

BACHELOR OF SCIENCE: New Curriculum 2009/2010
MAJOR: MATHEMATICS; CONCENTRATION: BIOMATHEMATICS

FRESHMAN YEAR		F	S
MATH 231, 232	Calculus I, II	4	4
PE OPT	2-100 Level Courses	1	1
or			
HE 101	Health	3	
ENG 104, 105	Composition	3	3
BIO 111 & BIOL111	Gen Biology w Lab	4	
BIO 112 & BIOL112	Gen Biology w Lab		4
HIST 101, 102	History of Civilization	3	3
² UNIV 100	University Success		2
Totals		15-17	17

SOPHOMORE YEAR

BIO 114	Intro Marine/Env Sci	2	
MATH 233	Calculus III	4	
MATH 303W	Set Theory & Logic		3
ENG 205	World Literature I	3	
or			
ENG 206	Literature of Science	3	
ART 206	Art Appreciation		3
or			
MUS 205	Music Appreciation		3
⁵ SS OPT	Social Science Option	3	
BIO 202	Elem Biostatistics	3	
BIO 318	Genetics w Lab		4
CSC 118	Programming Fund		3
CSC 118	Programming Fund Lab		1
Totals		15	14

JUNIOR YEAR

³ FORN LNG	Foreign Lang Option	3	3
MATH 355	Prob. & Statistics		3
MATH 331	Lin. Alg. & Matrix Thry.	3	
MATH 368	Ordinary Differential Eqs.	3	
MATH 321W	Modern Geometry		3
SPCH 301	Speech Arts	3	
MATH430	Math Modeling I		3
BIO 423	Ecology w Lab	4	
Totals		16	12

SENIOR YEAR

BIO 424	Marine Biology w Lab		4
MATH 311W	Abstract Algebra I	3	
MATH 351	Advanced Calculus	3	
MATH 403	Experimental Research		3
MATH 451	General Topology		3
PHIL 301	Intro. to Philosophy		3
or			
PHIL 416	Logic		3
ELEC	General Elective	3	
⁴ MATH ELEC	Mathematics Elective	3	
¹ SCI OPT	Science Option	4/5	
Totals		16-17	16

TOTAL HOURS 121-124

1. See list of Science Options.
2. Students who transfer 12 or more hours of college credits are exempt from this course, but must meet the minimum degree requirements.
3. Students who have completed two years of a foreign language in high school with a "C" or above are exempt from the foreign language requirement **but must take six additional semester hours of course work**. See list of Foreign Language Options.
4. Must be from list of Concentration-Specialization and courses must be from the 300 - 400 level.
5. See list of Social Science Options

***Concentration-Specialization**

Pure Mathematics

Algebra
 Analysis
 Complex Variables
 Geometry
 Number Theory
 Set Theory and Logic

Applied Mathematics

Differential Equations
 Financial Mathematics
 Mathematical Modeling
 Numerical Analysis
 Operations Research
 Probability and Statistics

* Students should consult an advisor for courses in these areas.

Science Options

BIO 101 Biological Science and Lab
 BIO 103 Environmental Science and Lab
 BIO 105 Introductory Botany and Lab
 BIO 106 Marine Science and Lab
 BIO 107 Introduction to Zoology and Lab
 BIO 111 Introduction to Biology and Lab
 BIO 437 Applied Ecology w Lab

BIO 440 Cell Biology w Lab
 BIO 470 Human Physiology w Lab
 SCI 201 or 201 Physical Science and Lab
 SCI 205 Earth and Space Science
 CHEM 201 Chemistry and Society and Lab
 CHEM 131 Introduction to Chemistry and Lab
 CHEM 141 or 142 General Chemistry I or II and Labs
 PHY 151 Introduction to Physics
 PHY 201 or 202 Basic Physics I or II and Labs
 PHY 211 or 212 Gen. Physics I or II and Labs
 PHY 241 Introduction to Astronomy
 MET 200 Introduction to Meteorology

Social Science Options

SS 201 or 202 Social Institutions
 GEO 115 Introduction to Cultural Geography
 GEO 209 World Regional Geography
 SOC 214 Introduction to Sociology
 SOC 325 Cultural Anthropology
 PS 344 Introductions to Political Science
 PS 335 American Government
 PS 336 State and Local Government
 ECO 211 or 212 Principles of Economics
 PSY 201/111-112 Psychology

Foreign Language Options

FR 101 & 102 Elementary French
 GR 101 & 102 Elementary German
 SP 101 & 102 Elementary Spanish
 LAT 101 & 102 Elementary Latin
 POR 101 & 102 Elementary Portuguese
 CHI 101 & 102 Mandarin Chinese

Requirements for a Minor in Mathematics

Students electing a minor in mathematics must complete a minimum of 21 semester hours of mathematics course work; six (6) hours must be taken from courses beyond the Calculus sequence with the approval of the Department