

**BLUEGRASS COMMUNITY AND TECHNICAL COLLEGE**

**Electrical Technology  
Associate in Applied Science**

Academic Plan Code - 4603027039

The electrical technology program focuses on preparing students for entry-level electrician positions in industry and the building trades. The study of electrical theory and practical application of that theory provides the foundation of this program. Laboratory and classroom instruction include such topics as blueprint reading, motor controls, and residential wiring. Construction Electricity concentrates on residential electrical construction, and industrial electricity on industrial electrical construction.

Students enrolled in the Electrical Technology program are required to achieve a minimum grade of "C" in each technical core and technical elective course.

| <b>General Education Core</b>            |  |                     |
|--|--|---------------------|
| <b>Course</b>                            | <b>Course Descriptions</b>                   | <b>Credit Hours</b> |
| MA109 or MT150                           | College Algebra and Functions <b>OR</b>      | 3                   |
| MT125                                    | Technical Algebra and Trigonometry <b>OR</b> | 3                   |
| PH171                                    | Applied Physics <b>OR</b>                    | 4                   |
|  | Other Science with Consent of Advisor        | 3                   |
| ENG101                                   | Writing                                      | 1 3                 |
|  | Social Interaction                           |                     |
|  | Oral Communications                          |                     |
|  | Heritage/Humanities                          |                     |
|  | <b>Subtotal Credit Hours</b>                 | <b>18-19</b>        |
| <b>Technical Core or Support Courses</b> |  |                     |
| ENGT110                                  | Circuits I <b>AND</b>                        | 3                   |
| ENGT111                                  | Circuits I Lab 1 <b>AND</b>                  | 1                   |
| ENGT113                                  | Circuits I Lab 2                             | 1                   |
| ENGT114                                  | Circuits II <b>AND</b>                       | 3                   |
| ENGT115                                  | Circuits II Lab 1 <b>AND</b>                 | 1                   |
| ENGT117                                  | Circuits II Lab 2                            | 1                   |
| EET250                                   | National Electric Code                       | 4                   |
| EET264                                   | Rotating Machines                            | 2                   |
| EET265                                   | Rotating Machines Lab                        | 2                   |
| EET270                                   | Motor Controls I                             | 2                   |
| EET271                                   | Motor Controls I Lab                         | 2                   |
|  | Computer Literacy                            | 3                   |
|  | <b>Subtotal Credit Hours</b>                 | <b>25</b>           |

**Options (choose on of the following)**

**Industrial Electrician**

Academic Sub-Plan Code - 460302701

|        |  |   |
|--------|--|---|
| EET154 | Electrical Construction I <b>AND</b>     | 2 |
| EET155 | Electrical Construction I Lab <b>AND</b> | 2 |
| EET252 | Electrical Construction II <b>AND</b>    | 2 |
| EET253 | Electrical Construction II Lab           | 2 |
| EET272 | Motor Controls II <b>AND</b>             | 2 |

|        |   |              |
|--------|---|--------------|
| EET273 | Motor Controls II Lab <b>AND</b>          | 2            |
| EET276 | Programmable Logic Controllers <b>AND</b> | 2            |
| EET277 | Programmable Logic Controllers Lab        | 2            |
|        | Technical Electives *                     | 9            |
|        | <b>Subtotal Credit Hours</b>              | <b>23-25</b> |
|        | <b>Total Credit Hours</b>                 | <b>66-68</b> |

**Construction Electrician**

Academic Sub-Plan Code - 460302702

|        |  |              |
|--------|--|--------------|
| EET154 | Electrical Construction I <b>AND</b>     | 2            |
| EET155 | Electrical Construction I Lab <b>AND</b> | 2            |
| EET252 | Electrical Construction II <b>AND</b>    | 2            |
| EET253 | Electrical Construction II Lab           | 2            |
|        | Technical Electives*                     | 10           |
|        | <b>Subtotal Credit Hours</b>             | <b>17-18</b> |
|        | <b>Total Credit Hours</b>                | <b>60-61</b> |

**Motor Control Electrician**

Academic Sub-Plan Code - 460302703

|        |   |              |
|--------|---|--------------|
| EET272 | Motor Controls II <b>AND</b>              | 2            |
| EET273 | Motor Controls II Lab <b>AND</b>          | 2            |
| EET276 | Programmable Logic Controllers <b>AND</b> | 2            |
| EET277 | Programmable Logic Controllers Lab        | 2            |
| FPX100 | Fluid Power <b>AND</b>                    | 3            |
| FPX101 | Fluid Power Lab <b>OR</b>                 | 2            |
| ET265  | Applied Fluid Power                       | 3            |
|        | Technical Electives*                      | 7            |
|        | <b>Subtotal Credit Hours</b>              | <b>17-20</b> |
|        | <b>Total Credit Hours</b>                 | <b>60-63</b> |

**Electrical Technology  
Electrical Technology Diploma**

Academic Plan Code - 4603024049

| <b>Course</b>                            | <b>Course Descriptions</b>                   | <b>Credit Hours</b> |
|--|--|---------------------|
| <b>General Education Core</b>            |  |                     |
| MA109 or MT150                           | College Algebra and Functions <b>OR</b>      | 3                   |
| MT125                                    | Technical Algebra and Trigonometry <b>OR</b> | 3                   |
| <b>Choose one of the following:</b>      |  |                     |
|  | Science <b>OR</b>                            | 3                   |
| ENG101                                   | Writing I <b>OR</b>                          | 3                   |
|  | Social Interaction <b>OR</b>                 | 3                   |
|  | Oral Communications <b>OR</b>                | 3                   |
|  | Heritage/Humanities                          | 3                   |
|  | <b>Subtotal Credit Hours</b>                 | <b>6</b>            |
| <b>Technical Core or Support Courses</b> |  |                     |
| ENGT110                                  | Circuits I <b>AND</b>                        | 3                   |
| ENGT111                                  | Circuits I Lab 1 <b>AND</b>                  | 1                   |
| ENGT113                                  | Circuits I Lab 2                             | 1                   |
| ENGT114                                  | Circuits II <b>AND</b>                       | 3                   |
| ENGT115                                  | Circuits II Lab 1 <b>AND</b>                 | 1                   |
| ENGT117                                  | Circuits II Lab 2                            | 1                   |

**BLUEGRASS COMMUNITY AND TECHNICAL COLLEGE**

|        |                              |           |
|--------|------------------------------|-----------|
| EET250 | National Electric Code       | 4         |
| EET264 | Rotating Machines            | 2         |
| EET265 | Rotating Machines Lab        | 2         |
| EET270 | Motor Controls I             | 2         |
| EET271 | Motor Controls I Lab         | 2         |
|        | Computer Literacy            | 3         |
|        | <b>Subtotal Credit Hours</b> | <b>25</b> |

|          |                                       |           |
|----------|---------------------------------------|-----------|
| ENGT 114 | Circuits II <b>AND</b>                | 3         |
| ENGT115  | Circuits II Lab 1 <b>AND</b>          | 1         |
| ENGT 117 | Circuits II Lab 2                     | 1         |
| EET 250  | National Electric Code                | 4         |
| EET150   | Transformers <b>AND</b>               | 2         |
| EET151   | Transformers Lab                      | 1         |
| EET 270  | Rotating Machines                     | 2         |
| EET 271  | Rotating Machines Lab                 | 2         |
| EET 270  | Motor Controls I                      | 2         |
| EET 271  | Motor Controls I Lab                  | 2         |
| EET 154  | Electrical Construction I <b>AND</b>  | 2         |
| EET 155  | Electrical Construction I Lab         | 2         |
| EET 252  | Electrical Construction II <b>AND</b> | 2         |
| EET 253  | Electrical Construction II Lab        | 2         |
|          | <b>Total Credit Hours</b>             | <b>33</b> |

**Options (choose on of the following)**

**Industrial Electrician**

Academic Sub-Plan Code - 460302401

|        |   |              |
|--------|---|--------------|
| EET154 | Electrical Construction I <b>AND</b>      | 2            |
| EET155 | Electrical Construction I Lab <b>AND</b>  | 2            |
| EET252 | Electrical Construction II <b>AND</b>     | 2            |
| EET253 | Electrical Construction II Lab            | 2            |
| EET272 | Motor Controls II <b>AND</b>              | 2            |
| EET273 | Motor Controls II Lab <b>AND</b>          | 2            |
| EET276 | Programmable Logic Controllers <b>AND</b> | 2            |
| EET277 | Programmable Logic Controllers Lab        | 2            |
|        | Technical Electives *                     | 9            |
|        | <b>Subtotal Credit Hours</b>              | <b>23-25</b> |
|        | <b>Total Credit Hours</b>                 | <b>54-56</b> |

**Electrician Helper I**

Academic Sub-Plan Code - 4603023039

|          |                             |          |
|----------|-----------------------------|----------|
| ENGT 110 | Circuits I <b>AND</b>       | 3        |
| ENGT 111 | Circuits I Lab 1 <b>AND</b> | 1        |
| ENGT 113 | Circuits I Lab 2            | 1        |
|          | Technical Elective          | 3        |
|          | <b>Total Credit Hours</b>   | <b>8</b> |

**Construction Electrician**

Academic Sub-Plan Code - 460302402

|        |  |              |
|--------|--|--------------|
| EET154 | Electrical Construction I <b>AND</b>     | 2            |
| EET155 | Electrical Construction I Lab <b>AND</b> | 2            |
| EET252 | Electrical Construction II <b>AND</b>    | 2            |
| EET253 | Electrical Construction II Lab           | 2            |
|        | Technical Electives *                    | 10           |
|        | <b>Subtotal Credit Hours</b>             | <b>17-18</b> |
|        | <b>Total Credit Hours</b>                | <b>48-49</b> |

**Residential Electrician I**

Academic Sub-Plan Code - 4603023049

|          |                                      |           |
|----------|--------------------------------------|-----------|
| ENGT110  | Circuits I <b>AND</b>                | 3         |
| ENGT111  | Circuits I Lab 1 <b>AND</b>          | 1         |
| ENGT113  | Circuits I Lab 2                     | 1         |
| ENGT114  | Circuits II <b>AND</b>               | 3         |
| ENGT115  | Circuits II Lab 1 <b>AND</b>         | 1         |
| ENGT 117 | Circuits II Lab 2                    | 1         |
| EET 154  | Electrical Construction I <b>AND</b> | 2         |
| EET 155  | Electrical Construction I Lab        | 2         |
|          | <b>Total Credit Hours</b>            | <b>14</b> |

**Motor Control Electrician**

Academic Sub-Plan Code - 460302403

|               |   |              |
|---------------|---|--------------|
| <b>EET272</b> | Motor Controls II <b>AND</b>              | 2            |
| <b>EET273</b> | Motor Controls II Lab <b>AND</b>          | 2            |
| <b>EET276</b> | Programmable Logic Controllers <b>AND</b> | 2            |
| <b>EET277</b> | Programmable Logic Controllers Lab        | 2            |
| <b>FPX100</b> | Fluid Power <b>AND</b>                    | 3            |
| <b>FPX101</b> | Fluid Power Lab <b>OR</b>                 | 2            |
| <b>ET265</b>  | Applied Fluid Power                       | 3            |
|               | Technical Electives *                     | 7            |
|               | <b>Subtotal Credit Hours</b>              | <b>17-20</b> |
|               | <b>Total Credit Hours</b>                 | <b>48-51</b> |

**Electrician Helper II**

Academic Sub-Plan Code - 4603023059

|          |                              |           |
|----------|------------------------------|-----------|
| ENGT 110 | Circuits I <b>AND</b>        | 3         |
| ENGT 111 | Circuits I Lab 1 <b>AND</b>  | 1         |
| ENGT 113 | Circuits I Lab 2             | 1         |
| ENGT 114 | Circuits II <b>AND</b>       | 3         |
| ENGT 115 | Circuits II Lab 1 <b>AND</b> | 1         |
| ENGT 117 | Circuits II Lab 2            | 1         |
|          | Technical Elective           | 3         |
|          | <b>Total Credit Hours</b>    | <b>13</b> |

**Electrical Technology  
Certificates**

| Course | Course Descriptions | Credit Hours |
|--------|---------------------|--------------|
|--------|---------------------|--------------|

**Electrician Apprentice**

Academic Sub-Plan Code - 4603023029

|          |                             |   |
|----------|-----------------------------|---|
| ENGT 110 | Circuits I <b>AND</b>       | 3 |
| ENGT 111 | Circuits I Lab 1 <b>AND</b> | 1 |
| ENGT 113 | Circuits I Lab 2            | 1 |

**Residential Electrician II**

Academic Sub-Plan Code - 4603023069

|          |                                      |   |
|----------|--------------------------------------|---|
| ENGT 110 | Circuits I <b>AND</b>                | 3 |
| ENGT 111 | Circuits I Lab 1 <b>AND</b>          | 1 |
| ENGT 113 | Circuits I Lab 2                     | 1 |
| ENGT 114 | Circuits II <b>AND</b>               | 3 |
| ENGT 115 | Circuits II Lab 1 <b>AND</b>         | 1 |
| ENGT 117 | Circuits II Lab 2                    | 1 |
| EET 154  | Electrical Construction I <b>AND</b> | 2 |
| EET 155  | Electrical Construction I Lab        | 2 |

**BLUEGRASS COMMUNITY AND TECHNICAL COLLEGE**

|         |                                       |           |
|---------|---------------------------------------|-----------|
| EET 252 | Electrical Construction II <b>AND</b> | 2         |
| EET 253 | Electrical Construction II Lab        | 2         |
| EET 250 | National Electric Code                | 4         |
|         | <b>Total Credit Hours</b>             | <b>22</b> |

**Motor Control Elect I**

Academic Sub-Plan Code - 4603023079

|          |                                 |           |
|----------|---------------------------------|-----------|
| ENGT 110 | Circuits I <b>AND</b>           | 3         |
| ENGT 111 | Circuits I Lab 1 <b>AND</b>     | 1         |
| ENGT 113 | Circuits I Lab 2                | 1         |
| ENGT 114 | Circuits II <b>AND</b>          | 3         |
| ENGT 115 | Circuits II Lab 1 <b>AND</b>    | 1         |
| ENGT 117 | Circuits II Lab 2               | 1         |
| EET 250  | National Electric Cod           | 4         |
| EET150   | Transformers <b>AND</b>         | 2         |
| EET151   | Transformers Lab                | 1         |
| EET 270  | Rotating Machines               | 2         |
| EET 271  | Rotating Machines Lab           | 2         |
| EET 270  | Motor Controls I                | 3         |
| EET 271  | Motor Controls I Lab            | 3         |
| CPU 150  | Computer Fundamentals <b>OR</b> | 3         |
| CIS 100  | Introduction to Computers       | 3         |
|          | <b>Total Credit Hour</b>        | <b>28</b> |

**Motor Control Elect II**

Academic Sub-Plan Code - 4603023089

|          |  |           |
|----------|--|-----------|
| ENGT 110 | Circuits I <b>AND</b>                        | 3         |
| ENGT 111 | Circuits I Lab 1 <b>AND</b>                  | 1         |
| ENGT 113 | Circuits I Lab 2                             | 1         |
| ENGT 114 | Circuits II <b>AND</b>                       | 3         |
| ENGT 115 | Circuits II Lab 1 <b>AND</b>                 | 1         |
| ENGT 117 | Circuits II Lab 2                            | 1         |
| EET 250  | National Electric Code                       | 4         |
| EET150   | Transformers <b>AND</b>                      | 2         |
| EET151   | Transformers Lab                             | 1         |
| EET 270  | Rotating Machines                            | 2         |
| EET 271  | Rotating Machines Lab                        | 2         |
| EET 270  | Motor Controls I                             | 2         |
| EET 271  | Motor Controls I Lab                         | 2         |
| EET 272  | Motor Controls II <b>AND</b>                 | 2         |
| EET 273  | Motor Controls II Lab                        | 2         |
| EET 276  | Programmable Logic Controllers<br><b>AND</b> | 2         |
| EET 277  | Programmable Logic Controllers Lab           | 2         |
| CPU 150  | Computer Fundamentals <b>OR</b>              | 3         |
| CIS 100  | Introduction to Computers                    | 3         |
|          | <b>Total Credit Hours</b>                    | <b>36</b> |