

Technical Studies – Electricity Specialization, AAS Degree

Purpose

This program is designed to build upon the Electricity certificate and to create a pathway to upper division studies or a competitive resume advantage for students planning to work as Electricians. This program may help students attain the following license(s) or certifications: Journeyman Electrical Tradesman Licensure or Master Electrical Tradesman, Virginia Dept. of Professional and Occupational Regulation.

Program Learning Outcomes

Students will:

- Be able to use electrical equipment safely and appropriately.
- Apply National Electrical Code to industrial and residential wiring.
- Apply fundamental electrical theory to electrical and industrial wiring.
- Demonstrate an understanding of quality control principles.

Program Curriculum and Suggested Sequence of Courses

1 st Semester	Credits	Course Options
SDV 101 Student Dev Orientation to Engineering and	1	SDV 100
ENG 111 College Composition I	3	
MTH 130 Mathematics/Natural Science	3	Math 111 See Note 2
SAF 130 Industrial Safety – OSHA 10	1	
ELE 127 Residential Wiring Methods	3	
IND 103 Industrial Methods	2	
ELE 131 National Electrical Code I	4	
<i>Total Credits</i>	<i>17</i>	
2 nd Semester	Credits	Course Options
HLT 100 First Aid and CPR	2	Any HLT, PED
ENG 115 Technical Writing	3	
ELE 156 Electrical Control Systems	3	
ITE 115 Microcomputers/Programming/Software	3	ITE 119
ETR 150 Machine Control Using Relay & Programmable	3	
<i>Total Credits</i>	<i>14</i>	
3 rd Semester	Credits	Course Options
IND 116 Applied Technology	3	
IND 190 Coordinated Internship I	3	IND 197 See Note 3
<i>Total Credits</i>	<i>6</i>	
4 th Semester	Credits	Course Options
ELE 118 Practical Electricity	2	
ELE 149 Wiring Methods in Industry	3	
HIS 111 History of World Civilization I	3	
ELE 132 National Electrical Code II	4	
IND 101 Quality Assurance Technology I	3	
<i>Total Credits</i>	<i>15</i>	

5th Semester	Credits	Course Options
HIS 112 History of World Civilization II	3	
PHI 220 Ethics	3	
CAD 201 Computer Aided Drafting and Design I	3	See Note 4
IND 137 Team Concepts and Problem Solving	3	
IND 190 Coordinated Internship II	3	IND 197 See Note 3
Total Credits	15	
Total Credits For Program	67	

Notes and Additional Curriculum Options

1. *Part-time students should consult their faculty advisors regarding appropriate course sequences.*
2. *Students who have completed MTH 103 have satisfied this requirement.*
3. *Internship is a total of 6 credits taken over two semesters.*
4. *Alternate courses: ETR 113, ETR160*

Certifications

Courses in this program may help students attain the following license(s) or certification(s):

- *Journey Electrical Tradesman Licensure*
- *Virginia Department of Professional and Occupational Regulation*
- *Master of Electrical Tradesman*