ENGINEERING TECHNOLOGY - DEGREE

Associates of Applied Science Degree Program | mhcc.edu/EngineeringTechnology (http://mhcc.edu/EngineeringTechnology/)

Faculty Adviser
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The Associate of Applied Science in Engineering Technology degree is designed specifically for students seeking a degree that equips them for entry-level technician jobs in the engineering field. Engineering technicians work in support of engineers completing drawings, contributing to design or overseeing manufacturing/construction processes. Engineering is a technical profession that applies science and mathematics to design, manufacturing, construction, environmental management and sustainability. Engineering technicians provide a critical link between professional engineers and the craftspeople doing the work.

Program Outcomes
At the completion of this program, students should be able to:

• Demonstrate technical expertise in a minimum of three subject areas chosen from: engineering materials, applied mechanics, applied fluid sciences and fundamentals of electricity
• Use graphics software to enhance creativity and productivity in engineering design
• Calculate loads and determine stresses and displacements in elementary structural and mechanical systems
• Working in a team, apply technical expertise in creating a product from concept to working prototype
• Conduct standardized field and laboratory testing on concrete and soils
• Use both traditional and modern electronic surveying equipment
• Describe the ethical responsibilities of the engineering profession
• Describe sustainability in engineering and how it impacts products, business and communities

Course Title Credits

First Quarter
Fall
ET120 Engineering Problem Solving 4
GE101 Engineering Orientation 4
MEC110 Introduction to Manual Machine Tools 3
MTH095 Intermediate Algebra with Right Triangle Trigonometry 5
(Courses to be taken in any order)
CS120L Computer Concepts Lab ★ 1
Credit 17

Second Quarter
Winter
GE115 Engineering Graphics 3
ET221 Statics 4
MTH111 Pre-Calculus I: Elementary Functions ★ 5
Related Elective, can be taken in any term (p. 1) 3-5
Credit 17

Third Quarter
Spring
ENG248 Engineering Graphics: Solidworks 3

ET221 Basic Strengths of Materials 4
WR121 English Composition ★ 4
Health and Physical Education (https://catalog.mhcc.edu/degree-certificate-requirements/aas/#health) 3

Credits 14

Fourth Quarter
Fall
ET150 Plane Surveying 4
ET222 Fluid Mechanics 3
ET227 Engineering Project Management 4
MEC131 AC/DC Electrical Systems 3
Credit 14

Fifth Quarter
Winter
ET266 Concrete and Soil Technology 4
ET210 Sustainable Engineering 3
ET270 Intro to Thermodynamics 4
MEC141 or FT228 Pneumatics I or Introduction to Geographic Information Systems 3
Human Relations course (HUM202 recommended) (https://catalog.mhcc.edu/degree-certificate-requirements/aas/#human) 3
Credit 17

Sixth Quarter
Spring
ET249 or ET221 Advanced Solidworks or Aerial Photo Interpretation and GPS 3-4
ET250 Project Capstone 4
ET263 Structural Design 4
WR227 Technical Report Writing ★ 4
Credit 15-16

Total Credits 92-95

Related Electives
One (1) course. Can be taken in any term. Students who placed above MTH095 should take an additional Related Elective if needed to reach 90 credits.

Code Title Credits

COMM111 Fundamentals of Public Speaking ★ 4
IMTL125 Geometric Dimensioning and Tolerancing (offered in spring; instructor approval required) 3
MFG217 Modern Manufacturing Concepts (offered in fall; instructor approval required) 3
MFG234 Advanced Manufacturing Processes (offered in winter; instructor approval required) 3
WE280ET Coop-Ed Engineering Technology 4
Any Chemistry (CH) course 4-5
Any Geology (G) course 4-5
Any Mathematics (MTH) course MTH112 or above 4-5
Any Mechatronics (MEC) course not already in program 3-4
Any Physics (PH) course 4-5

★ Course offered online
Culture Literacy course