Manufacturing Technology

Associate in Applied Science Degree, Career program

Division of Math, Physics, Technology & Engineering Science, Associate Dean: Bradley Cole
Department Chair: John Longwell

Manufacturing Technology is a field of study that prepares students for careers in production settings, technical and/or management oriented professions. Manufacturing technicians are primarily involved with the management, operation, and maintenance of complex, team-oriented technological systems. Typical on-the-job functions may include work in production and inventory control, quality assurance, methods analysis, manufacturing supervision, and facilities management.

Within the traditional manufacturing courses, the program will integrate the latest concepts of Quality Management Principles that are increasingly important to the leadership and management of all organizations. With an awareness of growing global competition, the students will learn to apply these principles to produce benefits for customers, owners, employees, suppliers, and society at large. The initial semester will focus on topics common to all technical fields. Subsequent courses become more specialized and use the scientific method to identify and solve problems related to a manufacturing environment.

Graduates will be able to perform manufacturing process analysis, cost estimating, and product testing; apply a problem solving approach to manufacturing cost reduction; develop quality control programs; use a Computer Aided Design system; design, manage, and analyze work environments within standard restraints; recognize and use project management techniques.

Many students decide to continue their education at the baccalaureate level, and courses taken at Corning Community College generally transfer to upper-division colleges and universities granting Bachelor of Science degrees in Manufacturing Technology, Industrial Technology, and Manufacturing Engineering Technology.

High school or equivalent preparation required: Two years of mathematics including algebra and either geometry or intermediate algebra. Students who don't have this preparation will be able to get it here, but it may take longer to complete the program.

Program Requirements

English (ENGL 1010 and 1020 or 1030. By placement)*	6
Mathematics (MATH 1230-1240 or higher)*	6
Social Sciences electives	6
Physics (PHYS 1010)	4
Technical Concentration (CADD 1700, 2710; ELEC 1010, 1510; MECH 1050, 1550, 1560, 1570, 2050, 2210; MACH 2380; MFGT 2020, 2060; TECH 1030, 1080)	46
Wellness	2
Total hours	70

*Based on placement, students may be required to take ENGL 0950 and/or ENGL 0990 before taking ENGL 1010, and MATH 0960 before taking a math credit course.

Students should take the Orientation to Technology (TECH 1050) course [offered before the semester begins] where their computer skills will be assessed. It may be possible to get credit for TECH 1110, 1120, 1130 via this assessment. If students do not pass sections of the computer assessment, they may be required to take TECH 1110, 1120 or 1130 to make up the deficiency.

Sample Sequence: intended as a guide for academic planning. It need not be followed exactly or completed in four semesters.

First Semester

English	3
Mathematics (MATH 1230 or higher)	3
Engineering Graphics I (MECH 1050)	3
Manufacturing Methods (TECH 1030)	3
Manufacturing Methods Lab (TECH 1080)	1
Electricity (ELEC 1010)	4
Wellness (Awareness/Instructional Component)	1

Second Semester

English	3
Mathematics (MATH 1240 or higher)	3
CNC Programming (MECH 1560)	3
Engineering Graphics II (MECH 1550)	3
Physics (PHYS 1010)	4
Wellness Activity	0.5

Third Semester

Materials (MECH 2210)	4
Social Sciences elective	3
Quality Management (MFGT 2020)	3
Hydraulics & Pneumatics (MECH 2050)	3
Computer Aided Drafting I (CADD 1700)	3
Wellness Activity	0.5

Fourth Semester

Computer Aided Drafting II (CADD 2710)	3
Manufacturing Supervision (MFGT 2060)	3
Dimensional Metrology (MECH 1570)	3
MasterCam I (MACH 2380)	3
Digital Electronics (ELEC 1510)	4
Social Sciences elective	3