

# Electricity

## Certificate

**Program Coordinator:** Donnie Melvin • dmelvin@vhcc.edu • 276-739-2453

**Length:** Two semesters (one year)

**Purpose:** The Certificate program in Electricity is designed to prepare the student for full-time employment as an electrician, immediately upon completion of the program. A student who completes the program is capable of performing the job skills normally expected of beginning electricians, working with a licensed electrician.

**Occupational Objectives:** Residential, industrial, or maintenance electrician

**Admission Requirements:** A student eligible for admission to the College can normally be considered for admission to the Electricity curriculum. Proficiency in high school English is required. Direct enrollment guidelines using either multiple measures or informed placement will determine a student's placement into college-level English and mathematics courses.

**Program Requirements:** Approximately two-thirds of the curriculum will include courses in electricity, with the remaining courses in related subjects, and general education. Instruction will include both the theoretical concepts and practical applications needed for future success as an electrician. Upon completion of the two-semester curriculum listed, the student will be awarded a Certificate in Electricity.

**Virginia Tradesman Certification Program:** Students who seek the Journeyman or Master levels of certification may, with appropriate documentation, help meet the practical experience requirement through the Cooperative Education Program.

Course Number	Course Title	Lecture Hours	Lab Hours	Credits
<b>First Semester (Fall)</b>				
ENG 111 or 115	College Composition I or Technical Writing	3	0	3
ECO 201 or 202	Principles of Macroeconomics or Principles of Microeconomics <sup>1</sup>	3	0	3
ELE 111	Home Electric Power I	2	3	3
ELE 157	Electricity Fundamentals	3	6	6
SAF 130	Industrial Safety – OSHA 10	1	0	1
SDV 101	Orientation to College Success	1	0	1
<b>Total</b>		<b>13</b>	<b>9</b>	<b>17</b>
<b>Second Semester (Spring)</b>				
MTH 111	Basic Technical Mathematics	3	0	3
ELE 141	DC & AC Machines	3	3	4
ELE 112	Home Electric Power II	2	3	3
ELE 131	National Electric Code I	3	0	3
<b>Total</b>		<b>11</b>	<b>6</b>	<b>13</b>
<b>Total Minimum Credits for Certificate</b>				<b>30</b>

Approved general education electives are listed at <http://www.vhcc.edu/GenEdCore>.

# Industrial Electricity

## Career Studies Certificate

**Program Coordinator:** Donnie Melvin • dmelvin@vhcc.edu • 276-739-2453

**Length:** Two Semesters (One year)

**Purpose:** The Career Studies Certificate program in Industrial Electricity is designed to update the skills for full-time employment as an industrial electrician. A student who completes the program is capable of performing the job skills normally expected of beginning industrial electricians.

**Occupational Objectives:** Industrial or maintenance electrician.

**Admission Requirements:** See the section on admission requirements in this catalog. A student eligible for admission to the College can normally be considered for admission to the Industrial Electricity program.

**Program Requirements:** All courses in this curriculum will be technical electrical courses. These courses will be transferable to the regular Electricity Certificate or on of the three AAS programs in Electrical Technology.

Course Number	Course Title	Lecture Hours	Lab Hours	Credits
<b>First Semester (Fall)</b>				
ELE 157	Electricity Fundamentals	3	6	6
ELE 245	Industrial Wiring	2	3	3
ELE 233	Programmable Logic Controllers I	2	3	3
MEC 161	Hydraulics and Pneumatics	2	2	3
<b>Total</b>		<b>9</b>	<b>14</b>	<b>15</b>
<b>Second Semester (Spring)</b>				
ELE 132	National Electric Code 2	3	0	3
ELE 141	DC & AC Machines	3	3	4
ELE 175	Industrial Solid State Devices	2	3	3
<b>Total</b>		<b>8</b>	<b>6</b>	<b>10</b>
<b>Total Credits for Career Studies Certificate</b>				<b>25</b>

The above semester-by-semester sequence of courses may be modified when necessary. Please refer to the Program Choices section of this Catalog for a discussion of factors which affect planning and sequencing programs of study. Courses may be substituted or adjustments may be made by the College to meet program objectives and requirements.