

## Winona State University Four-Year Program Map

## Program: Data Science Major (BS DSCI)

Emphasis (optional):

	Fall Semester			Spring Semester		
	Course	Requirement Met	SH	Course	Requirement Met	SH
	CMST 191 or 192 or ENG 111 College Reading and Writin	ig GE Goal 1	3-4	CMST 191 or 192 or ENG 111 College Reading and Writing	GE Goal 1	3-4
	MATH 140 or MATH 212	GE Goal 4/Major	3-4	DSCI 210 Data Science	Major	3
	STAT 210 Statistics	GE Goal 4/Major	3	STAT 310 Intermediate Statistics	Major/WI	3
	General Education Course	GE Goal 3/5/6/7/8/9/10	3	MATH 222 Data-Driven Mathematical Modeling	Major	3
	OR 100	Recommended	1	General Education Course	GE Goal 3/5/6/7/8/9/10	3
	NOTE: Remember that you can take courses that meet two goal	areas within GE GOALS 5-10.				
	First-Year Fall Semester Credit Hour Total		13-15	First-Year Spring Semester Credit Hour Total		15-16
ear 2	CS 234 Algorithms and Problem Solving I	Major	4	CS 250 Algorithms and Problem Solving II	Major	4
	DSCI 310 Data Summary and Visualization	Major	3	DSCI 325 Management of Structured Data	Major/CAI	3
	STAT 360 Regression Analysis	Major	3	General Education Course	GE Goal 3/5/6/7/8/9/10	3
	General Education Course (Lab)	GE Goal 3	4	General Education Course	GE Goal 3/5/6/7/8/9/10	3
		-		General Elective Course	Elective	3
				Second-Year Spring Semester Credit Hour Total Interdisciplinary Emphasis Major		
	Program (GEP) requirements, so choose courses in some of the	Goal Areas with this in mind.				
	Second-Year Fall Semester Credit Hour Total					
			14	· · ·		16
	Interdisciplinary Emphasis^	Major	3	Interdisciplinary Emphasis^	Major	3
	Interdisciplinary Emphasis^ Major Elective* or CS 385	Major/WI	3 3-4	Interdisciplinary Emphasis <sup>^</sup> DSCI 395 Professional Skill Development for Data Sciences	Major/OI	3 2
	Interdisciplinary Emphasis^ Major Elective* or CS 385 General Education Course	Major/WI GE Goal 3/5/6/7/8/9/10	3 3-4 3	Interdisciplinary Emphasis <sup>^</sup> DSCI 395 Professional Skill Development for Data Sciences Major Elective* or CS 385	Major/OI Major/WI	3 2 3-4
	Interdisciplinary Emphasis <sup>^</sup> Major Elective* or CS 385 General Education Course General Elective	Major/WI GE Goal 3/5/6/7/8/9/10 Elective	3 3-4 3 3	Interdisciplinary Emphasis <sup>A</sup> DSCI 395 Professional Skill Development for Data Sciences Major Elective* or CS 385 General Education Course	Major/OI Major/WI GE Goal 3/5/6/7/8/9/10	3 2 3-4 3
	Interdisciplinary Emphasis^ Major Elective* or CS 385 General Education Course	Major/WI GE Goal 3/5/6/7/8/9/10 Elective Elective	3 3-4 3 3 3 3	Interdisciplinary Emphasis <sup>^</sup> DSCI 395 Professional Skill Development for Data Sciences Major Elective* or CS 385	Major/OI Major/WI GE Goal 3/5/6/7/8/9/10 Elective	3 2 3-4 3 3
	Interdisciplinary Emphasis <sup>^</sup> Major Elective* or CS 385 General Education Course General Elective General Elective	Major/WI GE Goal 3/5/6/7/8/9/10 Elective 0 or above with the SAME prefix, ith your academic advisor. Cours ent. DSCI 326, DSCI 415, STAT 3 ared alternate years. *6 (S.H.) ele	3 3-4 3 3 3 e.g., res with a 335, and ective	Interdisciplinary Emphasis <sup>^</sup> DSCI 395 Professional Skill Development for Data Sciences Major Elective* or CS 385 General Education Course General Elective NOTE: Students must have 40 S.H. credits of 300 & 400 Level Cour only courses and are offered alternate years.	Major/OI Major/WI GE Goal 3/5/6/7/8/9/10 Elective	3 2 3-4 3 3
	Interdisciplinary Emphasis <sup>^</sup> Major Elective <sup>*</sup> or CS 385 General Education Course General Elective NOTE: <sup>^</sup> Interdisciplinary Emphasis (IE) are courses numbered 30 BIOL, ECON, FIN, etc. These should be chosen in consultation w DSCI, STAT, and CS prefix cannot be used to fulfill this requirem STAT 370 are Fall only courses. DSCI 326 and DSCI 415 are offi	Major/WI GE Goal 3/5/6/7/8/9/10 Elective 0 or above with the SAME prefix, ith your academic advisor. Cours ent. DSCI 326, DSCI 415, STAT 3 ared alternate years. *6 (S.H.) ele	3 3-4 3 3 3 e.g., res with a 335, and ective	Interdisciplinary Emphasis <sup>A</sup> DSCI 395 Professional Skill Development for Data Sciences Major Elective* or CS 385 General Education Course General Elective NOTE: Students must have 40 S.H. credits of 300 & 400 Level Cour	Major/OI Major/WI GE Goal 3/5/6/7/8/9/10 Elective	3 2 3-4 3 3 re Spring
	Interdisciplinary Emphasis <sup>^</sup> Major Elective <sup>*</sup> or CS 385 General Education Course General Elective MOTE: <sup>^</sup> Interdisciplinary Emphasis (IE) are courses numbered 30 BIOL, ECON, FIN, etc. These should be chosen in consultation w DSCI, STAT, and CS prefix cannot be used to fulfill this requirem STAT 370 are Fall only courses. DSCI 326 and DSCI 415 are offic credits are required for the major; refer to DARS to see which cla	Major/WI GE Goal 3/5/6/7/8/9/10 Elective 0 or above with the SAME prefix, ith your academic advisor. Cours ent. DSCI 326, DSCI 415, STAT 3 ared alternate years. *6 (S.H.) ele	3 3-4 3 3 3 e.g., res with a 335, and ective	Interdisciplinary Emphasis <sup>^</sup> DSCI 395 Professional Skill Development for Data Sciences Major Elective* or CS 385 General Education Course General Elective NOTE: Students must have 40 S.H. credits of 300 & 400 Level Cour only courses and are offered alternate years.	Major/OI Major/WI GE Goal 3/5/6/7/8/9/10 Elective	3 2 3-4 3 3 re Spring
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ear 4	Interdisciplinary Emphasis <sup>^</sup> Major Elective <sup>*</sup> or CS 385 General Education Course General Elective General Elective NOTE: <sup>^</sup> Interdisciplinary Emphasis (IE) are courses numbered 30 BIOL, ECON, FIN, etc. These should be chosen in consultation w DSCI, STAT, and CS prefix cannot be used to fulfill this requirem STAT 370 are Fall only courses. DSCI 326 and DSCI 415 are offic credits are required for the major; refer to DARS to see which cla <b>Third-Year Fall Semester Credit Hour Total</b> Interdisciplinary Emphasis <sup>^</sup>	Major/WI GE Goal 3/5/6/7/8/9/10 Elective O or above with the SAME prefix, ith your academic advisor. Cours ent. DSCI 326, DSCI 415, STAT s ered alternate years. *6 (S.H.) ele sses are offered.	3.4 3.4 3 3.2 e.g., rese with a 335, and ecctive 15-16 3	Interdisciplinary Emphasis <sup>^</sup> DSCI 395 Professional Skill Development for Data Sciences Major Elective* or CS 385 General Education Course General Elective NOTE: Students must have 40 S.H. credits of 300 & 400 Level Cour only courses and are offered alternate years. Third-Year Spring Semester Credit Hour Total Interdisciplinary Emphasis <sup>^</sup>	Major/OI Major/WI GE Goal 3/5/6/7/8/9/10 Elective ses. DSCI 330 and DSCI 425 ar Major	3 2 3-4 3 3 re Spring 14-15 3
ear 4	Interdisciplinary Emphasis <sup>^</sup> Major Elective* or CS 385 General Education Course General Elective General Elective NOTE: <sup>^</sup> Interdisciplinary Emphasis (IE) are courses numbered 30 BIOL, ECON, FIN, etc. These should be chosen in consultation w DSCI, STAT, and CS prefix cannot be used to fulfill this requirem STAT 370 are Fall only courses. DSCI 326 and DSCI 415 are offic credits are required for the major; refer to DARS to see which cla <b>Third-Year Fall Semester Credit Hour Total</b> Interdisciplinary Emphasis <sup>^</sup> DSCI 488 or 492	Major/WI GE Goal 3/5/6/7/8/9/10 Elective 0 or above with the SAME prefix, ith your academic advisor. Cours ent. DSCI 326, DSCI 415, STAT s red alternate years. *6 (S.H.) elesses are offered. Major Major	3           3-4           3	Interdisciplinary Emphasis <sup>A</sup> DSCI 395 Professional Skill Development for Data Sciences Major Elective* or CS 385 General Education Course General Elective NOTE: Students must have 40 S.H. credits of 300 & 400 Level Cour only courses and are offered alternate years. Third-Year Spring Semester Credit Hour Total Interdisciplinary Emphasis <sup>A</sup> DSCI 495 Communication of Captones Outcomes	Major/OI Major/WI GE Goal 3/5/6/7/8/9/10 Elective ses. DSCI 330 and DSCI 425 ar Major Major	3 2 3-4 3 3 re Spring 14-15 3 1
ear 4	Interdisciplinary Emphasis <sup>^</sup> Major Elective* or CS 385 General Education Course General Elective NOTE: <sup>^</sup> Interdisciplinary Emphasis (IE) are courses numbered 30 BIOL, ECON, FIN, etc. These should be chosen in consultation w DSCI, STAT, and CS prefix cannot be used to fulfill this requirem STAT 370 are Fall only courses. DSCI 326 and DSCI 415 are offic credits are required for the major; refer to DARS to see which cla <b>Third-Year Fall Semester Credit Hour Total</b> Interdisciplinary Emphasis <sup>^</sup> DSCI 488 or 492 Major Elective* or CS 385	Major/WI GE Goal 3/5/6/7/8/9/10 Elective O or above with the SAME prefix, ith your academic advisor. Cours ent. DSCI 326, DSCI 415, STAT s red alternate years. *6 (S.H.) ele sses are offered. Major Major Major	3           3-4           3	Interdisciplinary Emphasis <sup>^</sup> DSCI 395 Professional Skill Development for Data Sciences Major Elective* or CS 385 General Education Course General Elective NOTE: Students must have 40 S.H. credits of 300 & 400 Level Cour only courses and are offered alternate years. <b>Third-Year Spring Semester Credit Hour Total</b> Interdisciplinary Emphasis <sup>^</sup> DSCI 495 Communication of Captones Outcomes General Education Course	Major/OI Major/WI GE Goal 3/5/6/7/8/9/10 Elective ses. DSCI 330 and DSCI 425 ar Major Major/OI GE Goal 3/5/6/7/8/9/10	3 2 3-4 3 3 re Spring 14-15 3 1 3 1 3
ear 4	Interdisciplinary Emphasis <sup>A</sup> Major Elective* or CS 385 General Education Course General Elective NOTE: <sup>A</sup> Interdisciplinary Emphasis (IE) are courses numbered 30 BIOL, ECON, FIN, etc. These should be chosen in consultation w DSCI, STAT, and CS prefix cannot be used to fulfill this requirem STAT 370 are Fall only courses. DSCI 326 and DSCI 415 are offic credits are required for the major; refer to DARS to see which cla Third-Year Fall Semester Credit Hour Total Interdisciplinary Emphasis <sup>A</sup> DSCI 488 or 492 Major Elective* or CS 385 General Education Course PDW (Personal Development/Wellness) General Elective (if take only 2 credits in PDW)	Major/WI GE Goal 3/5/6/7/8/9/10 Elective 0 or above with the SAME prefix, ith your academic advisor. Cours ent. DSCI 326, DSCI 415, STAT 3 ered alternate years. *6 (S.H.) ele sses are offered. Major Major Major Major Major/WI GE Goal 3/5/6/7/8/9/10 Required Elective	3           3-4           3           3           3           3           9           1           3           2-3           1	Interdisciplinary Emphasis <sup>^</sup> DSCI 395 Professional Skill Development for Data Sciences Major Elective* or CS 385 General Education Course General Elective NOTE: Students must have 40 S.H. credits of 300 & 400 Level Cour only courses and are offered alternate years. <b>Third-Year Spring Semester Credit Hour Total</b> Interdisciplinary Emphasis <sup>^</sup> DSCI 495 Communication of Captones Outcomes General Education Course General Elective Course	Major/OI Major/WI GE Goal 3/5/6/7/8/9/10 Elective ses. DSCI 330 and DSCI 425 ar Major Major/OI GE Goal 3/5/6/7/8/9/10 Elective	3 2 3-4 3 3 re Spring 14-15 3 1 1 3 3 3
'ear 4	Interdisciplinary Emphasis <sup>^</sup> Major Elective* or CS 385 General Education Course General Elective NOTE: ^Interdisciplinary Emphasis (IE) are courses numbered 30 BIOL, ECON, FIN, etc. These should be chosen in consultation w DSCI, STAT, and CS prefix cannot be used to fulfill this requirem STAT 370 are Fall only courses. DSCI 326 and DSCI 415 are offic credits are required for the major; refer to DARS to see which clan Third-Year Fall Semester Credit Hour Total Interdisciplinary Emphasis <sup>^</sup> DSCI 488 or 492 Major Elective* or CS 385 General Education Course PDW (Personal Development/Wellness)	Major/WI GE Goal 3/5/6/7/8/9/10 Elective 0 or above with the SAME prefix, ith your academic advisor. Cours ent. DSCI 326, DSCI 415, STAT 3 ered alternate years. *6 (S.H.) ele sses are offered. Major Major Major Major Major/WI GE Goal 3/5/6/7/8/9/10 Required Elective	3           3-4           3           3           3           3           9           1           3           2-3           1	Interdisciplinary Emphasis <sup>A</sup> DSCI 395 Professional Skill Development for Data Sciences Major Elective* or CS 385 General Education Course General Elective NOTE: Students must have 40 S.H. credits of 300 & 400 Level Cour only courses and are offered alternate years. <b>Third-Year Spring Semester Credit Hour Total</b> Interdisciplinary Emphasis <sup>A</sup> DSCI 495 Communication of Captones Outcomes General Education Course General Elective Course General Elective Course	Major/OI Major/WI GE Goal 3/5/6/7/8/9/10 Elective ses. DSCI 330 and DSCI 425 ar Major Major/OI GE Goal 3/5/6/7/8/9/10 Elective Elective	3 2 3-4 3 3 re Spring 14-15 3 1 1 3 3 3 3 3

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 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	Indicates that the course meets one of the 10
	Area	General Education Goals
Gen	General Elective	Indicates that the course does not meet a
Elec		General Education, Major or Minor requirement
		but does count toward the degree
Major	Major Requirement	Indicates that the course meets a Major
		requirement
Major	Major Elective	Indicates that the course counts toward the
Elec		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	Indicates that the course counts as a Critical
	Intensive	Analysis Intensive
01	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	Indicates that the course counts as a Personal
	and Wellness	Development and Wellness Requirement

General Education Goal Areas:

		Minimum required	credits
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.