



Winona State University  
**Four-Year Program Map**

Created on 6/13/2017  
 Effective Fall 2017

**Program:** Computer Science (MATH 115) (BS CSCS)  
**Emphasis (optional):** Computer Science Option

Fall Semester				Spring Semester		
	Course	Requirement Met	SH	Course	Requirement Met	SH
<b>Year 1</b>	CS 101 Exploring Creative Computing	GE Goal 4/Major	3	CS 234 Algorithms and Problem Solving I	Major	4
	MATH 115 College Algebra or higher	GE Goal 4	4	MATH 120 Precalculus or higher	GE Goal 4	4
	ENG 111 College Reading and Writing or CMST 191	GE Goal 1	3-4	CMST 191 Introduction to Public Speaking or ENG 111	GE Goal 1	3-4
	OR 100 Introduction to Higher Education	Recommended	1	General Education Course*	GE Goal 5-10	3
	General Education Course*	GE Goal 5-10	3	Physical Development & Wellness Course	PDW	1
NOTE: *Students need a total of 40 SH of general education courses that fulfill specific goal areas. To remain under 120 credits, choose courses that meet two goal areas.				NOTE: Students must earn a "C" or better in all major courses. A 2.50 GPA is required in the major and overall. Students are allowed to attempt CS courses at most 3 times (including withdraws).		
<b>First-Year Fall Semester Credit Hour Total</b>			<b>14-15</b>	<b>First-Year Spring Semester Credit Hour Total</b>		<b>15-16</b>
<b>Year 2</b>	CS 250 Algorithms and Problem Solving II	Major	4	CS 341 Data Structures*	Major/CAI	4
	CS 275 Mathematical Foundations of Algorithms	Major	4	CS 313, CS 375, CS 385**, or CS Elective***	Major	3-4
	MATH 212 Calculus	GE Goal 4/Major	4	CS 313, CS 375, CS 385**, or CS Elective***	Major	3-4
	General Education Course*	GE Goal 5-10	3	STAT 210 Statistics	Major	3
				General Education Course	GE Goal 5-10	3
NOTE: *Select general education courses that fulfill multiple goal areas.				NOTE: *CS 341 satisfies the math/critical analysis requirement. **CS 385 satisfies a writing intensive requirement. ***Students should take 2 courses from CS 313, 375, 385, 300-level elective this semester and the other 2 courses from this list in the following semester. Students review the DARS to find full list for CS Electives.		
<b>Second-Year Fall Semester Credit Hour Total</b>			<b>15</b>	<b>Second-Year Spring Semester Credit Hour Total</b>		<b>16-18</b>
<b>Year 3</b>	CS 410 Software Engineering*	Major/WI	3	CS 471 Object Oriented Design and Development*	Major/OI	3
	CS 313, CS 375, CS 385, or CS Elective**	Major	3-4	CS Elective	Major	3
	CS 313, CS 375, CS 385, or CS Elective*	Major	3-4	CS Elective	Major	3
	General Education Course*	GE Goal 5-10	3	General Education Course (Science Lab)	GE Goal 3	4
	General Education Course	GE Goal 5-10	3	General Education Course	GE Goal 5-10	3
NOTE: * CS 410 satisfies the second writing intensive requirement. **Students should take 2 courses from CS 313, 375, 385, 300-level elective this semester and the other 2 courses from this list in the previous semester. Students review the DARS to find full list for CS Electives.				NOTE: *CS 471 satisfies the oral intensive requirement. Students must complete 18 SH of 300-400 level CS courses with at least 12 SH beyond the core course requirements from WSU.		
<b>Third-Year Fall Semester Credit Hour Total</b>			<b>15-17</b>	<b>Third-Year Spring Semester Credit Hour Total</b>		<b>16</b>
<b>Year 4</b>	CS 405 Operating Systems	Major	3	CS 415 Principles of Programming Languages	Major	3
	CS 435 Theory of Computation	Major	3	CS Elective	Major	3
	CS Elective	Major	3	CS Elective	Major	3
	General Education Course	GE Goal 5-10	3	General Education Course	GE Goal 5-10	3
	General Education Course	GE Goal 5-10	3	Physical Development/Wellness Elective	PDW	1
NOTE:				NOTE: Students must have 120 credits to graduate.		
<b>Fourth-Year Fall Semester Credit Hour Total</b>			<b>15</b>	<b>Fourth-Year Spring Semester Credit Hour Total</b>		<b>13</b>

**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.