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

* - course has a prerequisite

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.

Suggested Course Sequence

(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 Science, Technology, Engineering and Math Division office at 630-942-3210.

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

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<th>TOTAL CREDITS FOR AAS DEGREE</th>
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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 Plumbers
Elevator Installers and Repairers Maintenance and Repair Workers, General
Telecommunications Equipment Electrical and Electronics Repairers, Commercial and
Installers and Repairers, Except Line Industry Equipment
Installers
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.

Program Requirements ....................................................40
Elect 1100  Electricity and Electronics Fundamentals ......3
Elect 1101*  Circuits I......................................................3
Elect 1151*  Electronic Devices and Applications..............4
Elmec 1101  Survey of Automation .................................3
Elmec 1106  Power Electricity and Rotating Machines......4
Elmec 1110  Motor and Generator Fundamentals ............3
Elmec 1141  Hydraulics and Pneumatics ..........................3
Elmec 1171  Introduction to Robotic Technology ............3
Elmec 1190  Introduction to Programmable Logic
Controllers.................................................................3
Elmec 1420  Drive Components........................................2
Elmec 2410* Programmable Controller II (PLC II)............3
Elmec 2510  Process and Automation Controls...............3
Elmec 2600* Motion Control: Motor Drive
Application and Control .............................................3

Program Electives ............................................................7
Choose 7 credits in Electro-Mechanical Technology or Electronics Technology. (In addition to the courses listed above.)

* - course has a prerequisite

General Education ........................................................18
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.

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.

For more information:
If you are considering this program as an area of study, please contact the Science, Technology, Engineering and Math Division office at 630-942-3210.
Program website: http://www.cod.edu/academics/programs/electronics/electro_mechanical/
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*

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<th>TOTAL CREDITS FOR AAS DEGREE</th>
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</table>
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](http://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](http://www.cod.edu/careerservices)  Twitter: @codcareercenter

Related Occupations:

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