

**Bachelor of Science with Major in Mathematics
Concentration in Applied/Computational Mathematics
(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
___ 91.101 Computing I	3	___ 92.321 Discrete Structures I(see p2)	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. . . Differential Equations (234 or 236)	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 Writing Requirement	<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.
___ 92.301 Intro Applied Math I	3	___ 92.362 Numerical Analysis I	3
___ 92. . . Analysis Elective	3	___ 92. . . Analysis Elective	3
___ 92. . . Prob/Statistics Elective	3	___ 92.3/400 Math Elective	3
___ . . . (Gen Ed) AH	3	___ . . . (Gen Ed) AH	3
___ . . . (Gen Ed) SS	<u>3</u>	___ . . . (Gen Ed) SS	3
	15	___ 92.375 Senior Seminar I	<u>1</u>
			16

Senior Year / Fall Semester	Cr.	Senior Year / Spring Semester	Cr.
___ 92. . . Math Elective	3	___ . . . Science Elective	3
___ 92.3/400 Concentration Elective	3	___ 92.3/400 Math Elective	3
___ . . . Free 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		15

Minimum total credits = 120

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

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 or 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); one course in probability and statistics (92.385, 92.386, 92.486); 92.474 and 92.475 (Senior Seminar I and II); three 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.

Concentration Electives: 92.301, 92.362 and one course from the following list:

92.302 Intro to Applied Math II, 92.305 Real Analysis I,
92.322 Discrete Structures II (unless used to satisfy the discrete structures requirement),
92.411 Complex Variables I, 92.448 Mathematics of Signal Processing,
92.450 Mathematical Modeling, 92.454 Numerical Analysis II.
Substitutions by permission.

Computing Requirement: 91.101 (Computing I)

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.

Students with a joint major in Computer Science should take 42.220 (Oral and Written Communication for CS Majors) rather than 42.229.

Bachelor of Science Requirements: A minimum of 74 credits and 20 courses from the offerings of science and mathematics; four science lecture courses with corequisite 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.**

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