

# Electronic Engineering Technology

## Bachelor of Science Degree (286103BS)

Accredited by the Engineering Technology Accreditation Commission of ABET, <http://www.abet.org>

Course work from an accredited institution in Electronic Engineering Technology or in a related program, with bridgework, is a requirement to pursue the Electronic Engineering Technology Bachelor of Science Degree. An Associate of Applied Science in Electronic Engineering Technology is required prior to completing the baccalaureate. Please refer to the Electronic Engineering Technology, Associate of Applied Science Curriculum Guide for further information.

The following information has official approval of The University of Akron's College of Applied Science and Technology but is intended only as a guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, and prerequisites, among others. The transfer process is completed through an appointment with your Academic Advisor.

*Italicized* courses fulfill General Education requirements. If a course is not specified, refer to the General Education webpage at <http://www.uakron.edu/cast/gened>. The College of Applied Science and Technology recommends that students take the General Education courses listed in this curriculum guide. Transfer students should consult their Advisor to identify courses that are equivalent.

Year 3 Fall	Prerequisite
2030:356 Technical Calculus II (3)	2030:255 or equivalent with C- or better or placement by Advisor
2020:222 <i>Technical Report Writing</i> (3)	2020:121 or 3300:111 or equivalent
Computer Programming Elective (2) (Note c)	
Electronic Engineering Technology Electives (6) (Note d)	
<b>Total Credits = 14</b>	

Year 3 Spring	Prerequisite
2030:345 Technical Data Analysis (2) (Note a)	2030:154 or equivalent with grade of C- or better or placement by Advisor
3400:210 <i>Humanities in the Western Tradition</i> (4)	32 credits and completion of 2020:222 or 3300:112 or 3300:114 or permission
2870:301 Computer Control of Automated Systems (3) (Sch. Lab) -OR- 2920:405 Introduction to Industrial Machine Control (3)	
2860:354 Advanced Circuit Applications (3)	2860:350, 2030:356
2860:352 Microcontrollers (4) (Sch. Lab) (Note b)	2860:238 prerequisite, 2860:350 corequisite
<b>Total Credits = 16</b>	

Year 4 Fall	Prerequisite
7100:210 <i>Visual Arts Awareness</i> (3) -OR- 7500:201 <i>Exploring Music, Bach to Rock</i> (3) -OR- Arts Requirement (3) (Note d)	3400:210 or 3400:221 3400:210 or 3400:221
Electronic Engineering Technology Electives (3) (Note e)	
2860:453 Control Systems (4) (Sch. Lab) (Note a)	2860:354, 2870:301
<i>Natural Science Requirement</i> (3) (Note d)	
<i>Complex Systems Tag Requirement</i> (3)	
<b>Total Credits = 16</b>	

Year 4 Spring	Prerequisite
3300:252 <i>Shakespeare and His World</i> (3) -OR- 3600:101 <i>Introduction to Philosophy</i> (3) -OR- Arts or Humanities Requirement (3) (Note e)	For 3300:252 only: 2020:121 and 2020:222 or their equivalents, and 3400:210 or 3400:221
Technical Electives (3) (Note f)	
Electronic Engineering Technology Electives (6) (Note e)	
2860:455 Senior Project (2) (Note b)	
<b>Total Credits = 14</b>	

**Total Credits for Degree = 121 minimum**  
**(3<sup>rd</sup> and 4<sup>th</sup> Year Credits = 60; Associate Degree Credits = 61 minimum)**

**Policy Alert: By the end of your first 48 credit hours attempted, you must have completed your REQUIRED General Education English, Mathematics, and Communications (Speech) requirements.**

**You must have a minimum cumulative GPA of a 2.0 to graduate with this degree.**

Notes:

- a) Traditionally Fall only. (See Program Contact)
- b) Traditionally Spring only (See Program Contact)
- c) Computer Programming Electives

Choose one of the following Computer Programming Electives courses:

2820:310 Programming for Technologists (2)	2030:255; 2820:121
3460:126 Introduction to Visual Basic Programming (3)	
3460:209 Introduction to Computer Science (4)	3450:145 with C or better or equivalent
4450:208 Programming for Engineers (3)	4400:101 or permission

- d) Must be a course in the Ohio Transfer Module.
- e) Electronic Engineering Technology Electives

Please note that each of the following Electronic Engineering Technology Electives classes may be offered only once during the year, including the summer session. Consult with the Schedule of Classes Bulletin for exact scheduling of classes.

2860:238 Microprocessor Applications (4) (Sch. Lab)	
2860:251 Electronic Communications (4) (Sch. Lab)	
2860:290 Special Topics in Electronic Engineering Technology (1-4)	By permission only
2860:350 Advanced Circuit Theory (3) (Note a)	2860:251; 2030:356 corequisite
2860:400 Computer Simulations in Technology (3)	2860:354, 2030:345
2860:406 Communication Systems (3)	2860:251, 2860:354
2860:420 Biomedical Electronic Instrumentation (3)	2860:354
2860:360 Virtual Instrumentation and Data Acquisition (3)	2860:122 or 2860:370
2860:430 Senior Topics in Electronic Technology (3)	2860:350, 2860:400
2860:451 Industrial Electrical Systems (3)	2860:354
2860:490 Special Topics in Electronic Engineering Technology (1-4)	By permission only

- f) Technical Electives: Availability dependent on enrollment demands and classroom availability. Technical Electives are defined as courses outside of the Electronic Engineering Technology Program that support a student's career interest. The following list shows approved technical electives. Some courses listed may involve prerequisites. Any course taken that is not on the following list must be approved by the Program Director in writing in order to be considered a technical elective.

Choose a minimum of three (3) credit hours from the Technical Electives courses listed below:

2030:290 Special Topics: Associate Studies Mathematics (1-4)	
2030:361 Advanced Cryptography (3)	2030:154
2030:480 Advanced Topics in Technical Mathematics (2)	
2820:111 Introductory Chemistry (3) (Sch. Lab)	
2820:112 Introductory and Analytical Chemistry (3) (Sch. Lab)	Prerequisite: 2820:111 or permission.
2820:290 Special Topics: General Technology (1-2)	
2850:200 Advanced Corrosion Technology (3)	2850:100
2870:332 Management of Technology Based Operations (3)	
2870:348 CNC Programming I (3)	Prerequisites: 2940:121, 2030:154 or permission.
2870:448 CNC Programming II (3)	Prerequisite: 2870:348
2870:470 Simulation of Manufacturing Systems (3)	Prerequisite: 2880:211
2870:480 Automated Production (3)	Prerequisites: 2880:211 or senior status
2880:110 Manufacturing Processes (3)	
2880:201 Robotics and Automated Manufacturing (3)	Prerequisite: 100 or permission.
2880:211 Computerized Manufacturing Control (3)	Prerequisite: 2880:100
2920:101 Introduction to Mechanical Design (3)	
2920:142 Introduction to Material Technology (3)	
2920:249 Applied Thermal Energy I (2)	Prerequisites: 2030:255, 2820:164.
2920:251 Fluid Power (2)	Prerequisites: 2820:162, 164
2920:252 Thermo Fluids Lab (1)	Prerequisite: 251; Corequisite: 249.
2920:310 Economics of Technology (3)	
2880:140 Computer Aided Drawing (3)	
2940:240 Electrical and Electronic Drafting (3)	
2980:101 Basic Surveying (3)	
2985:101 Introduction to Geographic and Land Information Systems (3)	
2990:125 Statics (3)	Prerequisites: 2820:162 and 2030:153.
2990:150 Plan Reading (2)	
2990:245 Construction Estimating (3)	Prerequisite: 150 and 2030:153.
2990:371 Green and Sustainable Building Practices (3)	
2990:453 Legal Aspects of Construction (2)	Prerequisite: Admission into the BCET program or permission of instructor.
2990:462 Mechanical Service Systems (3)	
2990:463 Electrical Service Systems (3)	
2990:469 Contracts and Specifications (2)	
3100:200 Human Anatomy and Physiology I (3)	
3460:306 Assembly and System Programming (4)	

### Program Contact

Program Director Greg Harstine, Schrank Hall South 221E, 330-972-6234 or gph@uakron.edu

### Program Information

Engineering technologists are employed in virtually every activity where technical know-how is required. Their work requires the application of scientific and mathematical theory as well as specialized knowledge and skills to solve real world technical problems. The engineering technologist may become involved with electronic instruments and controls, experimental apparatus, computing devices, manufacturing processes and power distribution. As part of the engineering team, the technologist contributes to the technological progress and a high level of productivity which characterizes modern industry.

The Electronic Engineering Technology curriculum is one of a number of bachelor degree programs offered through the COLLEGE OF APPLIED SCIENCE & TECHNOLOGY at The University of Akron. The program requires two years of full-time study after the completion of Associate of Applied Science Degree in Electronic Engineering Technology or similar program. The bachelor degree may also be undertaken on a part-time evening basis requiring more than two years for completion. Both day and evening programs are accredited by the Engineering Technology Accreditation Commission of ABET, Inc. (ETAC/ABET).

The program prepares the individual to become a competent electronic technologist capable of working and communicating with engineers, scientists, and production personnel. The third year provides a firm foundation in circuit analysis. The fourth year builds directly on this background with applied electronic courses in such areas as microcontrollers, communications, controls, instrumentation and software applications. Although the curriculum prepares the student for immediate technical employment, a portion is devoted to non-technical subjects in order to assist the individual in developing as a citizen and responsible human being.

### Career Information

#### Placement or Optional Cooperative Education

Co-op work experiences are available on an optional basis in this academic program. To obtain additional information contact the Career Center regarding these opportunities.

For additional information regarding career opportunities in the Electronic Engineering Technology field, please visit the Bureau of Labor Statistics at [www.bls.gov](http://www.bls.gov) or the Career Center at the Student Union, room 2101, (330-972-7747) <http://www.uakron.edu/career>

### Transfer to the College of Applied Science and Technology

To be admitted to the College of Applied Science and Technology, a student must have a GPA of 2.0. A student can complete the transfer process through an appointment with an Academic Advisor in the college in which they reside.