

MANUFACTURING TECHNOLOGY, A.A.S.

The Manufacturing Technology program provides training in a wide variety of skill areas of product manufacturing and services. The four degree options in the program are Automated Manufacturing Systems, Drafting/Design, Manufacturing Technology and Manufacturing Engineering Technology. Automated Manufacturing is designed to prepare the student for careers in computer-aided manufacturing, robotics and numerical control. Drafting/Design prepares the student for careers in the drafting and computer-aided design areas. Manufacturing Technology provides the student with a broad background in the areas of machining, drafting and fluid systems so as to prepare them for entry-level positions as machine operators, machine maintenance personnel and quality control personnel. The Manufacturing Engineering Technology degree prepares students for entry-level engineering technician positions in manufacturing. The **Manufacturing Technology degree** requires 65 credits in program requirements, program electives and general education in the courses listed below.

For more information about Manufacturing Technology, please visit the program of study page (<http://www.cod.edu/manufacturing/>).

Degree Requirements

Field of Study Code: MANUF.AAS

Code	Title	Credits
Program Requirements		
MANUF 1101	Industrial Design/CAD	3
MANUF 1104	Technical Mechanics	2
MANUF 1110	Metrology	3
MANUF 1151	Machine Shop I	3
MANUF 1153	Advanced Machine Processes	3
MANUF 1180	Quality Control	3
MANUF 2251	Computer Numerical Control (CNC)	3
ELECT 1100	Electricity and Electronics Fundamentals	3
ELECT 1141	Digital Fundamentals	3
WELD 1100	Welding I	3
Program Electives		
Select 16 credits from the following: ¹		16
MANUF 1121	Physical Metallurgy	
MANUF 2201	Geometric Dimensioning and Tolerancing	
MANUF 2202	Solid Modeling and Design	
ELMEC 1171	Introduction to Robotic Technology	
WELD 1112	Oxy-Fuel, Welding, Plasma Cutting and Brazing	
WELD 1122	Shielded Arc Welding (SMAW)	
WELD 1132	Metal Inert Gas (MIG) Carbon Steel Welding	
WELD 1142	Gas Tungsten Arc (TIG)	
General Education		
Select 20 credits ¹		
Communications: Written		3
Communications: Oral		3
Physical/Life Sciences		3
Mathematics (1000 level or above)		5

Humanities	3
Social & Behavioral Sciences	3
Total Credits	65

¹ In addition to the courses listed above.

General Education Requirements

For general education requirements for the AAS degree, please visit the AAS degree catalog page (<https://catalog.cod.edu/associate-degree-programs/associate-applied-science-degree/>).

Suggested Semester Sequence

Course	Title	Credits
First Semester		
MANUF 1101	Industrial Design/CAD	3
MANUF 1151	Machine Shop I	3
MANUF 1180	Quality Control	3
ELMEC 1141	Hydraulics and Pneumatics	3
GEN ED	General Education	3-5
Credits		15-17
Second Semester		
MANUF 1110	Metrology	3
WELD 1100	Welding I	3
ELECT 1100	Electricity and Electronics Fundamentals	3
GEN ED	General Education	3
GEN ED	General Education	3
Credits		15
Summer Semester		
Select one of the following:		3
SPEEC 1100	Fundamentals of Speech Communication	
SPEEC 1120	Small-Group Communication	
SPEEC 1150	Introduction to Business Communication	
Credits		3
Third Semester		
MANUF 1153	Advanced Machine Processes	3
MANUF 1104	Technical Mechanics	2
ELECTIVE	Program Electives	3-9
Credits		8-14
Fourth Semester		
MANUF 2251	Computer Numerical Control (CNC)	3
ELECTIVE	Program Electives	3-9
GEN ED	General Education	3-5
Credits		9-17
Total Credits		50-66

Program Milestones

First Semester

- Consider joining or visiting with a professional, cultural or interest-based Student Club (http://cod.edu/student_life/clubs_org/).
- Attend Project Hire-Ed Seminar

Second Semester

- If you have not done so yet this semester, it is important to make an appointment with a Faculty or Program Advisor (<https://www.cod.edu/academics/programs/manufacturing/faculty.aspx>) to discuss your future academic progress.
- Join Engineering Technology Club
- Find summer entry level Manufacturing job

Third Semester

- Pursue 4 year course options
- Build Professional Resume
- Attend National Trade show

Fourth Semester

- Decide on Career vs Education

This page lists programs related to one another.

- Automated Manufacturing Systems, A.A.S. (<https://catalog.cod.edu/programs-study/manufacturing-technology/automated-manufacturing-systems-aas/>)
- Automated Manufacturing Systems, Certificate (<https://catalog.cod.edu/programs-study/manufacturing-technology/automated-manufacturing-systems-certificate/>)
- CNC Operations, Certificate (<https://catalog.cod.edu/programs-study/manufacturing-technology/cnc-operations-certificate/>)
- Computer-Aided Design, Certificate (<https://catalog.cod.edu/programs-study/manufacturing-technology/computer-aided-design-certificate/>)
- Drafting/Design, Certificate (<https://catalog.cod.edu/programs-study/manufacturing-technology/draftingdesign-certificate/>)
- Manufacturing Engineering Technology, A.A.S. (<https://catalog.cod.edu/programs-study/manufacturing-technology/manufacturing-engineering-technology-aas/>)
- Manufacturing Skills Standards, Certificate (<https://catalog.cod.edu/programs-study/manufacturing-technology/manufacturing-skills-standards-certificate/>)
- Manufacturing Technology Drafting/Design, A.A.S. (<https://catalog.cod.edu/programs-study/manufacturing-technology/manufacturing-technology-drafting-design-aas/>)
- Manufacturing Technology, Certificate (<https://catalog.cod.edu/programs-study/manufacturing-technology/manufacturing-technology-certificate/>)
- Mold Making, Certificate (<https://catalog.cod.edu/programs-study/manufacturing-technology/mold-making-certificate/>)
- Tool and Die Making, Certificate (<https://catalog.cod.edu/programs-study/manufacturing-technology/tool-die-making-certificate/>)