

ADVANCED TRANSPORTATION TECHNOLOGY - ALTERNATE FUELS

LONG BEACH CITY COLLEGE Curriculum Guide for Academic Year 2009-2010 Certificate of Achievement and/or Associate in Science or Certificate of Accomplishment

ALL INFORMATION CONTAINED HEREIN IS SUBJECT TO CHANGE WITHOUT NOTICE.

For possible updates to this guide please refer to the following website: <http://osca.lbcc.edu>

CAREER OPPORTUNITIES

The certificate and degree programs will prepare students for an entry-level position as a light/medium and heavy duty technician in such fields as car, bus, truck, and specialty equipment diagnosis and repair industry. Students prepare for a career in alternative fuel vehicle conversion, maintenance and repair using state-of-the-art-equipment. Computerized engine management is emphasized.

DEPARTMENTAL ADMISSION REQUIREMENTS

None. For more departmental information call (562) 938-3067.



Students pursuing an Associate Degree for this field of concentration need to select from specific courses in general education disciplines. For a complete listing of courses or disciplines, refer to the Associate Degree information section of this guide OR view the guide online at <http://osca.lbcc.edu>.



REQUIRED COURSES

		UNITS	In Progress	Completed Grade
AMECH 490	Introduction to Alternative Fuels (F, SP)	3.5		
AMECH 491	Heavy Duty Alternative Fuels (F, SP)	3.5		
AMECH 492	Heavy Duty Alternative Fuel Diagnosis and Repair (F, SP)	3.5		
AMECH 493	Alternative Fuel Conversion, Diagnosis and Repair (F, SP)	3.5		

Subtotal Units

14

Select one (1) class from the following:

AMECH 233	Auto Electrical & Fuel Systems (F)	9		
AMECH 236	Automotive Emissions & Computer Control (SP)	9		
AMECH 438	Auto Emission Controls (F - night)	6		
AMECH 440	Automotive Computer Systems (SP - night)	6		
AMECH 442	Automotive Fuel Systems (F - night)	6		
AMECH 444	Automotive Electrical Systems (SP - night)	6		
DIESL 282	Cummins Four-Cycle Engine	10		
DIESL 289	Caterpillar 3406 AND 3116	10		
DIESL 293AD	General Engines	4		

4-10

TOTAL UNITS

18-24

LEGEND

(SP = Spring) (S = Summer) (F = Fall) (INF = Infrequently) = Represents general frequency of course offering

GRADUATION REQUIREMENTS

For CERTIFICATE OF ACHIEVEMENT:

This certificate is a one to two year program in occupational/technical areas at Long Beach City College which provides training in job skills and employment opportunities. Complete the required units with a minimum cumulative grade point average of 2.0 ("C" average). Fifty percent (50%) or more of the unit requirements for this field of concentration must be completed in residence (credit earned by exam, where applicable, may be included).

For ASSOCIATE DEGREE:

NOTE: Effective Fall 2009, Title 5, section 55063 (a) (2) requires that students must complete each course counted toward the major or area of emphasis with a grade of "C" or better or "P" if the course is taken on a "Pass/No Pass" basis.

The Associate Degree is a two-year college degree awarded by Long Beach City College that includes general education courses and a major. In addition to the requirements for the Certificate of Achievement, complete the A.S. degree requirements specified in the catalog. The requirements for general education/proficiency and the field of concentration need to be from the same catalog year. This catalog year may be any year between the year of initial enrollment to the present, provided continuous enrollment is maintained throughout (see the catalog for definition of "continuous enrollment"). Fifty percent (50%) or more of the unit requirements for this field of concentration must be completed in residence (credit earned by exam, where applicable, may be included).



Required for the Communication & Analytical Thinking requirement:

† Math Requirement: Math 120, Math 130, Math 130A **OR** a more advanced level of Mathematics.



Recommended for the Natural Sciences requirement:

Environmental Science 1 (Energy for the Future) OR † Chemistry 2 OR Physics 10.

In general, "double-counting" is not allowed. That is, one course may not be used to fulfill both a field of concentration requirement and to fulfill a general education requirement.

NOTE: To receive a certificate or degree you must submit completed application forms in the Admissions and Records Office during your final semester of course work.

SUGGESTED SEQUENCE OF COURSES

This is not an educational plan, as course offerings, student schedules, and circumstances vary. Also be aware that a student must meet all the prerequisites in order to be eligible for the sequence of courses.

A suggested full-time sample sequence of courses for the required 60 units to reach an Associate Degree includes:

<p><u>First Semester</u> AMECH 490 3.5 Units OR AMECH 491 3.5 AND Possible Elective</p>	<p><u>Second Semester</u> AMECH 492 3.5 Units OR AMECH 493 3.5 AND Possible Elective</p>
<p><u>Third Semester</u> AMECH 491 3.5 Units OR AMECH 490 3.5 AND Possible Elective</p>	<p><u>Fourth Semester</u> AMECH 492 3.5 Units OR AMECH 493 3.5 AND Possible Elective*</p>

NOTE: Electives can be taken in any semester. The number of units required depends on elective selection.

CERTIFICATES OF ACCOMPLISHMENT

FOR OFFICE USE ONLY: 4102

**Name of Certificate: Advanced Transportation Technology –
Light – Medium Duty Alternate Fuels**

REQUIRED COURSES			UNITS	In Progress	Completed Grade
	AMECH 490	Introduction to Alternate Fuels (F, SP)	3.5		
	AMECH 493	A/F Conversion, Diagnosis & Repair (F, SP)	3.5		
TOTAL UNITS			7		

FOR OFFICE USE ONLY: 4104

**Name of Certificate: Advanced Transportation Technology –
Heavy Duty Alternate Fuels**

REQUIRED COURSES			UNITS	In Progress	Completed Grade
	AMECH 491	Heavy Duty Alternate Fuels (F, SP)	3.5		
	AMECH 492	Heavy Duty Alt. Fuel Diagnosis & Repair (F, SP)	3.5		
TOTAL UNITS			7		

LEGEND
(SP = Spring) (S = Summer) (F = Fall) (INF = Infrequently) = Represents general frequency of course offering

CERTIFICATE OF ACCOMPLISHMENT REQUIREMENTS

For CERTIFICATE OF ACCOMPLISHMENT:

This certificate certifies a competency in a given area and requires less than 18 units. Fifty percent (50%) or more of the unit requirements for this field of concentration must be completed in residence. Complete the required units at Long Beach City College with a minimum grade of "C" in each course. Please submit completed certificate applications to the Admissions and Records office during the final semester of course work.

Students interested in transferring to a university to continue their study in this field of concentration or other majors are strongly advised to consult an LBCC academic counselor and refer to the ASSIST website (www.assist.org) for major preparation information. Counselors can clarify the different major and admissions requirements at a university. Students may visit the Student Success/Transfer Services Center to access further educational resources. If you need to set up an appointment to see a counselor or schedule the SOAR Test, call LAC (562)938-4561 or PCC (562)938-3920.