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**MINNESOTA STATE  
UNIVERSITY**  
MANKATO

## MANUFACTURING ENGINEERING TECHNOLOGY

### *College of Science, Engineering & Technology*

#### WHAT DEGREES AND PROGRAMS DO WE OFFER?

Manufacturing Engineering Technology is a four-year BS degree, located within the College of Science, Engineering and Technology. The curriculum includes 61 semester hours of credit in the major with additional mathematics through Calculus II, physics, chemistry, and communication courses.

In addition to general education requirements, students do an in-depth study in areas such as manufacturing design, production analysis and monitoring, materials process, and research.

#### WHAT CAREER OPPORTUNITIES ARE AVAILABLE FOR STUDENTS COMPLETING THIS PROGRAM?

The MET Program at Minnesota State Mankato provides a broad technical background for students. Together with a proficiency in engineering methods and mathematics, this enables graduates to take advantage of opportunities for advancement in many directions. They often have their choice of challenging positions such as manufacturing engineer, production engineer, production manager, design engineer, quality manager, process analyst, project engineer, operations manager, continuous improvement manager, or sales engineer. Students work for a wide variety of international and national industries, including St. Jude Medical, Medtronic, 3M, Toyota, Coloplast, Bemis, Taylor Corporation, MICO, AGCO, ADC, Winland Electronics, Emerson, Hormel, Jenny-O and Motion Control Group among many others. The typical starting salary range is \$65,000 to \$75,000.

#### EXAMINING THE QUALITY OF OUR PROGRAM

##### Accreditations

The Manufacturing Engineering Technology program is accredited by the Engineering Technology Accreditation Commission of ABET.

##### Faculty

All faculty are directly involved in research and often are the recipients of grants. All research is conducted directly with students. These research projects provide learning opportunities for students in a project/group setting that is realistic with respect to scope, budget, timelines, and cooperative effort. Many research projects become the capstone Senior Design Projects for the students and result in published technical papers with the students as authors.

##### Alumni successes

A recent study of graduates of the Manufacturing Engineering Technology program showed that they had been employed in manufacturing on a regional and national basis with job titles such as project engineer, quality assurance engineer, research and development engineer, industrial engineer, plant engineer, production and inventory control specialist.

##### Other special programs

The Center of Additive Manufacturing is an integral component of the Manufacturing Engineering Technology Program. The purpose of the center is to provide the industry with direct assistance in the application of 3D printing technology to the production cycle. It also helps the industry make the material selection for projects. Undergraduate students have the opportunity to work directly with the industry on projects in the center. Undergraduate and Graduate students also do cutting edge research in new technologies and materials.

#### STUDENT EXPERIENCE/ PROGRAM REQUIREMENTS

##### Faculty/student ratio

The ratio is 1:20 to 1:30 to allow for full access to laboratory equipment and direct interaction with faculty. All classes are taught by department faculty. Technical staff supervise labs.

##### Unique program components

During the senior year, each student is required to complete a Senior Design Project. This hands-on project involves groups of students conducting research on a specific manufacturing problem.

The research is often done directly with the manufacturing industry or as part of a research grant.

##### Internships

Paid internships are available (although not required) in the manufacturing industry and are typically completed in the summer between the junior and senior years. The majority of students in the program participate in the internship program. Local, national, and international internships are available. Many internships lead to offers of full-time employment upon graduation.

##### Scholarships

Yearly scholarships are available. The annual application process is available each spring.

##### Clubs and organizations

Manufacturing students have an opportunity to become involved in the Student Society of Manufacturing Engineers organization. Participation includes meetings, speakers from industry, industrial tours, national and regional meetings, and the opportunity to become a Certified Manufacturing Technologist.

#### HOW DO I PREPARE FOR THIS PROGRAM?

The best high school curriculum to prepare you to enter a program of MET includes courses in algebra, trigonometry, and physics. Other helpful courses are geometry, computer science, and chemistry. A solid foundation in English is desirable. High school courses in technology education are also useful.

## FOR MORE INFORMATION PLEASE CONTACT

### Department of Manufacturing Engineering Technology

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Mankato, MN 56001

### Phone

507-389-6383 (M)  
800-627-3529 or 711 (MRS/TTY)

### Website

[cset.mnsu.edu/departments/automotive-and-manufacturing-engineering-technology/bs-manufacturing-engineering-technology/](http://cset.mnsu.edu/departments/automotive-and-manufacturing-engineering-technology/bs-manufacturing-engineering-technology/)  
You are encouraged to visit the campus.

You are encouraged to visit the campus. To arrange a visit, please call: Office of Admissions: 507-389-1822  
Tollfree: 800-722-0544

## SAMPLE FOUR-YEAR CURRICULUM (MANUFACTURING ENGINEERING TECHNOLOGY, BS)

First Year (Fall)	First Year (Spring)
MET 104 Intro to Manufacturing Engineering Technology (1) MET 142 Computer Parametric Modeling (3) MATH 121 Calculus I (4) CHEM 104 Intro to Chemistry (3) ENG 101 Foundations of Writing & Rhetoric (4)	CMST 100 Fund. Comm. or (CMST 102) (3) STAT 154 Elementary Statistics (4) EET 113 DC Circuits (3) MATH 122 Calculus II (4) GEN ED General Education (3)
Second Year (Fall)	Second Year (Spring)
ECON 202 Principles of Microeconomics (3) PHYS 211 Principles of Physics I (4) ENG 271W Technical Communications (4) MET 275 Manufacturing Process I (4) GEN ED General Education (1)	AET 334 Fluid Power (3) MET 323 Statics (3) MET 341 Advanced Parametric Modeling (3) PHYS 212 Principles of Physics II (4) GEN ED General Education (3)
Third Year (Fall)	Third Year (Spring)
MET 324 Strength of Materials & Dynamics (4) MET 375 Manufacturing Process II (4) MET 386 Metrology for Eng Technologist (3) MET 425 Project and Value Management (3) MET 427 Quality Management Systems (3)	MET 423 Ergonomics & Work Measurement (3) MET 347 Manufacturing Automation (4) MET 424 Industrial Safety (2) MET 428 Lean Manufacturing (3) GEN ED General Education (4)
Fourth Year (Fall)	Fourth Year (Spring)
MET 407 Mfg. Resource Plan & Control (3) MET 426 Logistics & Transportation (3) MET 448 Computer Integrated Mfg (3) MET 488 Senior Design I (2) Elective Credits (Internship Optional) (5)	MET 465 Laboratory Experience (2) MET 489 Senior Design Project II (2) GEN ED General Education (4) Elective Credits (Internship Optional) (7)

For additional information about course requirements, please visit [www.mnsu.edu/supersite/academics/bulletins/](http://www.mnsu.edu/supersite/academics/bulletins/)

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