

Mechanical Engineering Technology and Design Drafting

The Department of Mechanical Engineering Technology and Design Drafting offers two degree programs:

1. **MECHANICAL ENGINEERING TECHNOLOGY** accredited by TAC of ABET
and
2. **COMPUTERIZED ARCHITECTURAL AND INDUSTRIAL DESIGN**
This is *not* a TAC of ABET Accredited Program

The Mechanical Engineering Technology program is accredited by the Technology Accreditation Commission of ABET (TAC of ABET). Additional information on TAC of ABET can be found at ABET, Inc., 111 Market Place, Suite 1050, Baltimore, MD 21202, telephone 410-347-7700 and www.abet.org.

Educational Objectives for the A.A.S. in Mechanical Engineering Technology

Graduates of the program will be prepared for the following career and professional accomplishments during the first three to five years following graduation:

1. **Career Preparation and Advancement** – Graduates will demonstrate mastery of the knowledge and skills needed for entry into or advancement in the field of Mechanical Engineering Technology.
2. **Engineering Competence** - Graduates will be competent technicians with problem solving and design skills, and have the ability to apply mathematics, science and modern engineering software to solve mechanical engineering technology problems.
3. **Professional Skills** - Graduates will have strong communication skills, and the ability to work successfully in teams in industry.
4. **College Transfer** - Graduates will meet the requirements for transfer into the junior year of a baccalaureate program in engineering technology
5. **Well-rounded education** - Graduates will demonstrate respect for diversity and knowledge of contemporary professional, societal, ethical, and global issues, and they will engage in life-long learning

Mechanical Engineering Technology

Engineering Technicians play an important role in a variety of fields, such as the space program, missile development, and the design and operation of power plants, air and water pollution control, aircraft, automotive and high speed railway equipment development, air conditioning, instrumentation, and in the burgeoning fields of automation, computer numerical control, robotics and integrated manufacturing systems. Many experienced Mechanical Engineering Technicians assume positions in operations and management



of industrial enterprises. Mechanical Engineering Technology offers rewarding career opportunities with well known companies. The Department maintains a job placement service for students. The equipment available to students is identical to that in industry. The college laboratories include manufacturing processes, metallurgy, thermodynamics, fluid mechanics, electro-mechanical, hydraulic and pneumatic systems and four computer graphics labs.

Computerized Architectural and Industrial Design

The broad field of design drafting deals with the development of a complete set of detail working drawings from several design inputs including: raw design ideas, sketches, notes and data. Graduates can specialize in either architectural or industrial design drafting. Students specializing in architectural design obtain skills needed to function in the office of a registered architect or a related profession such as interior design, landscape architecture, planning or surveying. Students specializing in industrial design are prepared to work as designers for creating product systems and components. They are well suited to develop technical drawings for patents for product designs. Four state-of-the-art computer graphics laboratories running the latest releases of design software are available to students.

MECHANICAL ENGINEERING TECHNOLOGY A.A.S. Degree Program

A TAC of ABET ACCREDITED ENGINEERING TECHNOLOGY CURRICULUM

The A.A.S. degree in Mechanical Engineering Technology is equivalent to the first two years of study for the Bachelor of Engineering Technology program of The City College School of Engineering. Graduates of the Mechanical Engineering Technology program are eligible to apply for advanced standing to New York City College of Technology, with no loss of

REQUIREMENTS FOR THE A.A.S. DEGREE

GENERAL EDUCATION CORE REQUIREMENTS

	Credits
EN-101, 102 English Composition I, II.....	6
MA-114† College Algebra and Trigonometry for Technical Students.....	4
MA-128† Calculus for Technical and Business Students.....	4
PH-201*, 202* General Physics I, II.....	8
SS- or HI- Electives in Social Sciences§ or History§ (HI-100 series).....	6
Sub-total	28

REQUIREMENTS FOR THE MAJOR

MT-111 Technical Graphics.....	2
MT-122 Manufacturing Processes.....	3
MT-124 Metallurgy and Materials.....	3
MT-125 Metallurgy Laboratory	1
MT-161 Fundamentals of Computer Numerical Control.....	3
MT-341 Applied Mechanics	3
MT-488 Computer-Aided Design Drafting (CADD)	3
MT-345 Strength of Materials.....	3
MT-346 Strength of Materials Laboratory.....	1
MT-369 Computer Applications in Engineering Technology	3
MT-900 Cooperative Education/Design Projects.....	3
MT-491 Computer Controlled Manufacturing	2
MT-492 Introduction to Virtual Automation.....	2
MT-513 Thermo Fluid Systems	3
MT-514 Thermo Fluid Systems Laboratory.....	1
Sub-total	36

Total Credits Required64

† Students may take MA-440 and 441 in place of MA-114 and 128.

* Physics 301, 302 or 411, 412, 413 courses may be substituted for PH-201, 202.

§ Sections of this course denoted as "WT" may be taken to partially satisfy the Writing Intensive Requirement. See Writing Intensive Requirements on page 69 for details.

Two (2) Writing Intensive classes are required for the Associate degree. See page 69.

Please Note:

- Students interested in a cooperative education work-study experience may check with the Department chairperson.
- On the basis of a speech test administered to all students upon admission, up to two semesters of remedial speech may be required.

credit. Other colleges offer graduates of this program transfer credit into Bachelor of Mechanical Engineering degree programs. Students may inquire in the Office of the Department of Mechanical Engineering Technology for further information.

A Certificate program in COMPUTERIZED MANUFACTURING TECHNOLOGY is also offered by the Department of Mechanical Engineering Technology and Design Drafting.

SUGGESTED SEQUENCE OF COURSES

Semester 1

	Credits
EN-101 English Composition I	3
MA-114† Technical Mathematics A †	4
MT-111 Technical Graphics	2
MT-122 Manufacturing Processes	3
MT-124§ Metallurgy and Materials.....	3
MT-125§ Metallurgy and Materials Laboratory	1
Sub-total	16

Semester 2

EN-102 English Composition II	3
MA-128† Calculus for Technical and Business Students†	4
MT-161 Fundamentals of Computer Numerical Control	3
MT-341 Applied Mechanics.....	3
MT-488§ Computer-Aided Design Drafting (CADD)	3
Sub-total	16

Semester 3

SS- or HI- Elective in Social Science or History (selected from HI-100 series).....	3
PH-201 General Physics I.....	4
MT-345§ Strength of Materials.....	3
MT-346§ Strength of Materials Laboratory.....	1
MT-369 Computer Applications in Engineering Technology	3
Sub-total	14

Semester 4

SS- or HI- Elective in Social Science or History (selected from HI-100-179).....	3
PH-202 General Physics II.....	4
MT-900§ Cooperative Education/Design Projects.....	3
MT-513 Thermo Fluid Systems	3
MT-514 Thermo Fluid Systems Laboratory.....	1
MT-491 Computer Controlled Manufacturing.....	2
MT-492 Introduction to Virtual Automation.....	2
Sub-total	18

Total Credits Required64

Note for Potential Technology Education Majors:

Students desiring to pursue careers as technology teachers should confer with the Department of Mechanical Engineering Technology and Design Drafting regarding transfer requirements and procedures for a Bachelor of Science in Technology Education.