

Bachelor of Science in

Manufacturing Engineering

Freshman Orientation

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Manufacturing Engineering Website

We like students to make extensive use our program website:

<http://www.uwstout.edu/programs/bsmfe/>

- Within this site you will find up-to-date program information in these areas:
 - Curriculum
 - Faculty of the Program
 - Graduate Placement
 - Student Advising
 - Student Project Showcase
 - Student Organizations
-

What is a Manufacturing Engineer?

- Engineers apply science in the design, planning, construction, and maintenance of buildings, machines, and other manufactured things.
 - A *manufacturing engineer* is a designer of the processes, machines and systems used in the production of items. They understand how things are made and how to control the production process using the most efficient and cost effective methods.
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Program Goals

1. Apply the principles of mathematics and science to the solution of problems.
 2. Apply concepts of engineering analysis.
 3. Design products and manufacturing systems using contemporary methods.
 4. Communicate effectively.
 5. Function effectively as a team member.
 6. Integrate sound management principles into the engineering process.
 7. Practice his or her profession at the highest ethical standards.
 8. Implement technology with an awareness of important societal issues.
 9. Recognize the need for and have the ability to engage in life-long learning.
 10. Understand global and cultural issues.
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UW-Stout Engineering Highlights

- ❑ Hands-on Focus to All Courses
 - ❑ Instructor Availability
 - ❑ Undergraduate Laboratory Access
 - ❑ Instructors with Industrial Experience
 - ❑ Excellent Laboratory Facilities
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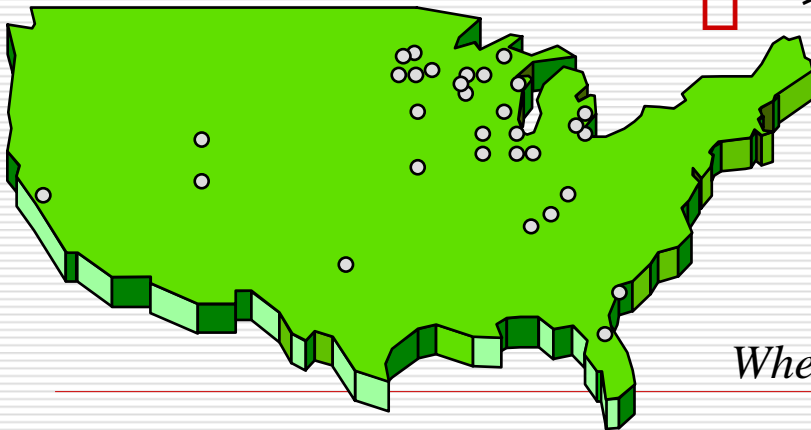
Graduate Statistics

Dec. 2001 & May 2002 Graduates:

- ❑ Graduates 41
- ❑ Starting Salaries \$28,080 to \$50,000
- ❑ \$41,272 Average Starting Salary
- ❑ 97% placement in major

2000-2001 Graduates:

- ❑ Graduates – 45
- ❑ Starting Salaries - \$29,000 to \$58,000
- ❑ \$43,000 Average Starting Salary
- ❑ 100% placement in major



Where are they?

Functions of MfgE Graduates

Results of employer feedback surveys list the following types of functions that MfE graduates perform.

- Process Improvement
 - Manufacturing or Process Operations
 - Facilities Layout/Maintenance
 - Quality Control
 - Tool Design
 - Equipment Procurement
 - Material Handling Systems
 - Computer Aided Manufacturing
 - Product Design
 - Pneumatic & Electro-mechanical Troubleshooting
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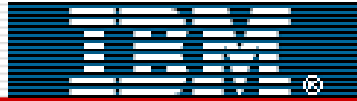
Manufacturing Engineering

Partial List of Employers

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- 3M
 - International Paper, Inc.
 - Bradley Corporation
 - MRG Tool and Die, Inc.
 - SP Owatonna Truck Corp.
 - Flexmedics Corporation
 - Lynch Machinery
 - Schaeffer Engineering
 - Classic Manufacturing
 - Kurt G. JOA
 - Swiss Technologies
 - Hutchinson Technology, Inc.
 - Quality Tool
 - Concept Engineering
 - Starpak
 - IBM
 - Laser Magic, Inc.
 - Tool-O-Matic
 - Kohler Company
 - Frito-Lay, Inc.
 - Amsco
 - Donatelle Plastics, Inc.
 - Marquip, Inc.
 - Flambeau Plastics
 - Gilman Engineering
 - Goodrich Aerospace
 - Greenheck
 - HON Industries (Heat-N-Glo)
 - Hormel Foods
 - John Deere
 - May Steel LLC
 - Mercury Marine
 - Oildyne
 - Oskosh Truck
 - Parker Hannifin
 - Clopay Building Products
 - Cummins Power Generation (Onan)
 - Dayco
 - Donaldson Company Inc.
 - Eaton
 - Federal Mogul
 - Honeywell International
 - Scientific Molding Corp.
 - St. Jude Medical, Inc.
 - Extrusion Dies, Inc.
 - Phillips Plastics Corporation
 - Polaris
 - Rockwell Automation
 - SSI Technologies, Inc.
 - Trostel
 - TRW
 - Thermo King, Ingersoll-Rand
 - Trane Co.
 - United Defense
 - Wausau Metals
 - Whirlpool Corporation
 - Emerson Electric
 - Remmele Engineering
 - Waupaca Foundry
 - Stratasys
 - Hurd Millworks
 - Semco Windows and Doors
 - Andersen Window
 - W.L. Gore
 - Prent Corp.
 - Rubbermaid Home Products
 - Deluxe Corporation
 - Everham Motor Sports



THE BOLD LOOK
OF **KOHLER**



Phillips
PHILLIPS PLASTICS CORPORATION™



GILMAN
Engineering & Manufacturing Co. LLC



Clopay®



**Power
Generation**

TRW
Automotive



HEAT-N-GLO
No one builds a better fire



**Rockwell
Automation**



DAYCO



THERMO KING



Honeywell

Hutchinson
TECHNOLOGY

ABET Accreditation

ABET is the

Accreditation Board for Engineering and Technology

- It is a non-governmental, peer review process that verifies a program meets the engineering criteria, ensuring a quality educational experience.
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Program Curriculum

□ **Communication Skills**

- Composition
- Reading & Writing
- Speech

□ **Analytical Reasoning**

- Calculus I
- Calculus II

□ **Humanities & Social Sciences**

- 18 total credits
- Depth in one subject area
- Breadth in 5 subject areas
- Uniquely select to also meet Ethnic Studies Requirement

□ **Natural Sciences**

- College Chemistry I
- University Physics I
- University Physics II

□ **Mathematics & Basic Sciences**

- Chemistry of Materials
- Probability & Statistics
- Differential Equations & Linear Algebra

□ **Engineering Core**

- Introduction to Engineering Materials
 - Engineering Mechanics
 - Mechanics of Materials
 - Circuits & Devices
 - Thermodynamics & Heat Transfer
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Professional Studies Courses

□ **Manufacturing Competitiveness**

- Production Operations Management
- Quality Engineering
- Manufacturing Operations & Systems
- Engineering Economy

□ **Materials & Manufacturing Processes**

- Material Removal & Forming Processes
- Casting & Joining Processes
- Polymer & Composite Processes

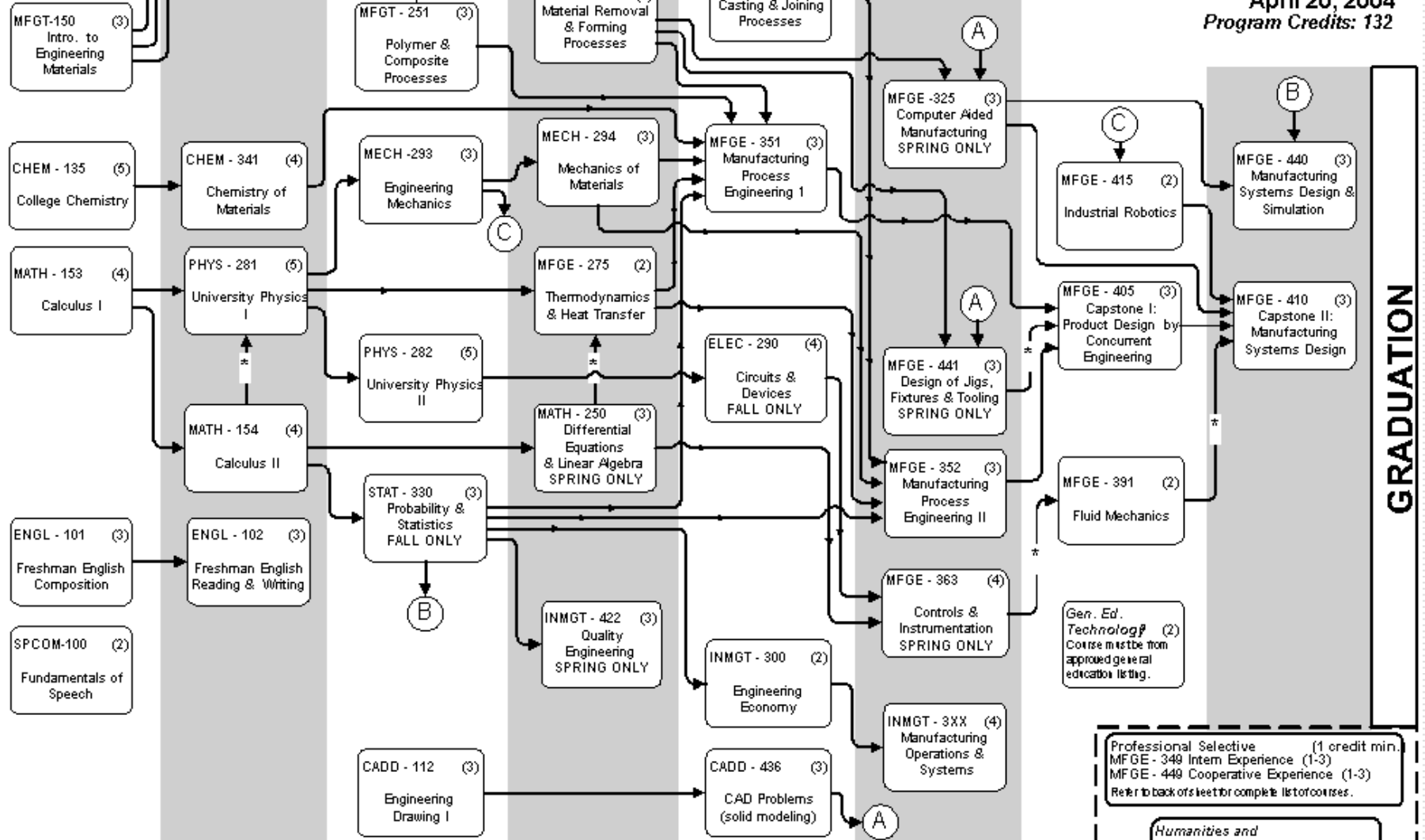
□ **Manufacturing Integration Methods and System Design**

- Computer Aided Manufacturing
- Industrial Robotics
- Capstone II: Manufacturing System Design
- Design & Simulation of Manufacturing Systems
- Fluid Mechanics
- Controls & Instrumentation

□ **Process, Assembly, & Product Engineering**

- Design of Jigs, Fixtures, & Tooling
 - Capstone I: Product Design by Concurrent Engineering
 - Engineering Graphics
 - Solid Modeling
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**BACHELOR of SCIENCE
MANUFACTURING ENGINEERING**
Curriculum Flow Chart
April 20, 2004
Program Credits: 132



Notes:
 1. * Prerequisite course indicated may be taken concurrently.
 2. Program is accredited by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology, 111 MarketPlace, Suite 1030, Baltimore, MD 21202-4012, 410/347-7700

Physical Well Being (2)
 Courses must be from approved general education listing.

Professional Selective (1 credit min.)
 MFGE - 349 Intern Experience (1-3)
 MFGE - 449 Cooperative Experience (1-3)
 Refer to back of leaflet for complete list of courses.

Humanities and Social Studies (18 credits)
 Five (5) different areas and depth in one (1) area from the general education category listings:
Select a minimum of 2 areas each from Humanities and the Arts and Social & Behavioral Sciences

GRADUATION

Some of the Minors Appropriate to Manufacturing Engineering

- Materials - 22-27 credits
 - Chemistry - 22 credits
 - Business Administration - 22 credits
 - Mathematics - 22 credits
 - Speech - 17 credits
 - Technical Writing - 15 credits
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Professional Development

GET INVOLVED THIS FALL!

- Society of Manufacturing Engineers
 - Dr. Gary Godfrey
 - Society of Automotive Engineers
 - Mr. Ed Hughes
 - American Foundry Society
 - Dr. Rajiv Asthana
 - Society of Women Engineers
 - Dr. Claire Sand
 - American Society of Mechanical Engineers
 - Dr. Scott Springer
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Scholarship Information

- Scholarships are awarded through the Stout Foundation *and* Professional Societies
 - Partial Listing of Scholarship Awards:
 - Rath Foundation Scholarships (\$6000 per year for 4 years)
 - Society of Manufacturing Engineers Scholarships (up to \$5000)
 - Cervenka Scholarship (\$1000)
 - Steiner/Milnes Scholarship (\$2350)
 - Ralph Stevens Scholarship (\$1000)
 - Dan and Linda Hampton Scholarship (\$3000)
 - 3M Wisconsin Community Affairs Council Scholarship (\$1000)
 - Fulton Holtby Scholarships (\$500)
 - multiple others for \$500 or less
 - ***Be sure to apply!!!***
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Any Questions??
