Applied Mathematics Option

Freshman Year	Credits	
	Fall	Spring
CLS 101US - Knowledge and Community or COMX 111US - Introduction to Public Speaking	3	
M 171Q - Calculus I or M 181Q - Honors Calculus I	4	
PHSX 220 - Physics I with Calculus**	4	
University Core and Electives	4	
WRIT 101W - College Writing I		3
M 172 - Calculus II or M 182 - Honors Calculus II		4
PHSX 222 - Physics II with Calculus**		4
University Core and Electives		4
Year Total:	15	15

Sophomore Year	Credits	
	Fall	Spring
M 221 - Introduction to Linear Algebra	3	
M 273 - Multivariable Calculus or M 283 - Honors Multivariable Calculus	4	
University Core and Electives	8	
M 274 - Introduction to Differential Equation or M 284 - Honors Introduction to Differential Equations		4
M 242 - Methods of Proof		3
University Core and Electives		8
Year Total:	15	15

Junior Year	Credits	
	Fall	Spring
M 383 - Introduction to Analysis I	3	
Math or Stat Elect (See List Below)	6	
University Core and Electives	6	
M 384 - Introduction to Analysis II		3
M 386R - Software Applications in Mathematics		3
Math or Stat Elect (See List Below)		3
University Core and Electives		6
Year Total:	15	15

Senior Year	Credits	
	Fall	Spring
M 441 - Numerical Linear Algebra & Optimization	3	
Math or Stat Elect (See List Below)	3	
University Core and Electives	9	
Math or Stat Elect (See List Below)		6
University Core and Electives		9
Year Total:	15	15
Total Program Credits:		**120**

Math or Stat Electives *

M 333	Linear Algebra	3
M 348	Techniques of Applied Math I	3
M 349	Techniques of Applied Mathematics II	3
M 362	Linear Optimization	3
M 430	Mathematical Biology	3
M 431	Abstract Algebra I	3
M 442	Numerical Solution of Differential Equations	3
M 450	Applied Mathematics I	3
M 451	Applied Mathematics II	3
M 454	Introduction of Dynamical Systems I	3
M 455	Introduction to Dynamical Systems II	3
M 472	Introduction to Complex Analysis	3
M 476	Introduction to Topology	3
STAT 332	Statistics for Scientists and Engineers	3
STAT 337	Intermediate Statistics with Introduction to Statistical Computing	3
STAT 421	Probability Theory	3
STAT 422	Mathematical Statistics	3

* At least nine credits must be 400 level.

** May be replaced with another mathematical application area with advisor approval.

A minimum of 120 credits is required for graduation; 42 of these credits must be in courses numbered 300 and above. Core 2.0 must be completed for graduation.

Accelerated M.S. Plan

The Accelerated M.S. Program (AMSP) is designed to provide MSU undergraduates a path to earning both the B.S. and the M.S. in Mathematics in a total of five years. Undergraduate students earning a B.S. in Mathematics at Montana State University may accelerate their program through any combination of Advanced Placement Credit, transfer credit, and higher semester credit loads so that they may receive their B.S. degree after four years and their M.S. degree after the fifth year. The undergraduate student can complete specific graduate level course work during year 4 of the undergraduate program. These courses can be **reserved for graduate credit** towards the M.S. degree. With careful planning by the student and the academic advisor, this can compress the time required to fulfill requirements of both the B.S. and M.S. degrees to a total of five years. The M.S. degree is typically a non-thesis degree (course work and exams only), and **all M.S. requirements described above in the Non-Thesis Plan must be fulfilled,** unless otherwise approved by the student's graduate committee. It is essential that student interested in the accelerated M.S. plan begin discussions with their undergraduate advisor no later than freshman year. To learn more about the AMSP, please visit http://catalog.montana.edu/graduate/letters-science/mathematical-sciences/ms-mathematics/