



ELECTRICAL TECHNOLOGY, AUTOMATION TECHNICIAN

Curriculum Guide for Academic Year 2019-2020

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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 (LAC) or (562) 938-3920 (PCC) to schedule a counseling appointment. Students may also wish to visit the Transfer Center on either campus.

Program of study leading to: <u>Associate in Science (A.S.)</u>			Units	In Progress	Completed Grade
Required Major Coursework:					
ELECT 253	OSHA Standards for Construction Safety		2		
ELECT 225	Algebra and Trigonometry for Technicians		4		
ELECT 204	First Semester Fundamentals of DC Electricity		4		
ELECT 240	Introduction to the National Electrical Code		3		
ELECT 209	Second Semester fundamentals of Motor/Generators		4		
ELECT 435A	Motor Control Wiring and Troubleshooting		2		
ELECT 212	Third Semester Fundamentals of AC Electricity		4		
ELECT 214	Fourth Semester AC Principles and Practices		4		
ELECT 242	Electrical Code-Grounding		1.5		
Subtotal Units			28.5		
<u>REQUIRED CONCENTRATION COURSES</u>					
ELECT 227	Variable Speed Drive Fundamentals		2		
ELECT 230A	Robotics Technology-Design		2		
ELECT 230B	Robotics Technology-Integration		2		
ELECT 231	Electro-Hydraulics Pneumatic		2		
ELECT 256	High Voltage Safety Awareness		1		
ELECT 435B	Programmable Logic Controllers (PLC) 1		2		
			11		
TOTAL UNITS			39.5		

- For graduation with an **Certificate of Achievement in ELECTRICAL TECHNOLOGY, AUTOMATION TECHNOLOGY:**
1. Complete each of the **REQUIRED COURSES** with a **minimum grade of "C"** and a cumulative grade point average of 2.5.
 2. Complete fifty percent (50%) or more of the unit requirements for this field of concentration in residence; this means at **least 20 units** of the required 39.5 must be **completed at Long Beach City College**. Credit earned by exam, where applicable, may be included.

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.

Program of study leading to:
Certificate of Achievement

REQUIRED COURSES—Complete the 39.5 units of required courses as listed in the Associate Degree requirements box.

TOTAL UNITS 39.5

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For graduation with a **Computer Networking Certificate of Achievement**:

1. Complete each of the **REQUIRED COURSES** listed above with a **minimum grade of “C”**.
2. Complete fifty percent (50%) or more of the unit requirements for this field of concentration in residence; this means at **least 20 units** of the required 39.5 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.

Program of study leading to:
Certificates of Achievement – Automation Technician

REQUIRED COURSES		UNITS	In Progress	Completed Grade
ELECT 227	Variable Speed Drive Fundamentals	2		
ELECT 230A	Robotics Technology-Design	2		
ELECT 230B	Robotics Technology-Integration	2		
ELECT 231	Electro-Hydraulics and Pneumatic Systems	2		
ELECT 256	High Voltage Safety Awareness	1		
ELECT 435B	Programmable Logic Controllers (PLC) 1	1		
TOTAL UNITS		11		

For graduation with a **Automation Technician 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: For the **Core Skills** Certificate, complete at **least 5.5 units** of the required 11 at **Long Beach City College**. For the **Advanced Skills** Certificate, complete at **least 17.5-18.5** of the required 32-37 at **Long Beach City College**. Credit earned by exam, where applicable, may be included.

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.

Career Opportunities

This **Associate Degree or Certificate of Achievement** is a two-year program leading to the Associate in Science (A.S.) degree. This degree will help students succeed after transferring to a CSU or UC School Computer Science major program. Students wishing a bachelor’s degree (transfer program) should meet with a counselor to discuss transferability of courses.

Program Mission and Outcomes

Program Outcomes:

- Develop procedures for the successful installation, maintenance and troubleshooting of robotic, PLC and automation control systems.

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/coursedetails/>) for specific prerequisite information.