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Automotive Service

CTE NARRATIVE TEMPLATE for a (credit) Certificate of Achievement

SPO2: Program Award	Certificate of Achievement	Faculty Workload (1)	1.725
Program Title	Automotive Service	New Faculty Positions	0
Program Goal	Career Technical Education	New Equipment	0
SP01: Pgm Top Code	094800	New/Remodeled Facilities	0
Required Certificate Unit Minimum	31.5	Library Acquisitions	0
Required Certificate Units Maximum	31.5	Program Review Date (2)	May 2015
Annual Completers	10	Gainful Employment	Yes
New Annual Labor Demand (CTE Only)	46	Apprenticeship	No
		Distance Education (3)	0%
		CTE Regional Consortium Approved	Yes
		District Governing Board Approved	Yes
		District Governing Board Approval Date	????

(1) Faculty load based on number of sections to support program student thru put

(2) Review date within 2 years following the approval of program. CTE must be every two years.

(3) Percent of courses offered in hybrid or distance ed.

ITEM1: Program Goals and Objectives

The Modesto Junior College Automotive Technology program is designed to provide training in all aspects of automotive maintenance and repair. The program consists of courses which prepare students for Automotive Service Excellence (ASE) examinations with emphasis placed on problem solving, repair procedures, service techniques, diagnostic analysis, and shop safety. Successful completion of the program could lead to entry level employment as an Automotive Service Technician or Mechanic, Automotive Specialty Technician, or a Master Automotive Technician. The

Automotive Service Certificate is consistent with and supports the college’s mission of providing programs and services that are informed by the latest scholarship of teaching and learning. These programs and services fulfill a primary mission of the college, career and technical education.

ITEM 2: Catalog Description

The Automotive Technology Program provides students with the skills necessary to perform routine vehicle service & maintenance operations on automotive systems. Curriculum includes courses which prepare students to take the Automotive Service Excellence (ASE) examinations A2, A3, A4, A5 and A6. Entry-level employment opportunities exist as Automotive Service Technicians or Mechanics, and Automotive Specialty Technicians.

Upon satisfactory completion of this program, the student will be able to:

1. Demonstrate compliance with current automotive industry safety and environmental standards.
2. Perform routine vehicle service operations in accordance with ASE standards A2, A3, A4, A5, and A6.

ITEM 3: Program Requirements

To earn a Certificate of Achievement the student must complete the following coursework. Each course must be completed with a grade of C or better.

REQUIRED COURSES - Complete 10.5 units		Units	Semester
AUtec 200	Automotive Service Management	3	NP
AUtec 311	Basic Automotive Systems	4	1
AUtec 368	A6: Automotive Electricity/Electronic Systems 1	3.5	1
Elective Courses: Complete 21 units		Units	
AUtec 315	Engine Rebuilding	3.5	4
AUtec 317	Auto Heating & Air Conditioning	3.5	2
AUtec 321	A5: Brakes Systems	3.5	2
AUtec 322	A4: Steering, Suspension and Alignment	3.5	2
AUtec 323	A2: Automotive Transmission & Transaxles	3.5	3
AUtec 324	A3: Manual trans and Dr Axles	3.5	2
AUtec 369	A6: Automotive Electricity 2	4	2,3
Total Units		31.5	

ITEM 4: Master Planning

The MJC Automotive Department currently consists of two full-time instructors and four part-time instructors. The program is located on the MJC West Campus and has been in existences since the 1970s. Presently, there is adequate financial support in place for to support the current program and the proposed changes.

MJC Automotive Faculty maintain an active relationship with local automotive service shops, auto dealership facilities and local government fleet agencies that are primarily located in Stanislaus County. The department brings together local employers in the transportation industry, CTE high school programs, the Bureau of Automotive Repair and the local WIB under the YROP Regional Transportation Advisory Committee. This group is the single meeting group that evaluates the responsiveness of secondary and postsecondary programs against the needs of the industry. The proposed **Automotive Service Certificate** is one such program supported by the local YROP Regional Transportation Advisory Committee as part of the new stackable certificate and degree options available for students at MJC; and therefore, appropriate to the objectives and conditions of higher education and community college education in California pursuant to Title 5 sections 55130(b)(6) and 55130(b)(7).

In summer 2012, the faculty from the Automotive Technology Program reviewed a compilation of program level student learning outcomes, course level student learning outcome assessment results, advisory meeting minutes and EMSI data in a comprehensive analysis of the programs certificates and degree. The outcome of this review led to a restructuring of curriculum that would effectively accomplish the following goals:

- A clear alignment between certificate and degree courses work and achievement of identified ASE Skills Standards,
- A clearer description of programs of study for students,
- Stackable certificate credentials, and
- Ability to introduce curricular changes in alternative fuels and automotive service & management

The diagram below lays out the certificates and degrees in the MJC Automotive Technology Program which were approved by the MJC Curriculum Committee in the fall 2012 semester.

A.S. Degree Automotive Technician (32.5 units)		
Certificate: Automotive Service (31.5 units)		
Certificate: Automotive Brakes & Suspension (17.5 Units)	Certificate: Automotive Engines & Transmissions (21 units)	Certificate: Automotive Diagnosis (27 Units)

The proposed program will operate as an open enrollment program and be operated out of the MJC West Campus, Tenaya Complex. Open enrollment will be adhered to through observance of traditional college wide registration and enrollment practice available to all student seeking enrollment into college classes at Modesto Junior College – classes and program information will be published in the catalog and semester schedules for students seeking studies in automotive. No additional student selection criteria are in place; this certificate complies with California Code of Regulations, Title 5, sections 55201 and 58106.

CTE Program Advisory Committee:

Gerald Wray	MJC Automotive Instructor
John Peterson	MJC Automotive Instructor
Jeff Beebe	MJC Auto Body Instructor
Leonard Corgiat	Owner, Modesto Engine Renu
John Davis	Owner,
Brent Burnside	Owner, Brent Side Auto Body Shop
Ray Van Loon	Auto Industrial Paint
John Haley	American Chevrolet
Tom Brown	Woodward Automotive
Robert Periera	Bobby's Smog
Gordon Lucas	Dan's Automotive Repair
Aaron Walker	Walker's Automotive
Dean Massey	Turlock High School – Auto
Dave Siebert	Oakdale High School – Auto
Dave McKenzie	Patterson High School – Auto
Jim Etchepare	Johansen High School – Auto
Mirl Morse	Bureau of Automotive Repair (B.A.R.)

ITEM 5: Enrollment and Completer Projections

The MJC Automotive Technology Program presently has an estimated 400 enrollees in its programs each year. Students enter the program to pursue various goals including skill enhancement, certificates and degrees. We anticipate the current program will achieve 10 completers per year by its 2nd year and maintain this completion rate through its fifth year of operation.

CBO1: Course	CBO2: Course Title	YEAR 1		YEAR 2	
		Annual Sections	Annual Enrollment	Annual Sections	Annual Enrollment
AUTEC 200	Automotive Service Management	2	50	2	50
AUTEC 211	Introduction to Alternative Fuels and Advanced Technology Vehicles	1	20	1	20
AUTEC 311	Basic Automotive Systems	7	140	7	140
AUTEC 315	Engine Rebuilding	-	--	1	20

AUTEC 317	Auto Heating & Air Conditioning	1	22	1	22
AUTEC 368	A6: Automotive Electricity/Electronic Systems 1	2	40	3	55
AUTEC 369	A6: Automotive Electricity 2	2	36	2	36
AUTEC 319	A8: Engine Performance	1	18	1	18
AUTEC 320	L1: Advanced Engine Performance	1	18	1	18
AUTEC 321	A5: Brakes Systems	1	22	1	22
AUTEC 322	A4: Steering, Suspension and Alignment	2	40	2	40
AUTEC 323	A2: Automatic Transmission & Transaxles	1	20	1	20
AUTEC 324	A3: Manual Trans and Dr Axles	1	20	1	20
AUTEC 373	Clean Air Car Course	1	20	1	20
ELTEC 208	The World of Electricity and Electronics	7	140	7	140

Career Technical Education – Labor Review:

Labor Market Information has been evaluated. This analysis of data includes local, sub-region, central region and state level data. In all sets of data, trends have indicated a steady need for automotive local occupation professionals. Current economic trends, labor market data and input from our industry continue to validate the need for automotive repair and service technicians entering the industry. Specifically, the data illustrated below the region selected projects an average of 46 jobs each year between 2013 and 2022. This exceeds the current rate of completers from the 3 neighboring community college automotive programs presently produce a range of 25-30 individual completers a year.

Inverse Staffing Patterns

Industry	Occupation Jobs in Industry (2011)	% of Occupation in Industry (2011)	% of Total Jobs in Industry (2011)
General Automotive Repair (811111)	2,255	35.1%	53.4%
New Car Dealers (441110)	1,276	19.9%	18.1%
Automotive Body, Paint, and Interior Repair and Maintenance (811121)	441	6.9%	16.6%
Automotive Parts and Accessories Stores (441310)	229	3.6%	7.6%
Other Automotive Mechanical and Electrical Repair and Maintenance (811118)	202	3.1%	53.2%

* Inverse Staffing Patterns - Settings

** EMSI. Report produced by P. Mendez (MJC): Automotive Summary Report SU2012

Regional Trends



Region	2011 Jobs	2021 Jobs	% Growth
CTE Valley Sierra Region	4,994	5,265	5.4%
State	61,451	61,829	0.6%
Nation	565,899	621,863	9.9%

* Regional Trends: Industry - Settings

Staffing Patterns

Occupation	Employed in Industry (2011)	% of the Total Jobs in Industry (2011)
Automotive Service Technicians and Mechanics (49-3023)	2,663	53.3%
Bus and Truck Mechanics and Diesel Engine Specialists (49-3031)	251	5.0%
First-Line Supervisors/Managers of Mechanics, Installers, and Repairers (49-1011)	205	4.1%
First-Line Supervisors/Managers of Non-Retail Sales Workers (41-1012)	202	4.0%
Office Clerks, General (43-9061)	186	3.7%

* Staffing Patterns - Settings

** EMSI. Report produced by P. Mendez (MJC): Automotive Summary Report SU2012

ITEM 6: Place of Program in Curriculum/Similar Programs

The program provides an opportunity to offer new curriculum in automotive management and braking and suspension. There is one new course in the program, AUTECH 200: Automotive Service Management, which has been approved by the MJC Curriculum Committee. The program is designed to provide a more concentrated study for students in **the most frequent service areas of automotive service**, as requested by shops in industry.

ITEM 7: Similar Programs at Other Colleges in Service Area

The MJC Automotive Technology Program has existed and served the local auto industry community since the 1970s. The proposed program is similar to other Automotive Technology Programs offered in the state college system. In the immediate region, Columbia College, San Joaquin Delta College and Merced College offer similar comprehensive programs. The **Automotive Service Certificate** has been reviewed and approved via the Central Region Consortium CTE approval process. MJC has made a

concerted effort to clearly align its curriculum to ASE Testing Standards to facilitate transition for its students. In addition, to these standards, MJC has focused courses in automotive electricity, diagnosis and alternative fuels. These areas have been developed through CTE Collaborative Grant Resources and are proving critical in the development of well-rounded graduates entering the industry. These areas have been developed through CTE Collaborative Grant Resources and are proving critical in the development of well-rounded graduates entering the industry. Together the 4 colleges (including MJC) are presently producing approximately 30-35 individual completers each year. Changes to the MJC programs are anticipated to provide more options for students and incumbent workers; thus, increasing the number of completers for the Automotive Industry in the future.