The Anoka Technical College Construction Electrician diploma is an 82-credit program designed to develop skills in the installation and testing of electrical fixtures. Students will study wiring, including blueprint reading, wiring code, electrical theory and wiring laboratory. Many graduates of this program join unions to complete their apprenticeship training.

**Program Learning Outcomes**

By completing this program, students will achieve the following learning outcomes, which, all outcomes are determined at a first year apprentice level:

1. Work safely amongst others.
2. Troubleshoot electrical circuits using proper technique.
3. Design and install single family dwelling circuits to NEC standards.
4. Design and install commercial and industry circuits to NEC standards.
5. Design and install control circuits to NEC standards.
6. Effectively follow verbal and written instructions.
7. Identify code articles that pertain to the project.

**Accreditation/Certification**

Minnesota Department of Labor and Industry
Two year Construction Electrician Program Approval

**Endorsements**

The Construction Electrician diploma is approved by:

• State Board of Electricity
• Twin Cities Joint Apprenticeship Committee,
• Many unions in the upper Midwest including:
  • Local 110 (St. Paul)
  • Local 292 (Minneapolis)
  • Local 343 (Mankato)
  • Local 242 (Duluth)
  • Local 294 (Bemidji and Iron Range)
  • Local 1426 (Fargo, East Grand Forks and Grand Forks)
  • Local 242 (Sioux City, Sioux Falls, Colorado and Kansas)

**Course Prerequisites**

Although no prior knowledge or experience is necessary to succeed in this program, prospective Construction Electrician students should have a high school diploma or GED. Helpful high school courses include electronics, drafting, carpentry, and algebra/trigonometry. Physical exertion is often required and electrical construction may be performed outdoors or under such conditions as heights, unfinished construction or high voltages.

Some courses may require appropriate test score or completion of basic math, basic English and/or reading courses with a “C” or better.

**Graduation Requirements**

All Anoka Technical College students seeking an Associate in Applied Science (AAS), diploma, or certificate must meet the cumulative grade point average (GPA) of 2.0 or higher.

**Transfer Opportunities**

To see how credits from this program may transfer into other Anoka Technical College programs or into a program at another college, visit:

• Minnesota Transfer: (www.mntransfer.org/students/plan/s_agreements.php?numResults=25&archive=false&from_inst=70&from_prog=&to_inst=&Search=Search)
• Anoka Technical College transfer student: (www.anokatech.edu/BecomeStudent/Transfers.aspx)

**Industry Information**

As a construction electrician, program graduates will work with electrical materials on construction and remodeling jobs. More specifically, construction electricians plan, assemble, install and test electrical fixtures, apparatus and wiring that is used in both new and existing buildings. Construction electricians must have complete knowledge of electrical codes, theory and materials in order to correctly install and troubleshoot all types of electrical equipment and controls as required for each type of building.

**Wages/Outlook/Advancement**

Wage information is available from the Minnesota Department of Employment and Economic Development (https://mn.gov/deed/job-seekers/job-outlook/). Experienced electricians who work for large companies have several options for advancement. Those who have good people skills may become supervisors. Those who have good organizational skills may become managers. Construction electricians may transfer to electrical jobs in the shipbuilding, automobile or aircraft industries. Some electricians start their own businesses. Those who have a master electrician’s license may become contractors.

**Gainful Employment**

Follow this link for a Gainful Employment Report.

**Technical Education: 70 Credits**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ELEC 1002</td>
<td>Electrical Theory I</td>
<td>6</td>
</tr>
<tr>
<td>ELEC 1021</td>
<td>Residential Wiring Lab I</td>
<td>5</td>
</tr>
<tr>
<td>ELEC 1031</td>
<td>National Electrical Code I</td>
<td>3</td>
</tr>
<tr>
<td>ELEC 1062</td>
<td>Electrical Theory II</td>
<td>6</td>
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<tr>
<td>ELEC 1081</td>
<td>Residential Wiring Lab II</td>
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<td>ELEC 1091</td>
<td>National Electrical Code II</td>
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<td>Power Limited</td>
<td>2</td>
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<td>ELEC 1108</td>
<td>PLC’s for Electricians</td>
<td>3</td>
</tr>
<tr>
<td>ELEC 1110</td>
<td>Lighting</td>
<td>2</td>
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<tr>
<td>ELEC 1122</td>
<td>Electrical Heating &amp; Air Conditioning</td>
<td>3</td>
</tr>
<tr>
<td>ELEC 1130</td>
<td>Plan Reading</td>
<td>2</td>
</tr>
</tbody>
</table>

Technical Requirements .......................... 70
General Education/MnTC ......................... 12
Total Credits ..................................... 82
Sample Program Sequence

### Fall Semester

- ELEC 1002 ..... 6
- ELEC 1021 ..... 5
- ELEC 1031 ..... 3
- MATH 1400 ... 5

**TOTAL** ........ 19

### Spring Semester

- ELEC 1062 ..... 6
- ELEC 1081 ..... 6
- ELEC 1091 ..... 4
- ELEC 1122 ..... 3

**TOTAL** ........ 19

### Summer Semester (4 weeks)

- ELEC 1101 ..... 2
- ELEC 1110 ..... 2
- ELEC 1130 ..... 2
- ELEC 1142 ..... 2

**TOTAL** ........ 8

### 2nd YEAR

#### Fall Semester

- ELEC 2011 ..... 5
- ELEC 2021 ..... 2
- ELEC 2031 ..... 3
- ELEC 2041 ..... 5
- ENGL 1107 .... 4

**TOTAL** ........ 18

#### Spring Semester

- ELEC 2011 ..... 5
- ELEC 2021 ..... 2
- ELEC 2031 ..... 3
- ELEC 2041 ..... 5
- ENGL 1107 .... 4

**TOTAL** ........ 18

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**Faculty Contact**

Brian Schelkopf .......................................................... 763-576-4228
Tim Simpson .................................................................... 763-576-4142

For information on how to apply, to schedule a tour, or for service during summer hours, contact Enrollment Services at 763-576-7710 or EnrollmentServices@anokatech.edu

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**Start Dates**

- Fall Semester ...............................................................August
- Spring Semester ...........................................................January**

**Students who start in the spring will need more time to complete this program. Limited first semester technical courses are offered in the Spring semester.**

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**General Education/MnTC Requirements: 12 Credits**

Twelve (12) general education credits of Minnesota Transfer Curriculum (MnTC) are required. Student is required to take:

- ENGL 1107 Composition I .................................................. 4
- MATH 1400 Algebra and Trigonometry ................................... 5
- SPCH 1200 Interpersonal Communication ............................. 3

*Also see: Architectural Technology AAS, Architectural Technology diploma, Architectural 2D CAD, and Construction Estimating certificate*