

Electronics Engineering Technology: Electronic Instrumentation (Fall Start)

Degree Type

Associate in Applied Science

ASSOCIATE DEGREE IN APPLIED SCIENCE ELECTRONICS ENGINEERING TECHNOLOGY - ELECTRONIC INSTRUMENTATION 71 SEMESTER HOURS

Electronic Instrumentation Technicians configure, program, calibrate, install and troubleshoot instruments that measure and control processes in automated and industrial environments. The process controlled systems maintained by these technicians are central to such production facilities as chemical plants, power plants, automotive and tire manufacturing, and many other automated control applications.

Other job responsibilities for these technicians include maintaining precision measuring instruments that record and control varying operating conditions. These conditions include vibration, temperature, humidity, pressure, flow, level, acceleration, pH, conductivity, and chemical makeup. Electronic Instrumentation Technicians select, install, and calibrate these instruments. In addition to these tasks, technicians also work with electrical and motor control systems. Technicians are also required to work with a variety of process control systems that require specialized programming, such as PLCs to optimize automatic and efficient operation.

Teamwork is very important in a career for an Instrumentation Technician. Good communication skills, both written and oral, are essential in the role of a Technician. Electronic Instrumentation Technicians must understand and apply electronic and electrical theory in their daily work activities; therefore, high school students interested in this field should take courses in mathematics and general physics.

OCtech is the only technical college in South Carolina that offers an associate degree in this field of engineering technology. The EIT curriculum has a co-op program established with multiple industry partners such as Dominion Energy and Sylvamo Paper Mill. Students who co-op during their Spring II semester will register for course EIT 240, Supervised Work Experience and will receive credit for EIT 220 and EIT 242.

Students planning to attend a four-year institution after graduation should consult with their advisors early in the program concerning transfer courses.

Program Educational Objectives

Our mission statement leads to the following program objectives that are also consistent with our industry identified program outcomes. Graduates of the OCtech Electronics Engineering Technology program will:

- Identify and solve problems in electronics engineering technology industry across a wide range of application areas. (Technical Expertise)
- Emerge as successful and professional workers who work and communicate successfully in industry teams across the service area and beyond. (Professionalism, Teamwork, and Leadership)
- Enhance the economic well being of the community through technical expertise, critical thinking, and teamwork. (Economic Impact)
- Adapt to new and emerging technologies to keep current with electronics engineering technology practice. (Continuing Education)

Accrediting Agency: Engineering Technology Accreditation Commission of ABET <http://www.abet.org>

Fall I

Course Number	Title	Credits
EET-113	Electrical Circuits I	4
EGR-130	Engineering Technology Applications and Programming	3
MAT-101	Beginning Algebra	3
HSS-105	Technology and Culture	3
EGT-152	Fundamentals of CAD	3

Spring I

Course Number	Title	Credits
EET-141	Electronic Circuits	4
PHY-201	Physics I	4
MAT-175	Algebra and Trigonometry I	3
EGR-112	Engineering Programming	3

Summer

Course Number	Title	Credits
EET-145	Digital Circuits	4
PHY-202	Physics II	4
EIT-110	Princ of Instrumentation	3
PSY-103	Human Relations	3

Fall II

Course Number	Title	Credits
EET-227	Electrical Machinery	3
ENG-160	Technical Communications	3
EIT-211	Intro to Electr Instr I	5
EET-235	Programmable Controllers	3

Spring II

Course Number	Title	Credits
EIT-212	Intro to Electr Instr II	5
EIT-220	Control Principles	3
EIT-242	Senior Proj in Eit	1
IDS-112	Employability Skills for Career	1
EIT-244	Computers & PLC's in Instrumentation	3

Spring II (Co-Op Option): Students chosen to participate in a Co-Op will enroll in [EIT-240](#) in their final semester, which will replace [EIT-220](#) and [EIT-242](#) on their schedule.

[EET-140](#) Digital Electronics and EET 143 Digital Electronics Laboratory can be taken instead of [EET-145](#).

[EGR-130](#), is a Project Lead the Way course

[PHY-201](#) and [PHY-202](#) are transfer courses

EGR-130 includes communications component

A minimum grade of "C" is required on all EET and EIT courses for graduation. Students must also have a grade of "C" or higher in all prerequisite courses in order for them to be counted toward the degree.

Total Credits	71
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