

# Professional Option

Freshman Year	Credits	
	Fall	Spring
CSCI 127 - Joy and Beauty of Data	4	
M 171Q - Calculus I	4	
WRIT 101W - College Writing I	3	
University Core and Electives	3	
CSCI 132 - Basic Data Structures and Algorithms		4
M 172 - Calculus II		4
University Seminar Core		3
University Core and Electives		4
Year Total:	14	15

Sophomore Year	Credits	
	Fall	Spring
CSCI 215CS - Social & Ethical Issues in Computer Science	3	
CSCI 246 - Discrete Structures	3	
WRIT 221 - Intermediate Tech Writing	3	
Science Elective	4	
University Core	3	
CSCI 112 - Programming with C I		3
CSCI 232 - Data Structures and Algorithms		4
Math, Statistics, or Probability Elective		3
Science Elective		3
University Core		3
Year Total:	16	16

Junior Year	Credits	
	Fall	Spring
ESOF 322 - Software Engineering	3	
CSCI 366 - Computer Systems	3	
Upper Division Elective Choices From Below	3	
CS or Related Electives	6	
CSCI 305 - Concepts/Programming Languages		3
CSCI 338 - Computer Science Theory		3
Upper Division Elective Choices From Below		6
CS or Related Electives		3
Year Total:	15	15

Senior Year	Credits	
	Fall	Spring
Upper Division Elective Choices From Below	6	
CS or Related Electives	3	
Math, Statistics, or Probability Elective	3	
Free Electives	3	
CSCI 468 - Compilers		4
CSCI 476 - Computer Security		3
CSCI 481 - Program Assessment		0
Upper Division Elective Choices From Below		4
Free Electives		3
Year Total:	15	14

**Total Program Credits: 120**

A minimum of 120 credits is required for graduation; 42 of these credits must be in courses numbered 300 and above.

## Upper Division Elective Choices

CSCI 331	Web Development	3
CSCI 347	Data Mining	3
CSCI 351	Systems Administration	3
CSCI 432	Advanced Algorithm Topics	3
CSCI 440	Database Systems	3
CSCI 441	Computer Graphics	3
CSCI 442	Comp Vision: Robot Vision	3
CSCI 443	User Interface Design	3
CSCI 445	Human Computer Interaction	3
CSCI 446	Artificial Intelligence	3
CSCI 447	Machine Learning	3
CSCI 451	Computational Biology	3
CSCI 455	Embedded Systems: Robotics	3
CSCI 460	Operating Systems	3
CSCI 466	Networks	3
CSCI 495	Field Work/Practicum	1
EGEN 310R	Multidisciplinary Engineering Design	3
EIND 422	Introduction to Simulation	3
ESOF 422	Advanced Software Engineering: Cybersecurity Practices	3
ESOF 423	Software Engineering Applications	3

A minimum of 120 credits is required for graduation; 42 of these credits must be in courses numbered 300 and above. For more detailed requirements, please consult the Professional Option Graduation Worksheet, located at [www.cs.montana.edu/forms.html](http://www.cs.montana.edu/forms.html) (<http://www.cs.montana.edu/forms.html>).