

Winona State University Four Year Map General Engineering Industrial Statistics (GENI)					
Fall Year 1			Spring Year 1		
Course	Requirement Met	SH	Course	Requirement Met	SH
Chemistry 212, Principles of Chemistry I	GE Goal 3/Major	4	Chemistry 213, Principles of Chemistry II	GE Goal 3/Major	4
Math 120, PreCalc	GE Goal 4	4	Math 212, Calculus 1	GE Goal 4/Major	4
English 111, College Rdg/Wrt	GE Goal 1	4	Communication Studies 191	GE Goal 1	3
CME 102, Introduction to Engineering	Major	2	Physics 221, University Physics 1	GE Goal 3/Major	4
General Education Elective	GE Goal 5/6/7/8/9/10	3	Physics 231, University Physics 1B	Major	1
Orientation 100	GE	1	CME 182, Engineering Graphics and Desig	Major	2
Notes: Start taking Math 212 and not Math 120 if ready			Notes:		
		Total SH 18			Total SH 18
Fall Year 2			Spring Year 2		
Course	Requirement Met	SH	Course	Requirement Met	SH
Math 213, Calculus 2	GE Goal 4/Major	4	Physics 340, Modern Physics	Major/WI	4
Physics 222, University Physics 2	GE Goal 3/Major	4	Math 312, Multivariable Calculus	Major/CAI	4
Physics 232, University Physics 2B	Major	1	General Education Elective	GE Goal 5/6/7/8/9/10	3
Computer Science 234, Algorithms and Pi	Major	4	CME 260, Mechanics of Materials	Major	3
CME 250, Statics	Major	3	Physics 328, Electrical Circuits and Measu	Major	4
Notes:			Notes: Apply for admission to Engineering after completing Math 312		
		Total SH 16			Total SH 18
Fall Year 3			Spring Year 3		
Course	Requirement Met	SH	Course	Requirement Met	SH
Stat 303, Engineering Statistics	Major	3	DSCI 210, Data Science	Major	3
General Education Elective	GE Goal 5/6/7/8/9/10	3	CME 285, Properties of Materials	Major/WI	4
Math 313, Differential Equations	Major	3	GENI elective	Major E	3
Math 314, Linear Algebra and Diff Eq	Major	1	General Education Elective	GE Goal 5/6/7/8/9/10	3
CME 300, Thermo or Physics 350, Mech	Major	4	CME 270, Dynamics or Physics 345, Therr	Major	4
MGMT 334 Operations Management	Major/CAI	3			
Notes: Can take CME 300 and then CME 270 in Spring; or Phys 350 and Phys 345 in spr			Notes: If you haven't yet, talk to advisor about post graduation plans		
		Total SH 17			Total SH 17
Fall Year 4			Spring Year 4		
Course	Requirement Met	SH	Course	Requirement Met	SH
Physics 455, Engineering Design	Major/OI	2	Stat 321, Industrial Design of Experiment	Major	3
Physics 320, Computational	Major	2	Physics 455, Engineering Design	Major/OI	2
CME 491A, Engineering Seminar	Major	0	General Education Elective	GE Goal 5/6/7/8/9/10	3
Stat 310, Intermediate Statistics	Major	3	Stat 360, Regression Analysis	Major	3
Stat 320, Statistical Quality Control	Major/CAI	3	CME 491B, Engineering Seminar	Major/OI	1
General Education Elective	GE Goal 5/6/7/8/9/10	3	GENI elective	Major E	3
Notes:			Notes: Apply for graduation		
		Total SH 13			Total SH 15

Courses

Chemistry 212, Principles of Chemistry I
 Chemistry 213, Principles of Chemistry II
 CME 102, Introduction to Engineering
 CME 182, Engineering Graphics and Design
 CME 250, Statics
 CME 260 - Mechanics of Materials
 CME 270 Dynamics or Physics 350 Mechanics
 CME 285 - Properties of Materials
 CME 300, Thermo or Physics 345, Thermo
 CME 491A, Engineering Seminar
 CME 491B, Engineering Seminar
 Computer Science 234, Algorithms and Problem Solving 1
 DSCI 210, Data Science
 Math 212, Calculus 1
 Math 213, Calculus 2
 Math 312, Multivariable Calculus
 Math 313, Differential Equations
 Math 314, Linear Algebra and Diff Eq
 Stat 303, Engineering Statistics
 Stat 310, Intermediate Statistics
 Stat 320, Statistical Quality Control
 Stat 321, Industrial Design of Experiments
 Stat 360, Regression Analysis

MGMT 334 Operations Management
 Physics 221, University Physics 1
 Physics 222, University Physics 2
 Physics 231, University Physics 1B
 Physics 232, University Physics 2B
 Physics 320, Computational
 Physics 328, Electrical Circuits and Measurements 1
 Physics 340, Modern Physics
 Physics 455, Engineering Design

Updated on 9/30/2018

Key:

GE goal	General Education Goal Area
GE	A general elective that counts toward graduation b
Major	Satisfies a major requirement
Minor	Satisfies a minor requirement
Major E	Satisfies a major elective
CAI	Critical Analysis Intensive
OI	Oral Intensive
WI	Written Intensive
PDW	Personal Development and Wellness

General Education Goals (please see website for more information)

Goal 1	Communication (7 SH)
Goal 2	Critical Thinking (met when all other goals met)
Goal 3	Natural Science (7 SH)
Goal 4	Mathematics/Logical Reasoning (3 - 4 SH)
Goal 5	Social/Behavioral Sciences (3 SH)
Goal 6	Humanities and Fine Arts (3 SH)
Goal 7	Human Diversity (3 SH)
Goal 8	Global Perspective (3 SH)
Goal 9	Ethic and Civic Responsibility (3 SH)
Goal 10	People and the Environment (3 SH)

Course offered every other year

Phys 345	
Phys 350	
Phys370	elective
Phys 420	
Phys 430	
Phys 431	elective
Stat 320	Required
Stat 320	Required

Engineering Admission Requirements

2.5 GPA or hig Eng 111

Completion of CMST 191

Math 212
 Math 213
 Math 312
 Chem 212
 Chem 213
 Phys 221
 Phys 222
 CME 102
 CME 182
 CME 250
 CS 234