Winona State University

Four-Year Program Map

Created on 8/30/2022
Effective Fall 2022

Program: General Engineering: Industrial Statistics (BS GENI)

Emphasis (optional):

	Fall Semester			Spring Semester		
	Course	Requirement Met	SH	Course	Requirement Met	SH
Year 1	ENG 111 College Reading and Writing	GE Goal 1	4	CMST 191 Intro to Public Spkg or CMST 192 Intro to Speech Comm	GE Goal 1	3
	CHEM 212 Principles of Chemistry I	GE Goal 3/Major	4	CHEM 213 Principles of Chemistry II	GE Goal 3/Major	4
	MATH 212 Calculus*	GE Goal 4/Major	4	PHYS 221 University Physics I	GE Goal 3/Major	4
	CME 102 Intro to Engrng or PHYS 150 Engrng for Mdrn Wrld	Major	2	PHYS 231 University Physics IB	Major	1
	General Education Course	GE Goal 5-10	3	CME 182 Engineering Graphics and Design	Major	2
	OR 100 Intro to Higher Education	Recommended	1	MATH 213 Calculus 2	GE Goal 4/Major	4
	NOTE: Math Requirements are based on the major; however, a student's math placement is based on ACT Score. It may be necessary for a student to take more than one math course. At least 15 unique credits must come from Goals 5-10.			*NOTE: NOTE: ENG 111, CMST 191 or 192, CS 234, MATH 212, 213, 312, CHEM 212, 213, PHYS 221, 222, CME 102, 182, 250 are required for Admission into program. Student must earn a grade of "C" or better in all courses and earn an overall 2.50 GPA.*		
	First-Year Fall Semester Credit Hour Total		**18**	**First-Year Spring Semester Credit Hour Total**		**18**
Year 2	MATH 312 Multivariable Calculus	Major/CAI	4	DSCI 210 Data Science	Major	3
	PHYS 222 University Physics II	GE Goal 3/Major	4	MATH 313 Differential Equations	Major	3
	General Education Course	GE Goal 5-10	3	MATH 314 Linear Algebra and Differential Equations	Major	1
	STAT 303 Engineering Statistics	Major	3	General Education Course	GE Goal 5-10	3
	CME 250 Statics	Major	3	CME 260 Mechanics of Materials	Major	3
	NOTE: A minimum 2.50 GPA is required overall.			CS 234 Algorithms and Problem Solving	Major	4
				NOTE: Apply for admission to Engineering after completing MATH 312, CS 234.		
	Second-Year Fall Semester Credit Hour Total		**17**	**Second-Year Spring Semester Credit Hour Total**		**17**
Year 3	PHYS 232 University Physics IIB	Major	1	PHYS 328 Electrical Circuits and Measurements I	Major	4
	STAT 310 Intermediate Statistics	Major/WI	3	CME 280 Properties of Materials	Major	3
	PHYS 320 Computational Physics	Major	2	CME 281 Properties of Materials Laboratory	Major	1
	MGMT 334 Operations Management	Major/CAI	3	PHYS 340 Modern Physics	Major/WI	4
	General Education Course	GE Goal 5-10	3	STAT 321 Industrial Design or STAT 365 Experimental Design	Major	3
	GENI Elective	Major Elective	3	*NOTE: If you haven't yet, talk to advisor about post graduation plans.*		
	NOTE: Can take CME 300 and then CME 270 in Spring; or PHYS 350 and PHYS 345 in Spring.					
	Third-Year Fall Semester Credit Hour Total		**15**	**Third-Year Spring Semester Credit Hour Total**		**15**
Year 4	PHYS 455 Engineering Design Project	Major/OI	2	PHYS 455 Engineering Design Project	Major/OI	2
	CME 300 Thermodynamics or PHYS 350 Mechanics	Major	4	General Education Course	GE Goal 5-10	3
	CME 491A Engineering Seminar	Major	0	STAT 360 Regression Analysis	Major	3
	General Education Course	GE Goal 5-10	3	CME 491B Engineering Seminar	Major/OI	1
	GENI Elective	Major Elective	3	STAT 320 Statistical Quality Control or ECON 340 Quantitative Analysis	Major	3
	NOTE: Take Fundamental Engineering Exam before graduation.			CME 270 Dynamics or PHYS 345 Thermodynamics & Statistical Physics	Major	4
				NOTE: Apply for graduation.		
	Fourth-Year Fall Semester Credit Hour Total		**12**	**Fourth-Year Spring Semester Credit Hour Total**		**16**

Total Credit Hours (SH): 128

Winona State University
Four-Year Program Map

Created on 8/26/2022
Effective Fall 2022

Guide to 4 Year Major Maps

- 4 Year Major Maps are intended to show a recommended four-year pathway to a degree. Students must be full-time, college ready, and ready to declare a major to follow the map exactly as shown. Maps are only a sample; there may be other pathways that lead to completion of the degree in four years.
- Major Maps are NOT intended to take the place of meetings with advisors.
- Major Maps are NOT intended to take the place of the Degree Audit (DARs/uAchieve).

All courses listed on a major map will be labelled as one or more of the following:

GE Goal	General Education Goal Area	Indicates that the course meets one of the 10 General Education Goals
Gen Elec	General Elective	Indicates that the course does not meet a General Education, Major or Minor requirement but does count toward the degree
Major	Major Requirement	Indicates that the course meets a Major requirement
Major Elec	Major Elective	Indicates that the course counts toward the major as an elective, must be chosen from list of approved courses
Minor	Minor Requirement	Indicates that the course meets a Minor requirement
CAI	Critical Analysis Intensive	Indicates that the course counts as a Critical Analysis Intensive
OI	Oral Intensive	Indicates that the course counts as an Oral Intensive
WI	Written Intensive	Indicates that the course counts as a Written Intensive
PDW	Personal Development and Wellness	Indicates that the course counts as a Personal Development and Wellness Requirement

General Education Goal Areas:

		Minimum credits required
Goal 1	Communication	7 credits
Goal 2	Critical Thinking (Met with completion of all other goal areas)	--
Goal 3	Natural Science	16 credits
Goal 4	Mathematics	8 credits
Goal 5	History, Social/Behavioral Sciences	3 credits
Goal 6	Humanities and Fine Arts	3 credits
Goal 7	Human Diversity	3 credits
Goal 8	Global Perspective	3 credits
Goal 9	Ethic and Civic Responsibility	3 credits
Goal 10	People and the Environment	3 credits

Graduation Requirements:

- Minimum of 128 total credits (semester hours) required for Bachelors' Degree in Engineering
- Minimum of 46 General Education credits required
- Minimum of 40 Upper Division credits required
- Minimum of 30 Residence credits required in Junior/Senior years
- Minimum WSU cumulative grade point average of 2.5