

Mechanical Engineering Technology

Bachelor of Science Degree (292104BS)

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

Course work from an accredited institution in Mechanical Engineering Technology or in a related program is a requirement to pursue the Mechanical Engineering Technology Bachelor of Science Degree. An Associate of Applied Science in Mechanical Engineering Technology is required prior to completing the baccalaureate. Please refer to the Mechanical 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 placement by Advisor |
| 2820:310 Programming for Technologists (2) (Sch. Lab) | 2030:255, 2820:131 |
| <i>2820:111 Introductory Chemistry (3) (Sch. Lab) (Note a)</i> | 2030:152 |
| 2860:370 Survey of Electronics I (3) (Sch. Lab) (Note a) | 2820:163 |
| 2920:344 Dynamics (3) (Note a) | 2030:255, 2920:243, 2990:125 |
| Technical Elective (2) (Note d) | |
| Total Credits = 16 | |

| Year 3 Spring | Prerequisite |
|--|---|
| <i>2820:112 Introductory & Analytical Chemistry (3) (Note b)</i> | 2820:111 |
| 2860:242 Machinery and Controls (3) (Note b) | 2860:120, and 2860:121 or 2860:370 (previously 270) |
| 2920:346 Mechanical Design III (4) (Sch. Lab) (Note b) | 2920:344, 2920:245 |
| 2920:347 Production Machinery and Processes (3) (Note b) | 2030:225 & [2880:110 or 2920:142] or permission. |
| Technical Elective (3) (Note d) | |
| <i>3600:101 Introduction to Philosophy (3) -OR- 3600:120 Introduction to Ethics (3) -OR- 3600:170 Introduction to Logic (3) -OR- Arts or Humanities Requirement (3) (Note c)</i> | |
| Total Credits = 19 | |

| Year 4 Fall | Prerequisite |
|---|--|
| 2920:405 Introduction to Industrial Machine Control (3) (Sch. Lab) (Note a) –OR- 2870:301 Computer Control of Automation Sys. (3) | 2860:370 (formerly 2860:270) |
| 2920:310 Economics of Technology (3) | 64 credits or permission |
| 2920:365 Applied Thermal Energy II (3) (Note a) | 2920:249, 2920:251, 2030:255 |
| 2920:370 Plastics Design and Processing (3) (Note a) | 2820:111 or higher |
| 2920:490 Senior MET Seminar (1) (Note a) | 2920:346, 2920:347 |
| <i>3400:210 Humanities in the Western Tradition (4) Fulfills Critical Thinking Tag</i> | <i>32 credits & completion of 2020:222 or 3300:112 or 3300:114 or permission</i> |
| Total Credits = 17 | |

| Year 4 Spring | Prerequisite |
|--|---|
| 2920:402 Mechanical Projects (1) (Note b) | 2920:365, 2920:310, 2920:370, 2920:490 & [2920:405 or 2870:301] |
| 2880:241 Introduction to Quality Assurance (3) (Sch. Lab) | 2030:152, 2880:100 or permission |
| 2920:470 Plastics Processing and Testing (2) (Note b) | 2920:370 or permission |
| <i>7100:210 Visual Arts Awareness (3) -OR- 7500:201 Exploring Music, Bach to Rock (3) -OR- 7900:200 Viewing Dance (3) -OR- Arts Requirement (3) (Note f)</i> | <i>3400:210 or 3400:221 3400:210 or 3400:221 3400:210 or 3400:221</i> |
| <i>2040:241 Technology and Human Values (3) Fulfills Complex Issues Tag</i> | |
| Total Credits = 12 | |

Total Credits for BS Degree = 127
(3rd and 4th Year Credits = 64; Associate Degree Credits = 63)

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:

- Traditionally Fall course (See Program Contact)
- Traditionally Spring course (See Program Contact)
- Must be a course in the Ohio Transfer Module.
- Mechanical Engineering Technology Approved Technical Electives: Availability dependent on enrollment demands and classroom availability
- The student must take both the Introduction and Advanced Corrosion Technology courses to receive the Corrosion Technology Certificate. Other requirements may be required in addition. Please check with the student advisor to be sure.

| Technical Electives | |
|---|---|
| 2920:290 Special Topics: Mechanical Engineering Technology (1-2) | Department permission |
| 2920:498 Independent Study in Mechanical Engineering Technology (1-4) | Department permission |
| 2030:345 Technical Data Analysis (2) | 2030:154 or equivalent with a C- or better, or placement test |
| 2850:100 Introduction to Corrosion Technology (2) (notes a & e) | 2030:151 or 3450:100 or higher |
| 2850:200 Advanced Corrosion (3) (Notes b & e) | 2850:100 |
| 2860:121 Introduction to Electronics and Computers (2) | 2030:151 or placement. Corequisite: 2860:120 |
| 2860:237 Digital Circuits (Sch. Lab) (4) | 2860:123 |
| 2860:238 Microprocessor Applications (4) | 2860:237 |
| 2860:360 Virtual Instrumentation and Data Acquisition (3) | 2860:122 or 2860:370 |
| 2870:311 Facilities Planning (3) | 2940:180 or 2940:210 or permission |
| 2870:332 Management of Technology Based Operations (3) | |
| 2870:441 Advanced Quality Practices (3) | 2880:241 or permission. |
| 2870:448 CNC Programming II (3) | 2870:348 |
| 2870:480 Automated Production (3) | 2880:211 or senior status |
| 2880:130 Work Measurement and Cost Estimating (3) | 2880:100 |
| 2880:201 Robotics and Automated Manufacturing (3) | 2880:100 or permission |
| 2880:211 Computerized Manufacturing Control (3) | 2880:100 |
| 2880:230 3-D Modeling & Design (3) | 2940:210 |
| 2880:232 Labor Management Relations (3) | 2880:100 |
| 2980:101 Basic Surveying I (2) | Corequisite: 2030:153 |
| 2990:462 Mechanical Service Systems (3) | |
| 2990:463 Electrical Service Systems (3) | |
| 3460:126 Introduction to Visual Basic Programming (3) | Completion of 3450:100 with a C- or better or placement |

Contact Information

Program Director Mr. Scott Dilling, Schrank Hall South 123G, 330-972-6232 or sd53@uakron.edu

Career Opportunities

The bachelor degree holder, along with maturity and experience gained on the job as a technologist, may rise to designer, head of test laboratory, service manager, tool room supervisor, production foreman, plant maintenance supervisor, and with additional education and specialized training, he/she may reach positions of middle management responsibility. He/she is the liaison between the engineer and shop.

Other opportunities exist in cost estimation, purchasing, power generation, and almost any area that requires a liaison that speaks and understands the language of technology.

Advanced technologies, coupled with the need to update and improve manufacturing facilities and product design, will fuel the demand of well-trained professionals in this field.

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 Mechanical Engineering Technology field, please visit the Bureau of Labor Statistics at www.bls.gov or the Career Center at the Student Union, room 211, (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.