OPERATIONS ENGINEERING TECHNOLOGY (ENGINEERING MANAGEMENT), ASSOCIATE OF APPLIED SCIENCE

The Associate of Applied Science degree in Operations Engineering Technology with a concentration in Engineering Management is designed to enable students to obtain the necessary background to become an effective supervisor or manager in a manufacturing/production setting on the engineering design side. Production, logistics, and the basics in engineering design is covered within the program. The program is designed to tie the fundamentals of manufacturing with the fundamentals of engineering management. This program ties into 4-year bachelor degree programs aimed at industrial/manufacturing engineering.

This degree program contains one or more embedded certificates which will be automatically awarded when the certificate requirements are completed. If you do not want to receive the embedded certificate(s), please notify the Office of the Registrar at RegistrarOffice@tri-c.edu.

Learn more about how certificate credits apply to the related degree.

Related Degrees and Certificates

- Operations Engineering Technology with a Concentration in Automated Manufacturing, Associate of Applied Science
- Operations Engineering Technology, Associate of Applied Science
- 3D Digital Design and Manufacturing Technology, Certificate of Proficiency
- Computer-Aided Drafting (CAD), Certificate of Proficiency
- Computer-Integrated Manufacturing (CIM), Certificate of Proficiency
- Machine Tools Operation, Certificate of Proficiency
- Quality Control, Certificate of Proficency
- Digital Design & Product Innovation, Short-Term Certificate
- Digital Manufacturing and Product Launch, Short-Term Certificate

Program Admission Requirements

- High School Diploma/GED
- Complete the following courses with a grade of "C" or higher:

Code	Title	Credit Hours
MATH-0965	Intermediate Algebra	6
MET-1100	Technology Orientation	2
Select one of the following:		3
ENG-1010	College Composition I	
ENG-101H	Honors College Composition I	

Program Learning Outcomes

This program is designed to prepare students to demonstrate the following learning outcomes:

a. Utilize basic computer skills including word processing, spreadsheet, and database. (i.e. MS Word, Excel, Access, PowerPoint)
b. Identify and explain basic safety requirements and good safe work habits for working in manufacturing industries.
c. Apply knowledge of regulated environments, various industry standards including FDA, ISO, and documentation and report writing.
d. Communicate effectively, orally and in writing, and display professionalism, and work well in a team environment.
e. Apply knowledge of basic lean concepts and tools (5 S), including introductory Six Sigma concepts, methods for identifying and eliminating the various forms of waste.
f. Read engineering drawings, with an understanding of Geometric Dimensioning & Tolerancing, and be able to measure parts against engineering drawings to determine conformity.
g. Create and execute a program management plan (Gantt Charts, etc.).
h. Interpret operations metrics (on-time delivery, defects parts per million, labor efficiency, equipment capacity utilization, material yield) in order to drive improvement.
i. Interpret calculation of cost of goods sold (overhead, direct/indirect labor, etc.).
j. Apply concepts of workplace ergonomics to determine proper and safe operations.

Suggested Semester Sequence

First Semester		Credit Hours
CNST-1750	Construction Safety	3
MET-1100	Technology Orientation	2
MET-1120	Computer Applications and Programming [2]	2
MET-1230	Drawing & AutoCAD [3]	3
MET-XXXX	MET Elective	3
Select one of the following:		3
ENG-1010	College Composition I	
ENG-101H	Honors College Composition I	
	Credit Hours	**16**
Second Semester		
MATH-1580	Precalculus	5
Select one of the following:		5
CHEM-1300 & CHEM-130L	General Chemistry I and General Chemistry Laboratory I	
CHEM-130H	Honors General Chemistry I	
Select one of the following:		3
ENG-1020	College Composition II	
ENG-102H	Honors College Composition II	
	Credit Hours	**13**

Summer Session		
MATH-1610	Calculus I	5
	Credit Hours	**5**
Third Semester		
MET-2422	Fundamentals of Engineering Economics	3
MET-2430	Engineering Probability and Statistics	3
PHYS-2310	General Physics I	5
Social & Behavioral Sciences requirement		3
	Credit Hours	**14**
Fourth Semester		
MET-2610	Statics	3
MET-2750	Technical Operations Management [4]	3
MET-XXXX	Elective	3
MET/EET-XXXX	MET or EET elective	3
	Credit Hours	**12**
	Total Credit Hours	**60**

[2] MET-2550 Engineering Analysis Using MATLAB or IT-1090 Computer Applicationswill be accepted in place of MET-1120 Computer Applications and Programming to meet this requirement.

[3] CNST-1731 Construction Print Reading may be used to meet this requirement.

[4] CNST-2510 Introduction to Asset Management or MET-2500 Fundamentals of Products Development and Manufacture will be accepted in place of MET-2750 Technical Operations Management.

MATH-1140, MATH-1141, MATH-1200, MATH-1270, and MATH-1280 can no longer count towards fulfilling the college-level mathematics requirement. These courses were re-classified as developmental mathematics by the state of Ohio in 2016. Tri-C established a 5-year transitioning window for students who had completed these courses prior to 2016 to apply them towards meeting graduation requirements, which expired in Summer 2021. It is highly recommended to see a counselor to determine the appropriate math required for your current major.