

Industrial Automation and Electronic Controls Certificate – (768B)

Requirements Effective Fall 2017

Program Planning Guide

Program Description: The Industrial Automation and Electronic Controls Certificate prepares students for immediate employment, and future advancement, in companies or government organizations that manufacture, service, sell, design or support electrical and electronic systems that control machinery, automation, and/or processes.

Prerequisites: Many classes have prerequisites. Prerequisites are those classes that prove eligibility for entry-level classes by testing or by having satisfied prior course work. Course work earned at other institutions must be unofficially evaluated or approved by a program advisor before registering. Courses in this certificate with prerequisites are marked with an asterisk (*). See catalog for more information.

Industrial Automation and Electronic Controls Certificate Prerequisites Placement into ENGL 097/098 (or higher) or successful completion of ABE 050, Placement into MATH 084 or successful completion of ABE 031 or equivalent or higher class and BUS 169 or equivalent computer experience.

Note: Advanced placement testing, work experience, and transfer of credits may result in course waivers, credit transfer, and advanced placement.

Program Requirements		
Course Number	General Education/Related Instruction Requirements (15 credits)	Credit Hours
ENGL&101* or ENGL&235*	Composition Technical Writing	5
Human Relations	BUS 236 Interpersonal Communications for the Workplace or approved Human Relations elective	5
EET 109* or MATH 141*	Mathematical Applications for Circuit Analysis or Pre-Calculus I or higher	5
Course Number	Certificate Requirements (46 credits)	
EET 106	Introduction to Soldering	1
EET 112	Fluid Power & Alternative Energy	5
EET 131	IT Essentials – A+ Certification	5
EET 137*	Introduction to Robotics	5
EET 138*	Robotic Applications	5
EET 160	Introduction to Electricity and Electronics	5
EET 161	D.C. Principles of Electronics	5
EET/EEL 201*	Energy Generation, Conversion, & Sustainability	5
EET/EEL 202*	Industrial Motors Controls	5
EET/EEL 203*	Programmable Logic Controllers	5
		Total Credits: 61 (excluding pre-requisites)

Program Outcomes:

- Identify and apply technical concepts and terms used in industrial energy and control.
- Ability to troubleshoot robotic systems, using knowledge of microprocessors, programmable controllers, electronics, circuit analysis, sensor or feedback systems, hydraulics, or pneumatics.
- Locate, evaluate, and apply relevant information from various sources to address workplace problems.

What Skills do I need to be successful in this field?

- <http://www.onetonline.org/link/summary/49-2094.00>

What are some potential job titles?

- Electrical and Electronics Repairers, Commercial and Industrial Equipment
<http://www.onetonline.org/link/summary/49-2094.00>
- Robotics Technician <https://www.onetonline.org/link/summary/17-3024.01>

Wages, employment trends and pathways

- <http://www.onetonline.org/link/summary/49-9041.00#WagesEmployment>

Course Sequence: This program of study is outlined by quarter, and courses should be taken in the indicated sequence. However, it should not be concluded that students will always proceed through their program of study exactly as prescribed here. The number of quarters listed here is minimal. Not all courses are offered every quarter. Individual student experiences, educational and training background, and personal schedules and demands all may affect the time it takes to finish this program.

1st quarter: EET/EEL 203, EET 109 or MATH 141 (or higher), EET 161

2nd quarter: EET/EEL 202, EET 160, ENGL&101 or ENGL&235

3rd quarter: EET/EEL 201, EET 137, EET 112, BUS 236

4th quarter: EET 138, EET 131, EET 106

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Program Website:	https://northseattle.edu/programs/mechatronics		

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