

# ADVANCED TRANSPORTATION TECHNOLOGY ALTERNATE FUELS

## 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.

**REQUIRED COURSES**

	<b>UNITS</b>	<i>In Progress</i>	<i>Completed Grade</i>
AMECH 490 Introduction to Alternative Fuels	3.5		
AMECH 491 Heavy Duty Alternative Fuels	3.5		
AMECH 492 Heavy Duty Alternative Fuel Diagnosis and Repair	3.5		
AMECH 493 Alternative Fuel Conversion, Diagnosis and Repair	3.5		
<b>Subtotal Units</b>	<b>14</b>		

**Select one (1) class from the following:**

AMECH 233 Electrical & Fuel	9		
AMECH 236 Computers & Emissions	9		
AMECH 333M1 Electrical Systems (9 weeks)	4.5		
AMECH 333M2 Fuel Systems (9 weeks)	4.5		
AMECH 438 Emission Controls (night)	6		
AMECH 440 Computer Systems (night)	6		
AMECH 442 Fuel Systems (night)	6		
AMECH 444 Electrical Systems (night)	6		
DIESL 282 Diesel Four-Cycle Engine	10		
DIESL 289 Caterpillar 3406 AND 3116	10		
DIESL 293AD General Engines	4		
	<b>4-10</b>		
<b>TOTAL UNITS</b>	<b>18-24</b>		

## GRADUATION REQUIREMENTS

**For CAREER CERTIFICATE:**

The Career Certificate is a one to two year program in occupational/technical areas at Long Beach City College which provide 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).

**SEE REVERSE SIDE FOR ADDITIONAL REQUIREMENTS**

For **ASSOCIATE DEGREE:**

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 this Career Certificate, 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:**

† ELECT 225, Algebra and Trigonometry for Technicians OR Mathematics 110, First Course in Algebra OR MATH 36, Nature of Mathematics OR a more advanced level of Mathematics may be substituted.

**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.

<b>SUGGESTED SEQUENCE OF COURSES</b>
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 that make one 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:

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

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

**SEE NEXT PAGE FOR ADDITIONAL REQUIREMENTS**

**COMPLETION CERTIFICATES**

FOR OFFICE USE ONLY: 4102

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

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

FOR OFFICE USE ONLY: 4104

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

<b>REQUIRED COURSES</b>			<b>UNITS</b>	<b>In Progress</b>	<b>Completed Grade</b>
	AMECH 491	Heavy Duty Alternate Fuels	3.5		
	AMECH 492	Heavy Duty Alt. Fuel Diagnosis & Repair	3.5		
<b>TOTAL UNITS</b>			<b>7</b>		

**COMPLETION CERTIFICATE REQUIREMENTS**

**For COMPLETION CERTIFICATE:**

The Completion 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". Submit a completed application for the Completion Certificate in the Admissions and Records Office after completion of required units.

**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](http://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. To set up an appointment to see a counselor or schedule the SOAR Test, call LAC (562)938-4561 or PCC (562)938-3920.**