

PROGRAM OF STUDY

Engine Overhaul and Repair Certificate of Achievement

Statement of Program Goals and Objectives

The focus of the Automotive Department as a whole is to equip students with the necessary knowledge and technical skills to successfully enter the workforce in the automotive industry, transportation industry, agriculture industry, and other related industrial and mechanical fields. This certificate will equip students to perform service, diagnosis, and repair of various types of internal combustion engines, including gas and diesel engines, in the above listed industries. This certificate also provides necessary training for students to pursue certification in many areas through ASE and AERA.

Program Background and Rationale

Restructuring of automotive courses necessitated the modification of an existing certificate in this area. The material in these courses are part of our national certification and accreditation through National Automotive Technicians Education Foundation (NATEF) and Automotive Service Excellence (ASE) core requirements.

This program prepares students for careers in: Automotive, Transportation, Agricultural, Oilfield and Construction Industries.

Catalog Description

The Engine Overhaul and Repair Certificate signifies that the student has developed skills in the diagnosis, repair and machining of various types of internal combustion engines, including gas and diesel engines found in automotive, agriculture and industrial applications. Students can implement the skills developed in the engine rebuilding courses in engine machine shops, performance shops, dealerships, construction companies, agriculture companies, government agencies, etc. Students earning this certificate will be prepared to further pursue certification through ASE in the A1, A8, H1, H2, S2, T1, T2 areas as well as certification through the Automotive Engine Rebuilders Association (AERA).

Program Learning Outcomes

1. Students will demonstrate proficiency in technical skills and safety principles required for employment in the engine rebuilding industry.

Assessment: The faculty will track success rates on safety tests, technical exams and lab tasks.

2. Students will demonstrate their ability to assess, evaluate and solve problems common to engine repair in the automotive, industrial and agricultural industries.

Assessment: The faculty will evaluate project based outcomes in the required courses, examinations and lab activities.

3. Students will demonstrate a thorough understanding of the core material of engine repair required for transfer to a four year university or certification in the department programs.

Assessment: The faculty will track success rates for the required courses, completion rates of the certificate of achievement and degree as well as completion of industry certificates.

Program Matrix

Courses	Program Learning Outcomes		
	A	B	C
AUTO B20	X	X	X
AUTO B21	X	X	X
AUTO B22	X	X	X
AUTO B23	X	X	X

Planning Summary

Program Cover	
Recommended T.O.P. Code	00948
Units for Degree Major or Area of Emphasis	NA
Total Units for Degree	NA
Required Units-Certificate	18
Projected Annual Completers	25
Projected Net Annual Labor Demand (CTE)	200
Estimated FTE Faculty Workload	0 additional
Number of New Faculty Positions	0 additional
Est. Cost, New Equipment	0
Cost of New/Remodeled Facility	0
Est. Cost, Library Acquisitions	0
When will this program undergo review as part of college's Program Evaluation Plan?	70 = Fall 2016

Need	
Enrollment and Completer Projections	25 students per year
Place of Program in Curriculum/Similar Programs	Other colleges offer similar programs
'Similar Programs at other colleges in service area	Yes, this is a common program.
Labor Market Information & Analysis (CTE only)	Based on EDD statistics there are almost 200 job openings that fall under the 00948 TOP code. This certificate serves the workforce in the automotive industry, transportation industry, agriculture industry, and other related industrial and mechanical fields.
Employer Survey (CTE only)	200 related job openings per year
Explanation of Employer Relationship (CTE Only)	Over 35 local employers in Bakersfield are members of the advisory committee for the Automotive Department at Bakersfield College.
List of Members and Advisory Committee (CTE Only)	Phillip Astumian, Patrick Beck, Arnold Burr, Ivan Coffman, Bruce Cox, Ron Dyer, David Friday, Dave Monty, Mike Hawkesworth, Barry Hopfe, Bob Klingenberg, Bob Kopp, Roger Lee, Gary Massie, Tom McHugh, Tom Moser, Ted Nicholas, Andy Pappas, Greg Pierucci, John Pitre, Nate Ruiz, Bruce Sherley, Glen Spence, Don Thornsberry, Randy Timmons, George White, Mitch Mullan, Dave Comstock, Dan Blanton, Dave Owens, Evan Bass, John Watson, George Rice, Leonardo Pacheco, Craig Henderson, Mike Ariola,
Recommendations of Advisory Committee (CTE Only)	Yes, this was a recommendation of the advisory committee. See Attachment
Adequate Resources	
Library and/or Learning Resources Plan	Yes
Facilities and Equipment Plan	Yes
Financial Support Plan	Yes
Faculty Qualifications and Availability	Yes
Compliance	
Based on model curriculum (if applicable)	The material in these courses are part of our national certification and accreditation through National Automotive Technicians Education Foundation (NATEF) and Automotive Service Excellence (ASE) core requirements.
Licensing or Accreditation Standards	The material in these courses are part of our national certification and accreditation through National Automotive Technicians Education

	Foundation (NATEF).
Student Selection and Fees	Standard
Attachment	

Student Education Plan (SEP) Pathway

Goal: develop a pattern of courses including both major and general education courses for college-ready students earning their degree in 2 years.

Pathway Guidelines:

1. Create a pattern of course-taking for a full-time student (12-16 units per semester=60 units total).
2. Start the pathway at college level. Academic Development will create a pathway for underprepared students.
3. Research demonstrates that students who complete their English and Math first are more successful.
4. Be sure the order of the coursework includes prerequisites taken at appropriate times.
5. Consider a balance between major courses, general education courses and easy versus hard courses.

Degree Engine Overhaul and Repair AA AS AA-T AS-T COA>18 units COA<18 units JSC

GE Pathway: IGETC (UC pathway) CSU Breadth BC Gen Ed (Certificates and Job Skills do not need General Education)

Step 1: Enter major courses by name and number.

Step 2: Choose appropriate GE courses fulfilling the GE pathway indicated above by course name, number, and category the course fulfills.

First Semester	Gen Ed	Units
AUTO B20		4
Total		4

Second Semester	Gen Ed	Units
AUTO B21		4
Total		4

Third Semester	Gen Ed	Units
AUTO B22		5
Total		5

Fourth Semester	Gen Ed	Units
AUTO B23		5
Total		5

Faculty Lead for Pathway: Justin Flint/Vic Posey Student Affairs Lead for Pathway: _____
 Department approval date 9-2-15

Bakersfield College Automotive Advisory Committee

Certificate and Degree Subcommittee meeting 9-16-15

Present – Ted Nicolas, John Pitrie, Bob Klingenburg, Tom Moser, Mitch Mullan, Justin Flint, Vic Posey

1:00 - Ted called to order

Justin and Vic presented the proposed Certificates and Degree that the Automotive Program would like to offer beginning in the Fall 2016 semester. The courses associated with each certificate and degree were reviewed as well as the multiple pathways the new offerings would create. Timeline scenarios for each certificate and degree were also discussed. The general consensus of the committee was that this would provide the student with many options for training while offering a well balanced, thorough education that preserves a high quality learning environment.

Tom made a motion to approve the certificates and degree as presented. Ted John seconded the motion. All were in favor. None opposed.

1:55 - Ted called the meeting to order