lab assistant who is capable of performing preventive maintenance and tracking and maintaining upgrades to test equipment.	Building is not yet fully functional. Lab assistant capable of performing preventive maintenance and tracking and maintaining upgrades to test equipment still needed.	I	
<b>Goal 12 2004-05</b>	Develop a timeline for rewriting all course outlines to include Student Learning Outcomes.		C	
<b>Goal 13 2004-05</b>	Develop appropriate compensation for individual program coordination or Provide reassign time for one individual to coordinate all the Automotive Programs. There are currently individual coordinators for the T-TEN, ASC Fast Track, and HPI Programs.	Currently only T-TEN program benefits from a compensated coordinator. Need to include coordination of Medium Heavy Duty Truck and Motorcycle as well.	I	
<b>Goal 14 2004-05</b>	Insure that planning of new facilities provides for student supervision by an instructor at all times. Space limitations currently place students in more than one location while in a lab setting. This means an instructor has to move from one location to another and leaves students unattended for short periods of Time.		C	
<b>Goal 15 2004-05</b>	Reassess certificate and skill award requirements to make certain that the standards are reasonable, feasible, and able to be accomplished by students.	HPI and Moto Motorcycle certificate being revised as capstone to Automotive certificate.	I	
<b>Goal 16 2004-05</b>	Review the process for certificate and skill award application to encourage More eligible students to complete.		C	
<b>Goal 17 2004-05</b>	Explore the possibility of an annual meeting with colleagues from other colleges in order to share information with other Automotive faculty and Discuss regional issues.	Will be meeting with Rio Hondo on October 7, 2011.	C	

<b>Goal 18 2004-05</b>	Revise syllabi to reflect the writing components currently required in each class.		C	
<b>Goal 19 2004-05</b>	Explore the possibility of tracking pass rates for students' ASE certifications.	Work in progress using MyASE tracking program.	I	
<b>Goal 20 2004-05</b>	Program needs up-to-date computers in each lab, connected to the network, With access to the software in the computer lab.	Need more.	I	
<b>Goal 21 2004-05</b>	Classrooms need to be equipped with built-in audio-visual equipment/ computers to eliminate the set-up/tear-down time for each class. This also eases the use of technology by adjunct faculty members.	One classroom needs a new Smartboard.	I	
<b>Goal 22 2004-05</b>	Equipment purchases need a budget that would allow prioritizing the purchase of larger pieces of equipment (i.e. those items that cost in excess of \$20,000).		I	
<b>Goal 23 2004-05</b>	Program needs to purchase software for the proposed Service Consultant/ Management program.	In progress. Need input on software from advisory committee.	I	
<b>Goal 24 2004-05</b>	Credit revenue (FTES X annual reimbursement rate) comparison to Program costs has decreased from 137% in 1997-98 to 100% in 2003-04, indicating that the Program is just "breaking even" prior to indirect costs of facilities and maintenance, business and administration, student services, etc. The change in ratio is due, in part, to higher full-time faculty costs, fewer adjunct with Temporary program reduction and equipment purchases to keep the program current with industry standards. Cost benefit analysis should be monitored as We serve the community.	N/A		
<b>Goal 25 2004-05</b>	Cost per FTES (Program Costs ÷ FTES) has increased from \$1857 in 1997-98 to \$2791 in 2003-04, bringing the ratio with credit reimbursement rate (credit reimbursement rate ÷ cost per FTES) down from 137% in 1997-98 to 100% in 2003-04. The change in ratio is due, in part, to higher full-time faculty costs, fewer adjunct with temporary program reduction, and equipment purchases to Keep the program current with industry standards. Cost benefit analysis should be monitored as we serve the community.	N/A		
<b>Goal 26 2004-05</b>	Develop plan for all adjunct faculty to complete all their ASE certifications.		C	

<b>Goal 27 2004-05</b>	Write program approval packet for Service/ Consultant/ Management option.	In consultation with advisory committee.	I	
<b>Goal 28 EMP</b>	Expand curriculum to respond to diversification within the automotive industry, including diesel and hybrid/electric technology and alternative fuels	Diesel Engine Management class has been approved. Two instructors will attend Train the Trainer Cummins Diesel. Through SCRTTC, Citrus will be a regional training facility for Cummins. Hybrid/electric technology incorporated into AUTO 281.	I	
<b>Goal 29 EMP</b>	Respond to industry needs for increased professional development of currently employed technicians	Three classes offered - EVAP, BCACC and ACACC in Fall 2011 and BAR 2011 update in Winter 2012.	I	
<b>Goal 30 EMP</b>	Incorporate into the curriculum recent advances in technology, including diagnostics and telematics	Plus new Special Topics courses.	P	

**In addition to previous goals, during 2011, we plan to:**

	<b>Description</b>	<b>Actions / Target Date</b>	<b>Year 1 Strategic Plan Objectives**</b>
<b>Goal 1 2011</b>	Develop capstone course and revised certificate program for Motorcycle Technology that builds on skills garnered in Automotive Technology certificate program.	December 2011	2.2.6
<b>Goal 2 2011</b>	Increase student participation in Medium Heavy Truck program through marketing and recruitment efforts.	June 2012	
<b>Goal 3 2011</b>	Increase Toyota T-TEN completers.	August 2012	
<b>Goal 4 2011</b>	Evaluate T-TEN program direction and establish a plan.	Fall 2011	

**\*\*See the Preface for information related to Year 1 Strategic Plan Objectives for 2011.**



## Automotive Technology

### X. Budget Recommendations for 2012

(Add rows or attach additional pages as needed for complete description / discussion)

#### Certificated Personnel (FNIC)

Position	Discuss impact on goals / SLOs	Impact	Priority
Faculty (AUTO)	NATEF		1
Faculty (AUTO/MTRK)	NATEF		1
CTE Counselor	Completers, Transfer & Success		1

#### Classified Personnel

Position	Discuss impact on goals / SLOs	Impact	Priority
Clerk	Tracking student progress, followup and processing of students.		1
Lab Technician	Preventative maintenance and repair of equipment and coordination of live automotive repair work.		2

#### Staff Development (Division)

Item	Discuss impact on goals / SLOs	Cost	Impact	Priority
NATEF Update Training - 20 hours per instructor	Required by NATEF Certification			1

#### Facilities (Facilities)

Describe repairs or modifications needed	Discuss impact on goals / SLOs	Building / Room	Impact	Priority
Engine Dynamometers made operational	Required to provide course for completion of HPI Certificate			1
Move motorcycle lab to north end of DT				3
Power door opener in TD 137	Less equipment damage and ADA Compliance			1

Parking – Instructional Vehicles	Program success and T-TEN Program requirement for number of vehicles			1
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### Computers / Software (Tecs)

Item	Discuss impact on goals / SLOs	Cost	Impact	Priority
Computers needed for AA and TD labs				2
Color printer for Trans lab				3

### Equipment

Item	Discuss impact on goals / SLOs	Cost	Impact	Priority
Lab set of Fluke meters for TD 137 lab				2
Snap-on Torque and DVOM kits to offer certification courses				2
Repair to motorcycle chassis dynamometer				2
Repair to automotive chassis dynamometer				2
Heavy Duty transmission jack				2
Ultra-sonic parts cleaner				3
Valve body tester				3
Alignment hoist, camera and computer (dropped from F&E)				2
Need budget for repair and maintenance contracts				1

## Supplies (Division)

Item	Discuss impact on goals / SLOs	Cost	Impact	Priority

### General Budget Guidelines

#### Budget Preparation Tips:

- Include items on the budget form that are needed for program success even if there is no financial need associated with the request (i.e. training that could be accomplished with on-campus resources, sharing of resources with another discipline or department etc.)
- Whenever possible, obtain actual cost for the items / equipment you wish to purchase. This avoids situations where items are considered for purchase but it is determined that the actual cost greatly exceeds the original estimate.
- Identify unit cost (cost per item) and the number of units desired in requests.
- Indicate if there is a lower level of financial support that would be workable in your educational plan – if you request \$30,000 for a classroom set of equipment (one item for each student), if \$15,000 were available, would it be possible for two students to share an item? Is the request “All or nothing”?

#### Determining Budget Impact:

**Indicate one or more of the following areas that your request will affect:**

**M = Mission:** Does the request assist the program in meeting the District’s mission and established core competencies and / or diversity?

**N = Need:** Does the request assist the program in addressing needs based on labor market data, enrollment, articulation, advisory committee, regional agreements, etc.?

**Q = Quality:** Does the request assist the program in continuing or establishing appropriate lecture/lab unit values? Will the request assist in the regular reviewed / updated of course outlines? Is faculty development adequate? Does program need support in addressing the State and District emphasis on critical thinking, problem solving and written expression? Does program need support to meet stated objectives in the form of SLOs? Do course pre-requisites and co-requisites need to be validated?

**F = Feasibility:** Does the request assist the program maintain adequate facilities, equipment, and library resources? Is there a need for repair or modification of facilities? Is there a need for new equipment or supplies? Are course offerings frequent enough for students to make adequate progress in both day and evening programs? Does the program have adequate communication with & support from Counseling?

**C = Compliance:** Does the request assist the program in meeting Federal, State & District requirements? (Do the course outlines meet state, district & federal regulations for content? Do vocational programs have regular advisory meetings?)

#### Budget Priorities: *When establishing priority, consider the following:*

Priority 1: This item is mandated by law, rule, or district policy.

Priority 2: This item is essential to program success.

Priority 3: This item is necessary to maintain / improve program student learning outcomes.



## Automotive Technology

### XI. Career Technical Education

11/19/10, 6/17/11

1. Advisory Committee meeting date(s): \_\_\_\_\_

\_\_\_\_\_

2. Advisory Committee recommendations

1.	Maintain steps to assure we are in compliance to be NATEF certified
2.	Industry trends must be incorporated into the curriculum by auto faculty
3.	Advisory will continue to submit equipment suggestions to auto faculty
4.	Advisory will continue to update faculty on industry equipment requirements
5.	Unpaid internship implementation
6.	Continuation of VTEA funds for a CTE counselor and diesel equipment
7.	

3. Are Advisory Committee minutes on file with Academic Affairs?

YES \_\_\_X\_\_\_ NO \_\_\_\_\_

4. Vocational Funds

Source	Purpose	Amount
Perkins	Equipment for MTRK and Emissions Testing	\$30,000

5. Labor Market Data 2008 – 2018

(California Employment Department Labor Market Information for Los Angeles County)

Soc Code	Occupation	Employment Estimated	Employment Projected	Change
49-3000	Vehicle and Mobile Equipment Mechanics, Installers, and Repairers			%

<b>49-3050</b>	Small engine Mechanics			%
<b>40-3090</b>	Miscellaneous Vehicle and Mobile Equipment Mechanics, Installers, and Repairers			%
<b>53-6030</b>	Automotive and Watercraft Service Attendants			%
<b>49-3023</b>	Automotive service technicians and mechanics	17900	19090	6.7%
<b>41-2022</b>	Parts salespersons	5210	5570	6.9%
<b>49-3093</b>	Tire Repairers and changers	2470	2490	0.8%
<b>49-2092</b>	Electric motor, power tool, and related repairers	830	890	7.2%
<b>49-3053</b>	Outdoor power equipment and other small engine mechanics	170	160	-5.9%
<b>49-3051</b>	Motorboat mechanics	250	240	-4%
<b>49-2094</b>	Electrical and electronics repairers, commercial and industrial equipment	1460	1490	2.1%
<b>49-2096</b>	Electronic equipment installers and repairers, motor vehicles	750	800	6.7%
<b>49-2093</b>	Electrical and electronics installers and repairers, transportation equipment	450	460	2.2%
<b>49-3031</b>	Bus and truck mechanics and diesel engine specialists	4640	4880	5.2%
<b>49-3040</b>	Heavy Vehicle and Mobile Equipment Service Technicians and Mechanics			
<b>49-3042</b>	Mobile Heavy Equipment Mechanics, Except Engines	3720	4090	10%
<b>49-3043</b>	Rail Car Repairers	N/A	N/A	N/A
<b>49-3052</b>	Motorcycle mechanics	510	550	7.8%
<b>49-3092</b>	Recreational vehicle	1300	1400	7.7%



	service technicians			
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**6. Discuss demand for workers in this TOP code based on CA Employment Development Department Labor Market Information for Los Angeles County and Advisory Committee input. Describe the rationale for use of data regarding additional geographic areas.**

- Data would support small capstone program in Motorcycle Technology.
- Data would support an increase in program development in Medium Heavy Truck.
- Data would support continued partnership with Toyota and Independents.