

# Electronics Technology | Associate in Applied Science

Field of Study Code: **ELECT.AAS**

## Catalog Description

The **Electronics Engineering Technology degree** is designed to provide the student with fundamentals of electricity and electronics, including digital electronics and microcomputers, specialized manufacturing electronics, industrial automation and electronic communications. This program emphasizes a hands-on approach to learning through projects.

### Program Requirements .....32

Elect 1100	Electricity and Electronics Fundamentals .....	3
Elect 1101*	Circuits I.....	3
Elect 1102*	Circuits II.....	4
Elect 1120	Electronic Documentation and Fabrication .....	2
Elect 1141	Digital Fundamentals .....	3
Elect 1151*	Electronic Devices and Applications.....	4
Elect 1161*	Modern Communications .....	3
Elect 2273*	Embedded Systems and Microcontroller Programming.....	3
Elmec 1106	Power Electricity and Rotating Machines .....	4
Elmec 2510	Process and Automation Controls.....	3

\* - course has a prerequisite

### Program Electives .....14

Choose at least 14 additional credits from Electronic Engineering Technology (ELECT) and/or Electromechanical Engineering Technology (ELMEC) courses.

### General Education .....18

Each candidate for an Associate in Applied Science (A.A.S.) degree shall satisfactorily complete at least 18 credits in General Education.

**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.

**Humanities and Fine Arts:** 3 credits

**Social and Behavioral Sciences:** 3 credits

## 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 (13 to 17 credits)

- Elect 1100 (3)
- Elmec 1106 (4)
- General Education Math (3 to 5)
- General Education Phys/Life Sci (3 to 5)

### Second Semester (15 credits)

- Elect 1101 (3)
- Elect 1141 (3)
- Elmec 2510 (3)
- General Education Soc/Beh (3)
- General Education Speech (3)

### Summer Term (6 credits)

- Program Elective – Elmec 2520 (3)
- General Education English (3)

### Third Semester (17 credits)

- Elect 1102 (4)
- Elect 1151 (4)
- Elect 1161 (3)
- Elect 2273 (3)
- Program Elective (3)

### Fourth Semester (12 credits)

- Elect 1120 (2)
- General Education Hum/Fine Art (3)
- Program Elective (3)
- Program Elective (4)

### Summer Term

- Program Electives (to reach total)

### 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/electronics-tech.aspx>

**Global/Multicultural Studies or Contemporary Life Skills:** 2 credits  
Complete at least 2 credits from the list of courses in the  
Global/Multicultural Studies or Contemporary Life Skills Category.

**TOTAL CREDITS FOR AAS DEGREE**

**64**

## Career Information ELECT.AAS

**Job Title(s):** Electronics Engineering Technicians

Digital Tech (Digital Technician), Electrical Technician, Electronics Engineering Technician, Electronics Technician, Engineering Technician (Engineering Tech), Failure Analysis Technician (FA Technician), Refurbish Technician (Refurb Tech), Senior Electronics Technician, Technician, Test 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:**

Computer User Support Specialists  
Electrical Engineering Technicians

Mechanical Engineering Technicians  
Manufacturing Production Technicians  
Electrical and Electronics Installers and Repairers, Transportation Equipment

Broadcast Technicians  
Radio Mechanics  
Computer, Automated Teller, and Office Machine Repairers  
Avionics Technicians  
Camera and Photographic Equipment Repairers

# Electronics Technology | Associate in Applied Science

Field of Study Code: **ELECT.AAS.BIOMED**

## Catalog Description

The **Biomedical Engineering Technology degree** prepares students for careers as biomedical equipment technicians, (also known as biomedical engineering technicians) in hospitals, health agencies, businesses and industries that manufacture and maintain electronic and biomedical instrumentation equipment. This program prepares students to test, install, and maintain healthcare components such as rehabilitation and therapeutic products, medical imaging systems, and computer-based systems used in the biomedical technology field. This degree program requires 64 credits in program requirements, program electives and general education in the courses listed below.

### Program Requirements .....33

Elect 1100	Electricity and Electronics Fundamentals .....	3
Elect 1101*	Circuits I.....	3
Elect 1102*	Circuits II.....	4
Elect 1141	Digital Fundamentals .....	3
Elect 1151*	Electronic Devices and Applications.....	4
Elect 1221*	Introduction to Biomedical Instrumentation Technology .....	3
Elect 2221*	Biomedical Instrumentation Technology and Applications.....	3
Anat 1500*	Survey of Human Anatomy and Physiology ...	4
Elmec 2510	Process and Automation Controls.....	3
Hlths 1110	Biomedical Terminology.....	3

### Program Electives.....13

Choose at least 13 credits from the following courses.

Elect 1120	Electronic Documentation .....	2
Elect 1161*	Electronic Communications .....	4
Elect 1201	Renewable Energy Fundamentals .....	2
Elmec 1101	Survey of Automation .....	3
Elmec 1141	Hydraulics and Pneumatics .....	3
Elmec 1190	Introduction to Programmable Logic Controllers.....	3

\* - 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.

**Written:** (3 credits) English 1101 or 1105

**Oral:** (3 credits) Speech 1100, 1120 or 1150

## 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)

- Elect 1100 (3)
- Elect 1141 (3)
- Gen Ed Comm: Written (3)
- Gen Ed Comm: Oral (3)
- Gen Ed Math (3)

#### Second Semester (16 credits)

- Elect 1101 (3)
- Elect 1221 (3)
- Elect 2221 (3)
- Elect 1151 (4)
- Gen Ed Humanities/Fine Arts (3)

#### Summer Term (6 credits)

- Program Elective (3)
- Program Elective (3)

#### Third Semester (14 credits)

- Anat 1500 (4)
- Hlths 1110 (3)
- Elect 1102 (4)
- Gen Ed Social & Behavioral Sciences (3)

#### Fourth Semester (13 to 15 credits)

- Elmec 2510 (3)
- Gen Ed Physical/Life Sciences (3 to 5)
- Program Electives (7)

#### 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/electronics-tech.aspx>

**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.

**Physical and Life Sciences:** 3 to 5 credits

At least one course with a laboratory component.

**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

<b>TOTAL CREDITS FOR AAS DEGREE</b>
-------------------------------------

<b>64</b>
-----------

ELECT.AAS.BIOMED

## Career Information ELECT.AAS.BIOMED

### **Job Title(s):** Medical Equipment Repairers

Bio Medical Technician, Biomedical Electronics Technician, Biomedical Engineering Technician (BMET), Biomedical Equipment Technician (BMET), Biomed Tech (Biomedical Technician), Dental Equipment Technician, Electronic Technician, Repair Technician, Service Technician, X-ray Service Engineer

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:**

Electrical Engineering Technicians

Manufacturing Production Technicians

Medical Appliance Technicians

Robotics Technicians

Mechanical Engineering Technicians

Electrical and Electronics Repairers,

Commercial and Industrial Equipment