Math B.S. - OPTION II: General Mathematics Option

(for majors from the 2019-2020 catalogue year)

Student_____ CIN_____ADVISOR_____

GE Requirements (39 units)	Term	Grade	Course Type
Block A: Basic Subjects (9)			
A1 Oral Communication Course =			
A2 Written Communication Course =			
A3 Critical Thinking & composition Course =			
American Institutions (6)			
US History course =			
US Constitution course =			
Block B: Natural Sciences (0)			
Fulfilled by major requirements			
Block C: Arts and Humanities (6)			
C1 Arts Course =			
C2 Humanities Course =			
Block D: Social Sciences (6)			
D1 Course =			
D2 Course =			
Block E: Lifelong Learning and Self Development (3)			
E Course =			
Block F: Upper Division GE from 3 different sub-blocks (9)			
Sub block B Course =			
Sub block C Course =			
Sub block D Course =			

Major Requirement (81 Units)	Term	Grade
Lower Division Required Courses (33)		
CS 2011 (3) or MATH 2170 (3)		
MATH 2110 Calculus I (4)		
MATH 2120 Calculus II (4)		
MATH 2130 Calculus III (3)		
MATH 2150 Differential Equations (3)		
MATH 2450 Foundations of Mathematics I (3)		
MATH 2550 Introduction to Linear Algebra (3)		
PHYS 2100 General Physics I (5)		
BIOL 1100 Principles of Biology I (5)		
Upper Division Required Courses (7)		
MATH 3450 Foundations of Mathematics II (4)		
MATH 4650 Analysis I (3)		
Directive Elective Course* (3)		
Course =		
Option Specific Required Courses (19-21)		
MATH 4550 Modern Algebra I (3)		
MATH 4900 Senior Seminar in Mathematics (4) *WI course*		
Select one from each of the following groups (12-14)		
Group I: MATH 4200 Mathematical Logic (3); MATH 4300 Modern Geometry (3); MATH 4460 Theory of Numbers (3); MATH 4840 Graph Theory (3)		
Group II: MATH 4570 Linear Algebra (3); MATH 4700 Numerical Analysis I (3); MATH 4720 Linear Programming (3); MATH 4740 Theory of Probability (3)		
Group III: MATH 4560 Modern Algebra II (3); MATH 4660 Analysis II (3); MATH 4670 Multivariate Analysis (3); MATH 4680 Intro. to Complex Analysis (3); MATH 4690 Intro. to Topology (3); MATH 4710 Numerical Analysis II (3); MATH 4750 Intro. to Mathematical Statistics (3)		
Group IV: PHYS 2200 General Physics II (5); BIOL 1200 Principles of Biology II (5); CHEM 1100 General Chemistry I (5); CS 2012 Introduction to Programming II (3); CS 2013 Programming with Data Structures (3)		
University Free Electives (2-4) (If you took PHYS 2200, BIOL 1200, or CHEM 1100 in Group IV above choose 2 units of any courses. If you took CS 2012 or CS 2013, choose 4 units.)		
Course(s) =		
Upper Division Electives (15)		
Course1 =		
Course2 =		
Course3 =		
Course4 =		
Course5 =		

VARIOUS GE REQUIREMENTS

1. One civic learning course (denoted by **cl**) at the upper division GE level.
2. One race/ethnicity course (denoted by **re**) AND one diversity course (denoted by **d**) or another **re** course.
3. One writing intensive course (denoted by **wi**).

The above requirements must be fulfilled in GE blocks. Choose accordingly. An IHE course is required of all first-time freshmen. Please see e-catalog for complete GE requirement rules and policies.

***DIRECTIVE ELECTIVE**

The approved list of all directive elective courses is on the next page.

Graduation Requirements

A minimum **40** units of upper division courses and **120** total units are required for graduation. For an extensive list of other graduation requirements, check "academic requirement" in your GET account.

Directive Elective Courses

This is the approved list of Directive Elective Courses. If there is a course that you would like to use that is not on the list, please contact the Department of Mathematics for approval.

- BINF 4000 – Bioinformatics and Computational Biology (3) **also listed as**
- CHEM 4860 – Bioinformatics and Computational Biology (3)

- BIOL 4800 – Modeling Biological Systems (3) **also listed as**
- MATH 4800 – Modeling Biological Systems (3)

- CS 2012 – Introduction to Programming II (3)
- ECON 2090 – Applied Business and Economics Statistics I (3)
- ECON 4010 – Mathematical Economics (3)
- EE 2440 – Digital Engineering (3)
- EE 3040 – Probability, Random Variable, and Random Processes (3)
- PHIL 2500 – Introduction to Symbolic Logic (3)