



Winona State University
Four-Year Program Map

Created on 5/24/2017
Effective Fall 2017

Program: Mathematics (BS MATH)
Emphasis (optional):

	Fall Semester			Spring Semester		
	Course	Requirement Met	SH	Course	Requirement Met	SH
Year 1	ENG 111 College Reading & Writing or CMST 191 or 192	GE Goal 1	3-4	MATH 213 Calculus II	Major	4
	MATH 212 Calculus I	GE Goal 4	4	Math 247 Discrete Mathematics	Major	3
	STAT 210 Statistics	Major/GE Goal 4	3	General Education Course	GE Goal 5	3
	General Education Course	GE Goal 3	3	ENG 111 College Reading & Writing or CMST 191 or 192	GE Goal 1	3-4
	OR 100 Orientation	Recommended	1	General Education Course	GE Goal 7	3
	NOTE:			NOTE:		
First-Year Fall Semester Credit Hour Total			14-15	First-Year Spring Semester Credit Hour Total		16-17
Year 2	MATH 242 Linear Algebra	Major	4	MATH 313 Differential Equations	Major/CAI	3
	MATH 312 Multivariable Calculus	Major/CAI	4	MATH 327 Foundations of Mathematics	Major/WI	4
	Applications of Math Elective*	Major	3	Applications of Math Elective*	Major	3
	General Education Course	GE Goal 6	3	DSCI 210 Data Science or CS 234 Algorithms and Problem Solving	Major	3-4
				Physical Development & Wellness	PDW	1
	NOTE: *There are a variety of courses that can be taken. Please refer to DARS to see a list of all courses offered.			NOTE: Students must earn 40 S.H. credits of 300 & 400 Level Courses.		
Second-Year Fall Semester Credit Hour Total			14	Second-Year Spring Semester Credit Hour Total		14-15
Year 3	Major Elective**	Major	3	MATH 337 Probability OR MATH 347 Number Theory	Major	3
	MATH 447 Abstract Algebra I (Writing Intensive) OR MATH 452 Advanced Calculus I (Writing Intensive)*** OR Major Elective **	Major/WI	3	MATH 447 Abstract Algebra I (Writing Intensive) OR MATH 448 Abstract Algebra II (Oral Intensive) OR MATH 452 Advanced Calculus I (Writing Intensive) OR MATH 453 Advanced Calculus II (Oral Intensive) ***	Major/WI/OI	3
	General Education Course	GE Goal 5	3	MATH 395 Professional Skills for Mathematics	Major	2
	General Education Course Lab	GE Goal 3	4	General Education Course	GE Goal 8	3
	General Education Course	GE Goal 9	3	General Education Course	GE Goal 6	3
	NOTE:** There are two different lists A & B that (3 S.H.) must be taken from each list. NOTE:*** Three of MATH 447, MATH 448, MATH 452 or MATH 453 required. These courses are offered on a three-semester cycle. If taking all four, one will count as an elective.			NOTE:		
Third-Year Fall Semester Credit Hour Total			16	Third-Year Spring Semester Credit Hour Total		14
Year 4	MATH 447 Abstract Algebra I (Writing Intensive) OR MATH 448 Abstract Algebra II (Oral Intensive) OR MATH 452 Advanced Calculus I (Writing Intensive) OR MATH 453 Advanced Calculus II (Oral Intensive) ***	Major WI/OI	3	MATH 447 Abstract Algebra I (Writing Intensive) OR MATH 448 Abstract Algebra II (Oral Intensive) OR MATH 452 Advanced Calculus I (Writing Intensive) OR MATH 453 Advanced Calculus II (Oral Intensive) *** OR Major Elective**	Major/WI/OI	3
	Major Elective**	Major	3	MATH 495 Communication of Independent Project	Major	1
	MATH 490 Independent Project^^	Major	2	Math 490 Independent Project	Major	1
	General Education Course	GE Goal 6	3	General Education Course^	GE Goal 3/5/6/7/8/9/10	3
	General Education Course	GE Goal 5	3	General Education Course	GE Goal 3/5/6/7/8/9/10	3
	Physical Development & Wellness	PDW	1	General Education Course	GE Goal 10	3
NOTE: ^^ 3 (S.H.) of Math 490 (Independent Project) required. This course must be arranged with a faculty advisor and may be broken up across semesters. Some faculty advisors prefer to start in third year. A summer internship between third and fourth years may also satisfy the requirement. Students should coordinate with their academic advisor.			NOTE: ^4 S.H. should be taken if DSCI 210 was taken instead of CS 234			
Fourth-Year Fall Semester Credit Hour Total			15	Fourth-Year Spring Semester Credit Hour Total		15

Total Credit Hours (SH): 120

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

Major Maps are not contracts. Winona State University reserves the right to make changes at any time, without prior notice, to programs, policies, procedures and information described in this major map. Students should consult the appropriate academic department or college for currently accurate program information.