

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 Requirements29

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*	Electronic Communication	4
Elect 2273*	Embedded Systems and Microcontroller Programming.....	3
Elmec 2510	Process and Automation Controls.....	3

* - course has a prerequisite

Program Electives16

Choose at least 16 additional credits from Electronic Engineering Technology (ELECT) and/or Electromechanical Engineering Technology (ELMEC) courses.

General Education19-22

Each candidate for an Associate in Applied Science (A.A.S.) degree shall satisfactorily complete 19-22 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 (15 to 17 credits)

- Elect 1100 (3)
- Elect 1141 (3)
- General Education Comm: Written (3)
- General Education Comm: Oral (3)
- General Education Math (3 to 5)

Second Semester (15 credits)

- Elect 1101 (3)
- Elect 1120 (2)
- Elect 1151 (4)
- General Education Soc/Beh (3)
- General Education Hum/Fa (3)

Summer Term (6 credits)

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

Third Semester (14 credits)

- Elect 1102 (4)
- Elect 1161 (4)
- Elect 2273 (3)
- Elmec 2510 (3)

Fourth Semester (13 credits)

- General Education Phys/Life Science (3)
- Program Electives (10)

For more information:

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

Program web sites:

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

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

64-67

ELECT.AAS

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

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:

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 Requirements33

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 Education18

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 Business and Technology Division office at 630-942-2592.

Program web site:

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

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

TOTAL CREDITS FOR AAS DEGREE

64

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

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:

Electrical Engineering Technicians

Manufacturing Production Technicians

Medical Appliance Technicians

Robotics Technicians

Mechanical Engineering Technicians

Electrical and Electronics Repairers,

Commercial and Industrial Equipment

Electronics Technology | Associate in Applied Science

Field of Study Code: INET.AAS.IMMT

Catalog Description:

The **Integrated Mechatronics and Manufacturing Technology** degree is designed to meet industry needs for multi-functional technicians competent in manufacturing, electro-mechanics, and electronics technology. InET engineering technicians apply scientific and engineering concepts to the implementation of existing technologies. Areas of focus include installation, operation and maintenance of manufacturing and automated systems.

Program Requirements38

Elect 1100	Electricity and Electronics Fundamentals	3
Elect 1101*	Circuits I	3
Elmec 1110	Motor and Generator Fundamentals	3
Elmec 1141	Hydraulics and Pneumatics	3
Elmec 1190	Introduction to Programmable Logic Controllers.....	3
Elmec 2510	Process and Automation Controls.....	3
Elmec 2520	Advanced Process and Automation Controls.....	3
Manuf 1101	Industrial Design/CAD	3
Manuf 1151	Machine Shop I	3
Manuf 2251	Computer Numerical Control (CNC)	3
Manuf 2252	CNC Operations	3
Manuf 2253	Computer-aided Manufacturing (CAM)	3
Manuf 2280	Industrial Safety	2

General Education19

Take 19 credits of general education as 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.

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 (15 credits)

- Elect 1100 (3)
- Manuf 1101 (3)
- Manuf 1151 (3)
- Gen Ed Comm: Written (3)
- Gen Ed Comm: Oral (3)

Second Semester (14 credits)

- Elect 1101 (3)
- Elmec 1190 (2)
- Manuf 2251 (3)
- Gen Ed Social & Behavioral Sciences (3)
- Gen Ed Humanities/Fine Arts (3)

Summer Term (6 credits)

- Elmec 2520 (3)
- Elmec 1141 (3)

Third Semester (14 credits)

- Elmec 1110 (3)
- Elmec 2510 (3)
- Manuf 2252 (3)
- Manuf 2280 (2)
- Gen Ed: Mathematics (3)

Fourth Semester (13-15 credits)

- Manuf 2253 (3)
- Program electives (7)
- Gen Ed: Physical & Life Sciences (3-5)

For more information:

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

INET.AAS

Global/Multicultural Studies or Contemporary Life Skills: 2 credits

Program Electives.....7

Take 7 credits from the ELECT or ELMEC offerings.

TOTAL CREDITS FOR AAS DEGREE

64

Program web site:

<http://www.cod.edu/programs/electronics/integrated/>

Career Information INET.AAS

Job Title(s): Engineering Technicians, Except Drafters, All Other

"All Other" titles represent occupations with a wide range of characteristics which do not fit into one of the detailed O*NET-SOC occupations. O*NET data is not available for this type of title.

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:

Electrical Engineering Technologist

Mechanical Engineering Technologist

Electromechanical Engineering technologist

Manufacturing Production Technician

Electronics Engineering Technologist

Non-Destructive Testing Specialist

Manufacturing Engineering Technologist