**Electro-Mechanical Technology | Associate in Applied Science**

*Field of Study Code: ELMEC.AAS.ELECA*

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**Catalog Description**

The **Electrician Apprenticeship degree** program, in partnership with the Joint Apprenticeship and Training Committee (JATC) of the International Brotherhood of Electrical Workers (IBEW) Local Union, is open only to individuals admitted into the Electrician Apprenticeship Program of the IBEW. This degree will fulfill the classroom component of the IBEW/JATC apprenticeship experience. This program requires a minimum of 64 credits in program requirements and general education as listed below.

**Program Requirements** ........................................................................45 to 48

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elmec 1110</td>
<td>Motor and Generator Fundamentals</td>
<td>3</td>
</tr>
<tr>
<td>Elmec 1130</td>
<td>Industrial Electricity</td>
<td>3</td>
</tr>
<tr>
<td>Elmec 1150</td>
<td>National Electrical Code</td>
<td>3</td>
</tr>
<tr>
<td>Elmec 1190</td>
<td>Introduction to Programmable Logic Controllers</td>
<td>3</td>
</tr>
<tr>
<td>Elmec 2860*</td>
<td>Internship (Career &amp; Technical Education)</td>
<td>1 to 4</td>
</tr>
<tr>
<td>Elmec 2863*</td>
<td>Internship (Career &amp; Technical Education)</td>
<td>3</td>
</tr>
<tr>
<td>Elmec 2864*</td>
<td>Internship (Career &amp; Technical Education)</td>
<td>4</td>
</tr>
<tr>
<td>Elect 1100</td>
<td>Electricity and Electronics Fundamentals</td>
<td>3</td>
</tr>
<tr>
<td>Elect 1101*</td>
<td>Circuits</td>
<td>3</td>
</tr>
<tr>
<td>Elect 1120</td>
<td>Electronic Documentation</td>
<td>2</td>
</tr>
<tr>
<td>Elect 1130*</td>
<td>Electronics Materials and Fabrication</td>
<td>3</td>
</tr>
<tr>
<td>Elect 1141</td>
<td>Digital Fundamentals</td>
<td>3</td>
</tr>
<tr>
<td>Elect 1151*</td>
<td>Electronic Devices and Applications</td>
<td>4</td>
</tr>
<tr>
<td>Elect 2220*</td>
<td>Electronic Instruments, Measurements and Control</td>
<td>3</td>
</tr>
<tr>
<td>Manuf 1101</td>
<td>Industrial Design/CAD</td>
<td>3</td>
</tr>
<tr>
<td>Manuf 2280</td>
<td>Industrial Safety</td>
<td>2</td>
</tr>
</tbody>
</table>

* - course has a prerequisite

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**General Education** ........................................................................19 to 22

Each candidate for an Associate in Applied Science (A.A.S.) degree shall satisfactorily complete a minimum of 18 credits in General Education. (In addition to the courses listed below.)

Under the specified General Education headings below, the following courses are required:

- **Communication**: 6 credits
  - Written: (3 credits) English 1101 or 1105
  - Oral: (3 credits) Speech 1100, 1120 or 1150

- **Physical and Life Sciences**: 3 to 5 credits
  - At least one course with a laboratory component.

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**Suggested Course Sequence**

*(Full Time Enrollment)*

**Please note**: A student’s readiness to perform college-level coursework is based on the student’s placement test and/or ACT scores. Below 1000 level coursework may be required prior to the student taking courses in the suggested sequences.

Program Requirements are done thru the International Brotherhood of Electrical Workers. Students will submit their ACE transcript to the Office of Student Records for evaluation. The Electrician Apprenticeship degree program, in partnership with the Joint Apprenticeship and Training Committee (JATC) of the International Brotherhood of Electrical Workers (IBEW) Local Union, is open only to individual admitted into the Electrician Apprenticeship Program of the IBEW.

The College of DuPage Requirements beyond the Requirement for completing the apprenticeship program are:

**First Semester (12 to 16 credits)**

- General Education—Communication (3)
- General Education—Physical & Life Sciences (3 to 5)
- General Education—Mathematics (3 to 5)
- General Education—Social & Behavioral Sciences (3)

**Second Semester (6 credits)**

- General Education—Communication (3)
- General Education—Humanities & Fine Arts (3)
- General Education—Global/Multicultural Studies or Contemporary Life Skills (2)

**For more information:**
If you are considering this program as an area of study, please contact the **Business & Technology Division** office at 630-942-2592.

**Program web site:**
http://www.cod.edu/programs/electronics/electro_mechanical/

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8/21/17                                      2017-2019 CATALOG

ELMEC.AAS.ELECA
**Mathematics:** 3 to 5 credits
Select a minimum of 3 credits (1000 level or above).
Select Mathematics 1102, 1104 or 1120 only where required in the degree program. Only one from the following three courses may count toward overall degree requirement credit: Mathematics 1635, Psychology 2280 or Sociology 2205. Only one of the following courses may count toward overall degree credit: Mathematics 1428 or Mathematics 1431.

**Humanities and Fine Arts:** 3 credits

**Social and Behavioral Sciences:** 3 credits

Complete at least 2 credits from the list of courses in the Global/Multicultural Studies or Contemporary Life Skills Category
*Electro Mechanical Technology 1130 fulfills this requirement.*

<table>
<thead>
<tr>
<th>TOTAL CREDITS FOR AAS DEGREE</th>
</tr>
</thead>
<tbody>
<tr>
<td>64 to 70</td>
</tr>
</tbody>
</table>
Career Information ELMEC.AAS.ELECA

Job Title(s): Electricians
Chief Electrician; Control Electrician; Electrician; Industrial Electrician; Inside Wireman;
Journeyman Electrician; Journeyman Wireman; Maintenance Electrician; Mechanical Trades
Specialist, Electrician; Qualified Craft Worker, Electrician (QCW, Electrician)

For salary and wage information, please visit: www.onetonline.org

If you would like information regarding internships, resume development, interviewing and job
search skills, please contact the Career Services Center
Phone: 630-942-2230
www.cod.edu/careerservices
Twitter: @codcareercenter

Related Occupations:
Pipe Fitters and Steamfitters
Elevator Installers and Repairers
Telecommunications Equipment Installers and Repairers, Except Line Installers
Plumbers
Maintenance and Repair Workers, General
Electrical and Electronics Repairers, Commercial and Industrial Equipment
The Electro-Mechanical Technology degree prepares students to enter the industrial and manufacturing workplace with knowledge and skill levels in three areas: programmable controllers, process control instrumentation and mechanical maintenance. This degree requires 64 credits in program requirements, program electives and general education in the courses listed below.

**Program Requirements**

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<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elmec 1101</td>
<td>3</td>
</tr>
<tr>
<td>Elmec 1110</td>
<td>3</td>
</tr>
<tr>
<td>Elmec 1141</td>
<td>3</td>
</tr>
<tr>
<td>Elmec 1171</td>
<td>3</td>
</tr>
<tr>
<td>Elmec 1190</td>
<td>3</td>
</tr>
<tr>
<td>Elmec 1420</td>
<td>2</td>
</tr>
<tr>
<td>Elmec 2410*</td>
<td>3</td>
</tr>
<tr>
<td>Elmec 2510</td>
<td>3</td>
</tr>
<tr>
<td>Elmec 2600*</td>
<td>2</td>
</tr>
<tr>
<td>Elect 1100</td>
<td>3</td>
</tr>
<tr>
<td>Elect 1101*</td>
<td>3</td>
</tr>
<tr>
<td>Elect 1151*</td>
<td>4</td>
</tr>
</tbody>
</table>

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**Program Electives**

Choose 11 credits in Electro-Mechanical Technology or Electronics Technology. (In addition to the courses listed above.)

* - course has a prerequisite

**General Education**

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<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>6</td>
</tr>
<tr>
<td>Speech</td>
<td>3</td>
</tr>
</tbody>
</table>

**Physical and Life Sciences**

3 to 5 credits

At least one course with a laboratory component.

**Mathematics**

3 to 5 credits

Select a minimum of 3 credits (1000 level or above). Select Mathematics 1102, 1104 or 1120 only where required in the degree program. Only one from the following three courses may count toward overall degree requirement credit: Mathematics 1635, Psychology 2280 or Sociology 2205. Only one of the following courses may count toward overall degree credit: Mathematics 1428 or Mathematics 1431.

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**Suggested Course Sequence**

(Full Time Enrollment)

*Please note: A student's readiness to perform college-level coursework is based on the student's placement test and/or ACT scores. Below 1000 level coursework may be required prior to the student taking courses in the suggested sequences.*

**First Semester (15 credits)**

- Elmec 1101 (3)
- Elect 1100 (3)
- Math 1115 (3)
- Socio 1100 (3)
- Engli 1101 (3)

**Second Semester (17 credits)**

- Elect 1101 (3)
- Elect 1151 (4)
- Elmec 1110 (3)
- Elmec 1190 (3)
- Physi 1100 (4)

**Summer Semester (6 credits)**

- Elmec 1141 (3)
- Elmec 2410 (3)

**Third Semester (14 credits)**

- Elmec 2510 (3)
- Elmec 2600 (2)
- Speec 1100 (3)
- Humnt 1100 (3)
- Program Elective (3)

**Fourth Semester (13 credits)**

- Elmec 1420 (2)
- Elmec 1171 (3)
- Program Elective (2)
- Program Elective (3)
- Program Elective (3)

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For more information:

If you are considering this program as an area of study, please contact the Business & Technology Division office at 630-942-2592.

Program web site:

http://www.cod.edu/programs/electronics/elec_tro_mechanical/

ELMEC.AAS.ELMET
Humanities and Fine Arts: 3 credits

Social and Behavioral Sciences: 3 credits

Complete at least 2 credits from the list of courses in the
Global/Multicultural Studies or Contemporary Life Skills Category
(Electro Mechanical Technology 1101 fulfills this requirement)

TOTAL CREDITS FOR AAS DEGREE
64
Career Information ELMEC.AAS.ELMET

Job Title(s): Electro-Mechanical Technicians
Electro-Mechanical Technician (E/M Technician), Electronic Technician, Test Technician, Tester, Mechanical Technician, Product Test Specialist, Electro-Mechanic, Electronic Instrument Technician, Laboratory Technician, Maintenance Technician

For salary and wage information, please visit: www.onetonline.org

If you would like information regarding internships, resume development, interviewing and job search skills, please contact the Career Services Center
Phone: 630-942-2230
www.cod.edu/careerservices Twitter: @codcareercenter

Related Occupations:
Electronics Engineering Technicians Avionics Technicians
Electrical and Electronics Repairers, Electrical Engineering Technicians
Commercial and Industrial Equipment
Computer Numerically Controlled Machine Industrial Machinery Mechanics
Tool Programmers, Metal and Plastic Mechanical Engineering Technicians
Manufacturing Production Technicians