Winona State University

Four-Year Program Map

Created on 1/7/2020
Effective Fall 2019

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 Introduction to Engineering	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	PHYS 340 Modern Physics	Major/WI	4
	PHYS 222 University Physics II	GE Goal 3/Major	4	MATH 313 Differential Equations	Major	3
	PHYS 232 University Physics IIB	Major	1	MATH 314 Linear Algebra and Differential Equations	Major	1
	CS 234 Algorithms and Problem Solving	Major	4	General Education Course	GE Goal 5-10	3
	CME 250 Statics	Major	3	CME 260 Mechanics of Materials	Major	3
				PHYS 328 Electrical Circuits and Measurements I	Major	4
	NOTE: A minimum 2.50 GPA is required overall.			*NOTE: Apply for admission to Engineering after completing MATH 312.*		
	Second-Year Fall Semester Credit Hour Total		**16**	**Second-Year Spring Semester Credit Hour Total**		**18**
Year 3	STAT 303 Engineering Statistics	Major	3	DSCI 210 Data Science	Major	3
	General Education Course	GE Goal 5-10	3	CME 280 Properties of Materials	Major	3
	CME 300 Thermodynamics or PHYS 350 Mechanics	Major	4	CME 281 Properties of Materials Laboratory	Major	1
	MGMT 334 Operations Management	Major/CAI	3	General Education Course	GE Goal 5-10	3
				CME 270 Dynamics or PHYS 345 Thermodynamics & Statistical Physics	Major	4
				GENI Elective	Major Elective	3
	NOTE: Can take CME 300 and then CME 270 in Spring; or PHYS 350 and PHYS 345 in Spring.			*NOTE: If you haven't yet, talk to advisor about post graduation plans.*		
	Third-Year Fall Semester Credit Hour Total		**13**	**Third-Year Spring Semester Credit Hour Total**		**17**
Year 4	PHYS 455 Engineering Design Project	Major/OI	2	STAT 321 Industrial Design of Experiments	Major	3
	PHYS 320 Computational Physics	Major	2	PHYS 455 Engineering Design Project	Major/OI	2
	CME 491A Engineering Seminar	Major	0	General Education Course	GE Goal 5-10	3
	STAT 310 Intermediate Statistics	Major/WI	3	STAT 360 Regression Analysis	Major	3
	STAT 320 Statistical Quality Control	Major	3	CME 491B Engineering Seminar	Major/OI	1
	General Education Course	GE Goal 5-10	3	GENI Elective	Major Elective	3
	NOTE: Take Fundamental Engineering Exam before graduation.			*NOTE: Apply for graduation.*		
	Fourth-Year Fall Semester Credit Hour Total		**13**	**Fourth-Year Spring Semester Credit Hour Total**		**15**

Total Credit Hours (SH): 128

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Four-Year Program Map

Created on 4/5/2016
Effective Fall 2016

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 fulltime, 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 System (DARs).

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	7 credits
Goal 4	Mathematics	3-4 credits
Goal 5	History, Social/Behavioral Sciences	9 credits
Goal 6	Humanities and Fine Arts	9 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 120 total credits (semester hours) required for Bachelors' Degree
- Minimum of 40 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 2.00; some programs require higher grade point averages