Program Description

The Electronics Engineering Technology program provides students with the entry-level skills and theoretical knowledge needed to design and troubleshoot circuits utilizing the latest semiconductor devices; biomedical devices; microprocessors; microcontrollers; circuit design and fabrication equipment; and data acquisition devices. Graduates from this program are prepared to enter the industry as electronics technicians, electronic assemblers, programmers, calibration technicians, and field service technicians.

The course of study includes: basic electricity and electronics; digital electronics; microprocessors and micro-controllers; computer programming; programmable logic controllers (PLCs); communication systems; and circuit engineering. Arts & Sciences curriculum supports the technical coursework by enhancing the students’ communication, mathematics, and critical thinking skills.

Dunwoody College of Technology: a non-profit, private technical college since 1914.

Degree Requirements

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<th>Course Code</th>
<th>Course Title</th>
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<tr>
<td>ELTT1110</td>
<td>Basic Electricity &amp; Electronics Lab</td>
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<tr>
<td>ELTT1120</td>
<td>Basic Electricity &amp; Electronics Theory</td>
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<tr>
<td>ELTT1210</td>
<td>Digital &amp; Microprocessors Lab</td>
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<tr>
<td>ELTT1220</td>
<td>Digital &amp; Microprocessors Theory</td>
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<td>ELTT1230</td>
<td>PCB &amp; Circuit Development</td>
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<td>ELTT1240</td>
<td>Programming Fundamentals</td>
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<td>ASRO2110</td>
<td>Industrial Controls &amp; PLCs Lab</td>
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<td>ASRO2120</td>
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<tr>
<td>ELTT2210</td>
<td>Advanced Electronics Lab</td>
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<td>ELTT2220</td>
<td>Advanced Electronics Theory</td>
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<tr>
<td>ASRO2290</td>
<td>Industrial Internship/Practicum</td>
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<tr>
<td>MATH1500</td>
<td>Algebra, Trigonometry &amp; Boolean Algebra</td>
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<td></td>
<td>Arts &amp; Sciences Elective</td>
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<td></td>
<td>Humanities Elective</td>
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<td>Communications Elective</td>
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<td>Social Sciences Elective</td>
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<td>Diversity Elective</td>
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Credential Earned: AAS Degree
Classes Offered: Day
Length of Program: 2 years (4 semesters)
Available Starts: Fall Semester; Spring Semester
Further Study: Bachelor’s Completion Degree in Industrial Engineering Technology

Common Job Titles
Electronics Technician
Bio-Medical Technician
Field Service Engineer
Calibration Technician
Programmer
Assembler

Recent Employers
Starkey Hearing Technologies
Martin Calibration
Cypress Semiconductor
Digike
Boston Scientific
Design Ready Controls

Salary Data
$58,210*
Annual Average Salary

Placement Rate
100%**
Course Descriptions

ELTT1110 Basic Electricity & Electronics Lab, 5 cr.
Analyze, design and build series, parallel and combination AC and DC circuits. Semiconductor circuits, power supplies, transistor circuits are built and tested using protoboards and various test equipment.

ELTT1120 Basic Electricity & Electronics Theory, 8 cr.
Identification, recognition and calculations associated with basic electricity, including Ohm’s Law, resistance, capacitance, inductance in AC and DC circuits, as well as solid state principles of diodes, power supplies and transistors.

ELTT1210 Digital & Microprocessors Lab, 3 cr.
Design, build, and troubleshoot digital circuits. Debug and program microprocessors and microcontrollers for various operations and interface to external devices. Analyze digital and microprocessor circuits using industry standard test equipment.

ELTT1220 Digital & Microprocessors Theory, 8 cr.
Identification, recognition and calculations associated with combinational and sequential logic circuits as well as internal architecture of microprocessors and microcontrollers, programming, logic operations, memory mapping, addressing, data transfer, and system control.

ELTT1230 PCB & Circuit Development, 1 cr.
Electronic circuit prototyping using various industry standards, hardware, and software. Utilize circuit manufacturing techniques to create surface mount and through hole circuit boards.

ELTT1240 Programming Fundamentals, 1 cr.
Use algorithms and flowcharts to develop logic, execution control, data types, loops, and control structures for computer executable software. Utilizes National Instrument’s LabVIEW.

ASRO2110 Industrial Controls & PLCs Lab, 5 cr.
Installation, wiring, programming, operation, testing and troubleshooting programmable logic controllers. Interfacing programmable logic controllers with switches, sensors, motors, pneumatics, and other I/O devices. Set-up, configuration and troubleshooting inductive and capacitive proximity, photo-electric, temperature and other industrial sensors.

ASRO2120 Industrial Controls & PLCs Theory, 8 cr.
Wiring and programming fundamentals associated with programmable logic controllers. Identification, recognition and calculations associated with inductive and capacitive proximity, photo-electric, temperature and other industrial sensors.

MATH1500 Algebra, Trigonometry & Boolean Algebra, 5 cr.
Polynomials, proportions and linear equations. Trig functions, graphs, and vectors. Binary, octal and hexadecimal number systems. Boolean Algebra and mapping.