

# BA: Mathematics (120 S.H. required to complete the degree)

Name: \_\_\_\_\_ Adviser: \_\_\_\_\_



## General Education Requirements (43-44 S.H.)

<b>COMMUNICATION SKILLS (3 S.H.)</b> Choose one of the following: COM 160 Public Speaking, COM 161 Decision Making in Groups, COM 162 Interpersonal Communication <b>or</b> COM 163 Introduction to Communication Skills		
COM:	3	
<b>WRITING INTENSIVE (W)</b> All students must complete at least one writing intensive course. W courses can be found in several disciplines. The credits will be counted in the discipline associated with the course. <i>NOTE: WRT 101 does not satisfy the writing intensive requirement.</i>		
Course:	Y/N	
<b>FOREIGN LANGUAGE</b> All math majors must complete a foreign language requirement. This may be done by completing a language at an elementary II level or above. Students who have completed three years of language in high school with at least a C average have satisfied this requirement. (For more info, click the link above.)		
Foreign Language Requirement Met?	Y / N	
<b>HUMANITIES (15 S.H.)</b> Including 3 of 6 categories: Fine and Applied Arts ( <i>NOTE: only one studio course accepted toward minimum</i> ), Literature, History, Humanistic Studies, Philosophy and Foreign Language. <b>NOTE: For foreign language courses you must complete Elementary II or higher before counting Elementary I as Humanities credit.</b>		
Elective:	3	
Elective:	3	
Elective:	3	
Elective:	3	
Elective:	3	
<b>SOCIAL AND BEHAVIORAL SCIENCES (12 S.H.)</b> Courses that satisfy this requirement can be found in Social Sciences (Anthropology, Economics, Political Science, Social Sciences, and Sociology), Non-Western Cultures, and Psychology. <i>You must select courses from at least 2 of the 3 main areas: Social Sciences, Psychology and Non-Western Cultures.</i>		
Elective:	3	
Elective:	3	
Elective:	3	
Elective:	3	
<b>NATURAL SCIENCES, MATHEMATICS &amp; COMPUTER SCIENCE (11-12 S.H.)</b> Students must complete one lab Science and the math and computer Science courses as specified for this category. <i>NOTE: MAT 100 does not satisfy this requirement.</i>		
Lab Science:	4	
MAT 181 Calculus I or MAT 171 Calculus with Precalculus II (must take MAT 170 before MAT 171 counts as credit)**	4	
CS 140 Introduction to Programming or CS 143 Visual BASIC	3-4	
<b>HEALTH PROMOTION AND EXERCISE SCIENCES (2 S.H.)</b>		
HPX 177 Fitness for Life — Lecture	1	
HPX 177 Fitness for Life — Activity	1	

\*Math Majors must earn a C or better.  
\*\*Math Majors must receive a B or better.

## Major Requirements (45 S.H.)

MAT 150 Mathematics Seminar I	.5	
MAT 151 Mathematics Seminar II	.5	
MAT 141 Foundational Discrete Mathematics *	3	
MAT 182 Calculus II *	4	
MAT 185 Introduction to Symbolic Computations	3	
MAT 207 Proofs *	3	
MAT 222 Introductory Statistics	3	
MAT 272 Introduction to Linear Algebra *	3	
MAT 281 Calculus III *	4	
MAT 282 Differential Equations	3	
MAT 332 Introduction to Applied Mathematics *	3	
MAT 375 Algebraic Structures *	3	
MAT 383 Introduction to Mathematical Analysis *	3	
MAT 453 - Senior Seminar Experience	3	
One Course which completes a sequence in Analysis, Algebra or Applied Math:	3	
One elective from the Department's Approved List	3	
<b>A YEAR SEQUENCE FROM ONE OF THE FOLLOWING</b> (may also be used to satisfy general education requirements) BIO 103-104, CHE 110-111 or ECO 211-213 or PHY 110-111 <b>(6-8 S.H.)</b>		
Sequence Course #1:	3-4	
Sequence Course #2:	3-4	
<b>FREE ELECTIVES (23-26 S.H.)</b>		
Elective:		
Elective:		
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Elective:		
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Elective:		
Elective:		

**Free electives offer an opportunity to complete a minor, study a second language, study abroad, or participate in an internship. Make a plan.**

**NOTES**

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## Four-Year Plan This is a sample sequence of courses. Other combinations are possible.



Prerequisites are in parentheses; see catalog for details. **Class standing by credit:** Freshman: 0-29 credits; Sophomore: 30-59 credits; Junior: 60-89 credits; Senior: 90+ credits

SEMESTER 1 (16.5 S.H.)		SEMESTER 2 (16.5-17.5 S.H.)		
FIRST YEAR (30 S.H.)	WRT 101 Composition I	3	Gen Ed: Humanities Writing Intensive	3
	MAT 181 Calculus I (MAT 133 <b>or</b> equivalent placement exam) <b>or</b> MAT 171 Calculus with Precalculus I (placement into gen ed math and must be taken with MAT 171 to receive credit)	4	MAT 182 Calculus II (MAT 181 <b>or</b> appropriate placement) <b>or</b> MAT 171 Calculus with Precalculus II (MAT 170)	4
	Gen Ed: Communication Skills	3	CS 140 Introduction to Programming (MAT 100 or appropriate placement) <b>or</b> CS 143 Visual BASIC (MAT 100 or appropriate placement)	3
	Gen Ed: Humanities (if required)	3	Gen Ed: Humanities (if required)	3
	MAT 150 Mathematics Seminar I (declared major in Math)	.5	MAT 151 Mathematics Seminar II (MAT 150)	.5
	MAT 141 Foundational Discrete Mathematics (MAT 100 with a grade $\geq$ B or appropriate placement)	3	MAT 207 Proofs (MAT 141 with a grade $\geq$ C)	3
SEMESTER 3 (16 S.H.)		SEMESTER 4 (14 S.H.)		
SECOND YEAR (29-31 S.H.)	MAT 185 Introduction to Symbolic Computations (MAT 171 or MAT 181 and CS 140 or CS 143)	3	MAT 222 Introductory Statistics (MAT 171 with a grade $\geq$ C or MAT 181 with a grade $\geq$ C)	3
	MAT 272 Introduction to Linear Algebra (MAT 182)	3	MAT 282 Ordinary Differential Equations (MAT 182)	3
	MAT 281 Calculus III (MAT 182 with a grade $\geq$ C or MAT 181/171 with a grade $\geq$ B)	4	MAT 375 Algebraic Structures (MAT 272 with a grade $\geq$ C)	3
	Gen Ed: Social & Behavioral Sciences	3	HPX177 Fitness for Life	2
	Gen Ed: Humanities	3	Gen Ed Social & Behavioral Sciences	3 - 4
SEMESTER 5 (16 S.H.)		SEMESTER 6 (16 S.H.)		
THIRD YEAR (30-32 S.H.)	MAT 332 Introduction to Applied Mathematics (MAT 222 and 272 with a grade $\geq$ C and MAT 272 with a grade $\geq$ C)	3	MAT 467 Topics in Mathematics (MAT 332, MAT 375, or MAT 383 with a grade $\geq$ C, as appropriate to the topic determined by the department)	3
	Science Sequence I	4	Science Sequence II	4
	Gen Ed Humanities	3	MAT 383 Introduction to Analysis (MAT 207 & 182)	3
	Gen Ed: Social & Behavioral Sciences	3	Free Elective	3
	Free Elective	3	Free Elective	3
SEMESTER 7 (12 S.H.)		SEMESTER 8 (12 S.H.)		
FOURTH YEAR (34 S.H.)	MAT 453 Senior Seminar Experience	3	Approved Math Elective (prerequisites vary, see catalog)	3
	Approved Math Sequence Elective (prerequisites vary, see catalog)	3	Free Elective	3
	Free Elective	3	Free Elective	3
	Free Elective	3	Free Elective	3

The number of Free Electives available will vary based on your initial math & writing placement tests. MAT 100 and WRT 101 if required, count as elective credit.

### Approved Electives:

- MAT 250 Mathematical Modeling (MAT 182)
- MAT 251 Posing & Solving Problems in Mathematics (MAT 182)
- MAT 363 History of Mathematics (MAT 182)
- MAT 298 Faculty Developed Study (requires approval)

- MAT 299 Student Developed Study (requires approval)
- MAT 342 Topics in Geometry (MAT 242)
- MAT 351 Independent Study (requires approval)
- MAT 359 Introduction to Theory & Computation (CS/MAT 165 and MAT 171 or MAT 181)