

**Industrial Power and Control AAS – 657E**  
Requirements Effective Fall 2016  
Program Planning Sheet

**Program Description:** Industrial Power and Control is a two-year program that 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 degree with pre-requisites are marked with an asterisk (\*). See catalog for more information.

**Industrial Power and Control AAS Prerequisites:** Placement into ENGL 097/098 (or higher), Placement into MATH 084 or successful completion of 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.

<b>Program Requirements</b>		
<b>Course Number</b>	<b>General Education/Related Instruction Requirements (30 credits)</b>	<b>Credit Hours</b>
ENGL&101*	Composition	5
Human Relations	Choose one of the following: BUS 236, HUM 105, ISP 101, ISP 105, ISP 110, POLS 112, SOC&101	5
EET 109* or MATH 141*	Mathematical Applications for Circuit Analysis or Pre-Calculus or higher	5
BUS 112 or US Culture or Global Studies	Multi-Cultural Communication in the American Workplace or Any approved US Culture course or Any approved Global Studies course	5
IT	Information Technology (IT 120 or higher)	10
<b>Course Number</b>	<b>Degree Requirements (81 credits)</b>	
EET 105	Introduction to Technology	2
EET 106	Introduction to Soldering	1
EEL 201*	Energy Generation, Conversion, & Sustainability	5
EEL 202*	Industrial Motors Controls	5
EEL 203*	Industrial Motors Drives	5
EET 108	Introduction to Fiber Optics	5
EET 112	Fluid Power & Alternative Energy Sources	5
EET 114	Applied Physics	5
EET 131	IT Essentials – A+ Certification	5
EET 132*	IT Essentials – A+ Certification Advanced	5
EET 137*	Introduction to Robotics	5
EET 138*	Robotic Applications	5
EET 161	D.C. Principles of Electronics	5
EET 162*	A.C. Principles of Electronics	5
EET 163*	Solid State Electronics	5
EET 165*	Analog Circuits and Devices	5
EET 170*	Digital Electronics & PLCs I	5
EET 219	Metrology and Measurement Science	3
		<b>Total Credits: 111</b> (excluding pre-requisites)

## Program Outcomes:

- Identify and apply technical concepts and terms used in industrial energy and control.
- Analyze and troubleshoot industrial energy generation, conversion and control systems.
- Use electronic circuit simulation software for circuit design and analysis.
- Repair, maintain and install electronic and electrical control systems.
- 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/49-9041.00>

## What are some potential job titles?

- Industrial Machinery Mechanic
- Industrial Electrician <http://www.onetonline.org/find/quick?s=industrail+electrician>
- Electrical and Electronics Repairers, Commercial and Industrial Equipment  
<http://www.onetonline.org/link/summary/49-2094.00>

## 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. Although summer quarter is not considered one of the full-time quarters in the program it would be a good time to take any of the courses listed below at, "Any quarter."

**1<sup>st</sup> quarter:** EET 105, EET 109 or MATH 141 (or higher), EET 161

**2<sup>nd</sup> quarter:** EET 131, EET 162, ENGL&101

**3<sup>rd</sup> quarter:** EET 112, EET 132, EET 163, EET 170

**4<sup>th</sup> quarter:** EEL 201, EET 165, EET108, EET106

**5<sup>th</sup> quarter:** EEL 202, EET 114, EET 137, EET 219

**6<sup>th</sup> quarter:** EEL 203, EET 138, IT course

**Any quarter:** BUS 112 or US Culture or Global Studies, Human Relations, IT Courses

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**NSCC Advising Office:** 206-934-3658 <https://northseattle.edu/advising>

**Program Website:** <https://northseattle.edu/career/degrees/scec-associate-applied-science-degree>