

MECHANICAL MAINTENANCE TECHNOLOGY

Curriculum Guide for Academic Year 2012-2013

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Students planning to **transfer** to a four-year college or university should refer to the ASSIST web site at www.assist.org and **consult a counselor** before beginning a program of study. Please call 562-938-4561 for the LAC, or 562-938-3920 for PCC to schedule a meeting with a counselor. Students may also wish to visit the Transfer Center on either campus.

Program of study leading to: Associate in Science (A.S.) Degree

<u>REQUIRED COURSES</u>		UNITS	In Progress	Completed Grade
	DIESL 293AD General Engines	4		
	DIESL 391A Hydraulics	3		
	DIESL 492 Air & Hydraulic Brakes	3		
	ELECT 202 Electrical Mathematics	3		
°	ELECT 204 First Semester Fundamentals of DC Electricity	3		
°	ELECT 210A Laboratory Practices 1 (<i>ELECT 204 & 210A must be taken concurrently</i>)	1		
†°	ELECT 209 Second Semester Fundamentals of Motors/Generators	3		
°	ELECT 210B Laboratory Practices 2 (<i>ELECT 209 & 210B must be taken concurrently</i>)	1		
	AC_R 450A Transport Refrigeration	5		
†	AC_R 450B Advanced Transport Refrigeration	5		
	FORK 801 Forklift Safety & Operation	1		
	WELD 400AD Welding (General)	2		
	WELD 410AD Welding (Arc)	2		
	WELD 480AD Welding (Inert Gas)	2		
Subtotal Units		38		
IN ADDITION, complete at least THREE (3) UNITS from the following:		UNITS		
†	ELECT 212 Third Semester Fundamentals of AC Electricity	3		
	ELECT 210C Laboratory Practices 3 (AC) (<i>ELECT 212 & 210C must be taken concurrently</i>)	1		
	AC_R 400A Uniform Mechanical Code I	3		
†	AC_R 400B Uniform Mechanical Code II	3		
	SHMET 220 Basic Sheet Metal Layout and Fabrication	4		
Subtotal Units		3		
TOTAL UNITS		41		

For graduation with an **Associate in Science (A.S.) Degree with a major in Mechanical Maintenance Technology:**

- Minimum Unit Requirements:** Any course that appears on a curriculum guide and the General Education Pattern (Plan A) may fulfill both major and general education requirements (Approved by College Curriculum Committee Spring 2012). For this degree, complete a minimum of 60 units in courses numbered 1-599. Please note that additional elective units may be required to meet this minimum based upon courses selected to fulfill General Education for the Associate Degree.

Mech. Maint. Tech. Major:	41	units
General Education/A.S.	19	units
Minimum Total Units:	60	units

Associate Degree requirements continue on the following page:

Associate Degree requirements continued from the previous page:

2. **Scholarship:** Maintain an **overall grade point average (GPA) of 2.0** ("C" average) based on all accredited college work applied to the degree, no matter where completed. For this **field of concentration, complete each course above with a grade of "C" or better**, or "P" if course is graded on a P/NP basis.
3. **Residence for the Degree:** Complete at least 30 units of the required 60 in residence at LBCC, or complete in residence at LBCC at least 20 units within the last 30 units of work applied to the degree.
4. **Residence for the Field of Concentration:** Complete fifty percent (50%) or more of the unit requirements for this field of concentration in residence; this means at **least 21 units** of the required 41 must be **completed at Long Beach City College**. Credit earned by exam, where applicable, may be included.
5. **General Education and Proficiency Requirements:** Complete the required A.A./A.S. General Education and Proficiency requirements*, otherwise known as "Plan A". For Plan A requirements, refer to the general catalog or view it online at <http://osca.lbcc.edu>.
6. Complete and submit the degree application form to the Admissions and Records office during your final semester of course work. These forms are available in the Admissions and Records office, or online at <http://admissions.lbcc.edu/>. Refer to the Schedule of Classes (<http://schedule.lbcc.edu>) and click the "Important Dates" link to view the actual deadline for each semester.

*The requirements for general education/proficiency and the field of concentration (major) 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".

**Program of study leading to:
Certificate of Achievement**

REQUIRED COURSES—Complete the 41 units of required courses as listed in the Associate Degree requirements box on the first page.

<u>REQUIRED COURSES</u>	TOTAL UNITS	In	
		Progress	Completed
	41	<input type="text"/>	<input type="text"/>

For graduation with a **Mechanical Maintenance Technology Certificate of Achievement:**

1. Complete each of the **REQUIRED COURSES** listed above with a **minimum grade of "C"**, or better, or "P" if course is graded on a P/NP basis.
2. Complete fifty percent (50%) or more of the unit requirements for this field of concentration in residence; this means at **least 21 units** of the required 41 must be **completed at Long Beach City College**. Credit earned by exam, where applicable, may be included.
3. Complete and submit the certificate application form to the Admissions and Records office during your final semester of course work. These forms are available in the Admissions and Records office, or online at <http://admissions.lbcc.edu/>. Refer to the Schedule of Classes (<http://schedule.lbcc.edu>) and click the "Important Dates" link to view the actual deadline for each semester.

For both the **Associate in Arts** and the **Certificate of Achievement**, the following courses are recommended, **BUT ARE NOT REQUIRED** to earn either.

RECOMMENDED but not required courses:

RECOMMENDED FOR THE COMMUNICATION & ANALYTICAL THINKING General Education component:

Math Requirement: Complete Math 120[#] or 130[#] or 130A[#] OR a more advanced level of Mathematics[#].

RECOMMENDED FOR THE NATURAL SCIENCES General Education component:

ENVRS 1 (Energy for the Future) OR CHEM 2[#] (Elementary Chemistry).

Career Opportunities

This program gives students the comprehensive skills to maintain, diagnose, and repair mechanical and electrical equipment related to any heavy industry (i.e. transportation, shipping, and rail or refinery industry).

Program Mission and Outcomes

The Mechanical Maintenance Technology program's mission is to provide technical training to meet the demands of the transportation, shipping, rail, ships or refinery industries and to provide employment and prepare students for the EPA exam which is required in these industries.

- Develop internships and networks with the transportation industries to help students attain employment upon the completion of our program.
- Provide environmental (green) and solar and renewable and sustainable energy technology equipment to the curriculum by experienced and highly trained staff using a quality curriculum for students that will equip them with the necessary skills and abilities to successfully.
- Since November 14, 1994 all refrigerant and air conditioning technicians must be certified by the EPA, and only certified technicians can purchase refrigerants. Our program will provide the necessary information and help students pass this test. Our instructors can give the test.

Legend

† This course has a prerequisite. Prerequisite courses must be complete with at least a “C” or “P” grade. Refer to the General Catalog (<http://www.lbcc.edu/cat/index.html>), the Schedule of Classes (<http://schedule.lbcc.edu/>), or the online Credit Course Outline (<http://wdb-asir.lbcc.edu/coursecurriculum/courseetails/>) for specific prerequisite information.

° Elect 200A & 200B are acceptable substitutes for ELECT 204/210A & 209/210B.