

**Bachelor in Science with Major in Mathematics
Concentration in Teaching
(For Students entering in Fall 2008)**

Freshman Year / Fall Semester	Cr.	Freshman Year / Spring Semester	Cr.
___ 92.131 Calculus I	4	___ 92.132 Calculus II	4
___ . ___ Free Elective	3	___ 92.321 Discrete Structures I	3
___ . ___ Science	3	___ . ___ Science	3
___ . ___ Science Lab	1	___ . ___ Science Lab	1
___ 42.101 (Gen. Ed.) College Writing I	<u>3</u>	___ 42.102 (Gen. Ed.) College Writing II	<u>3</u>
	14		14

Sophomore Year / Fall Semester	Cr.	Sophomore Year / Spring Semester	Cr.
___ 92.231 Calculus III	4	___ 92.236 Differential Equations	3
___ 92.221 Linear Algebra I	3	___ 92.222 Linear Algebra II	3
___ . ___ Science	3	___ . ___ Science	3
___ . ___ Science Lab	1	___ . ___ Science Lab	1
___ 42.229 Essay Writing for Non-English majors	<u>3</u>	___ . ___ (Gen. Ed.) AH	3
	14	___ . ___ (Gen. Ed.) SS	<u>3</u>
			16

Junior Year / Fall Semester	Cr.	Junior Year / Spring Semester	Cr.
___ 92. ___ Analysis	3	___ 92. ___ Analysis	3
___ 92. ___ Probability/Statistics	3	___ 92.300/400 Math Elective	3
___ . ___ (Gen. Ed.) AH	3	___ . ___ Concentration Elective	3
___ . ___ (Gen. Ed.) SS	3	___ . ___ (Gen. Ed.) AH	3
___ . ___ Computing Elective	<u>3(4)</u>	___ . ___ (Gen. Ed.) SS	3
	15(16)	___ 92.474 Senior Seminar I	<u>1</u>
			16

Senior Year / Fall Semester	Cr.	Senior Year / Spring Semester	Cr.
___ 92.420/520 Math. Problem Solving	3	___ 92.300/400 Math Elective	3
___ 92.300/400 Math Elective	3	___ . ___ Science Elective	3
___ . ___ Concentration Elective	3	___ . ___ Free Elective	3
___ 92.475 Senior Seminar II	3	___ . ___ Free Elective	3
___ . ___ Free Elective	<u>3</u>	___ . ___ Free Elective	<u>3</u>
	15		16

Minimum total credits for graduation = 120

Consult the yellow pages of the *Schedule of Classes* booklet regarding General Education (Gen. Ed.) requirements.

*See your advisor for other courses which may meet this requirement.

Course selections are subject to restrictions. See reverse side for additional information.

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Notes:

No more than 60 Math credits can be counted towards the degree.
Preparation for Calculus (92.127) cannot be used as an elective.
Introduction to Data Analysis (92.363) cannot be used as a Math Elective.

Mathematics requirements: A minimum of 46 credits in the Mathematics Department, including:
92.131, 92.132, 92.231 (Calculus I-III);
92.221, 92.222 (Linear Algebra I,II);
92.234, 92.236 (Differential Equations);
92.321 or 92.322 (Discrete Structures I or II);
one basic analysis course (92.305, 92.411, 92.501, 92.503);
one additional analysis course not used to fulfill another requirement (92.301, 92.305, 92.306, 92.322, 92.362, 92.411, 92.412, 92.413, 92.421, 92.420, 92.442, 92.450, 92.520);
one course in probability and statistics (92.385, 92.386, 92.486);
92.474 and 92.475 (Senior Seminar I and II);
Two mathematics electives at 300, 400 or 500 level, if prerequisites are met.

Note: A student may not take both 92.305 and 92.503 to satisfy the two-course analysis requirement. A student who uses 92.322 (Discrete Structures II) to satisfy the discrete structures requirement may not use it to satisfy the analysis requirement.

Two mathematics/concentration electives, at least two from the following list:
92.410 Computers & Calculators in the Classroom 92.427 Geometry,
92.413 Number Theory 92.435 History of Mathematical Science
92.421 Abstract Algebra

Concentration courses may be selected from Mathematics or from other departments (with signed permission of the Mathematics Undergraduate Coordinator or Department Chair).

Computing Requirement: 91.101 (Computing I) or 92.576 (Statistical Programming Using SAS) or another computer programming class as approved by the Undergraduate Coordinator or Department Chair.

Writing Requirement: 42.229 (Essay Writing for Non-English Majors). If a student has completed other courses with substantial writing requirements, he/she can petition to have that work satisfy the mathematics writing requirement.

Bachelor of Science Requirements: A minimum of 74 credits and 20 courses from the offerings of science and mathematics; four science lecture courses with co-requisite labs (2 from each of two Math/Science departments; or 4 from one Math/Science department; or 3 from Physics and 1 from the College of Engineering; or 2 from Physics and 2 from any one department in the College of Engineering).

General Education Electives must include at least 6 courses:
3 in Arts & Humanities (AH) and 3 in Social Sciences (SS); one course must satisfy the Diversity (D) requirement and one the Ethics (E) requirement. No more than two courses from a single department can be used to satisfy these Gen. Ed. requirements. Math/Science Gen. Ed. requirements are fulfilled by the major's courses.

The Teaching Concentration does not give students certification to teach mathematics. The requirements for certification to teach vary from state to state. The licensure to teach mathematics usually involves three parts: a bachelors degree in mathematics or the equivalent, courses in education and state exams. Therefore, we strongly advise students considering a teaching career to see their departmental advisor and to contact the UML Graduate College of Education to obtain information on the credentialing requirements for many states, as well as information on the Massachusetts Tests for Educator Licensure (MTEL). The courses required in the Teacher Option prepare students to take and pass these exams.

Advice to Students: If you plan any deviations from this sample program of study, use an Academic Petition signed by the Mathematics Department Chair to receive written permission. Keep a copy of any signed Academic Petitions for your own files.