MINNESOTA STATE UNIVERSITY MANKATO

Undergraduate Degree Map for Completion in Four Years

College:	College of Science, Engineering & Technology
Department:	Mechanical & Civil Engineering
Name of Program:	MECHANICAL ENGINEERING
Degree Designation:	BSME
Emphasis/Concentration:	
Option:	4-year Plan for Mechanical Engineering
Version:	1
Version Explanation:	2014 Bulletin for Mechanical Engineering
Type of Program:	Standard Major
Minor Required:	No
Specific Minor (if required):	

Program Description:

Mechanical Engineering

Admission Requirements:

Students are initially admitted as Pre-Mechanical Engineering students. To be considered for full admission to the Mechanical Engineering program at the junior year, students must complete the following steps:

Be admitted to the College of Science, Engineering, and Technology.
Achieve a minimum GPA of 2.50 in all math, science, and engineering courses.
Submit an application for admission to the Mechanical Engineering program, including a program plan of study (usually completed during the sophomore year).
Complete a minimum of 50 credits, including the following courses with grades of "C" or better:

- General Physics I and II (calculus-based, with lab), 8 credits
- Calculus I, II and III, and Differential Equations, 16 credits
- Chemistry, 3 credits
- English Composition, 4 credits.
- Introduction to Mechanical Engineering, 2 credits
- Computer Graphics Communication, 1 credit
- Geometric Dimensioning and Tolerancing in Engineering Design, 2 credit
- Introduction to Problem Solving and Mechanical Engineering Design, 2 credits
- Engineering mechanics (Statics, Dynamics, and Mechanics of Materials), 9 credits
- Electrical engineering (Circuits, including lab), 4 credits

Advising:

You are expected to meet with your advisor on a regular basis to ensure courses are taken in an order that will lead to successful completion of the degree.

Students must meet with their advisor each semester prior to registration to receive their registration access code.

A complete listing of program faculty, policies, and course descriptions is available in the undergraduate bulletin.

TERM 1 - FALL

Designator:	Course:	Course Name:	Credits:	Milestones: Overall GPA ≥ 2.0 Course Completion Rate ≥ 67% Completion of ≥ 15 credit hours
MATH	121	Calculus I	4	
CHEM	191	Chemistry for Engineers	3	
ENG	101	English Composition	4	
ME	101	Introduction to Mechanical Engineering	2	
ECON	201	Macro-Economics	3	or ECON202 Micro-Economics

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Term 1 Notes:

TERM 2 - SPRING

Designator:	Course:	Course Name:	Credits:	Milestones: Overall GPA ≥ 2.0 Course Completion Rate ≥ 67% Completion of ≥ 30 credit hours Advance to Sophomore status
MATH	122	Calculus II	4	Apply for admission to College.
PHYS	221	General Physics I	4	
CMST	102	Public Speaking	3	
ME	103	Computer Graphical Communication	1	
ME	201	Introduction to Problem Solving and Design	2	
EE	244	Digital Logic	2	

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Term 2 Notes:

TERM 3 - FALL

Designator:	Course:	Course Name:	Credits:	Milestones: Overall GPA ≥ 2.0 Course Completion Rate ≥ 67%
MATH	321	Differential Equations	4	
PHYS	222	General Physics II	3	
PHYS	232	General Physics II Laboratory	1	

Designator:	Course:	Course Name:	Credits:	Milestones: Overall GPA ≥ 2.0 Course Completion Rate ≥ 67%
ME	212	Statics	3	
EE	230	Circuits I	3	
EE	240	Circuits I Laboratory	1	

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Term 3 Notes:

TERM 4 - SPRING

Designator:	Course:	Course Name:	Credits:	Milestones: Overall GPA ≥ 2.0 Course Completion Rate ≥ 67% Completion of ≥ 60 credit hours Advance to Junior status
MATH	223	Calculus III	4	Apply for admission to program.
ME	203	GD&T in Engineering Design	2	
ME	214	Dynamics	3	
ME	291	Engineering Analysis	3	
		Math/Science Required Elective	4	

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Term 4 Notes:

TERM 5 - FALL

Designator:	Course:	Course Name:	Credits:	Milestones: Overall GPA ≥ 2.0 Course Completion Rate ≥ 67% Apply for Graduation
ME	206	Materials Science	3	
ME	241	Thermodynamics	3	
ME	321	Fluid Mechanics	3	
ME	223	Mechanics of Materials	3	
ME	341	Linear Systems Analysis	3	

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Term 5 Notes:

TERM 6 - SPRING

Designator:	Course:	Course Name:	Credits:	Milestones: Overall GPA ≥ 2.0 Course Completion Rate ≥ 67% Completion of ≥ 90 credit hours Advance to Senior status
ME	324	Heat Transfer	3	Apply for graduation.
ME	329	Applied Thermodynamics	3	
ME	333	Manufacturing Processes	3	
ME	336	ME Experimentation I	2	
ME	417	Machine Elements	3	
		Humanities/Social Science Required Course	3	

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Term 6 Notes:

TERM 7 - FALL

Designator:	Course:	Course Name:	Credits:	Milestones: Overall GPA ≥ 2.0 Course Completion Rate ≥ 67%
ME	420	Computer Aided Engineering	3	
ME	428	Design Project I	3	
ME	436W	ME Experimentation II	2	
ME	463	Automatic Controls	3	
ME		ME Required Elective	3	
ME	492	ME Seminar	1	
		Humanities/Social Science Required Course	3	

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Term 7 Notes:

TERM 8 - SPRING

Designator:	Course:	Course Name:	Credits:	Milestones: Overall GPA ≥ 2.0 Course Completion Rate ≥ 67%
ME	438W	Design Project II	3	
ME	466W	ME Experimentation III	2	
ME		ME Required Elective	3	
		Humanities/Social Science Required Course	4	
		Humanities/Social Science Required Course	3	

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Term 8 Notes:

PROGRAM NOTES

A 2.5 GPA for upper division engineering courses is required for graduation.
Students should consult department guidelines for the approved Humanities/Social Science and Math/Science elective courses.
Students should consult with their academic advisor during the selection of ME Required Electives.

DEGREE MAP CHECKLIST: GRADUATION REQUIREMENTS

☐	1. Minimum of 15 credits per semester
☐	2. General Education = 44 credits
☐	3. Diverse Cultures = 2 course (6 credits minimum) from two disciplines
☐	4. Writing Intensive = 2 courses (6 credits minimum)
☐	5. Major = _____ credits
☐	6. Upper-Division Requirements = 40 credits minimum
☐	7. Professional Education (if required) = 30 credits
☐	8. Language Requirements (if BA) = 8 credits minimum
☐	9. Minor = _____ credits
☐	10. Total credits required for degree 128

DEGREE MAP COMPLETE

☑	Map is complete and ready for review 1. Faculty please send an email to your Department Chair when map is ready to review. 2. Department Chair please send an email to your Dean when map is ready to review. 3. Dean please send an email to the Assistant Vice President for Undergraduate Studies when map is ready to review.

DEAN APPROVAL

☑	Map reviewed and approved by Dean

Save and Close