UNIVERSITY OF NORTH CAROLINA
CHARLOTTE
MATHEMATICS AND STATISTICS

Mathematics, B.A.

math.charlotte.edu

Degree Requirements

A Major in Mathematics for the B.A. degree consists of a minimum of 34 credit hours of approved mathematics (MATH), operations research (OPRS), or statistics (STAT) courses, one programming course in computer science (ITSC), and 18 credit hours of approved related coursework in an area outside of the department or an approved University minor from outside the department.

General Education Courses (15-19 credit hours)
For details on required courses, refer to the General Education Program. Total hours to satisfy General Education Requirements may vary as some general education requirements may be double-counted in the major with departmental approval. Please see your advisor for information.

Foreign Language (0-8 credit hours)
Students are required to demonstrate proficiency in the language of their choice through the 1202 level. For details on demonstrating proficiency refer to the College of Science Foreign Language Requirement in the Undergraduate Catalog.

Core Courses (28 credit hours)

ITSC 1212: Introduction to Computer Science
MATH 1241: Calculus I
MATH 1242: Calculus II
MATH 2164: Matrices and Linear Algebra
MATH 2167: Intro to Math Reasoning
MATH 2171: Differential Equations
MATH 2241: Calculus III
MATH 2242: Calculus IV
MATH 2688: Math Awareness Seminar
MATH 3163: Introduction to Modern Algebra

Restricted Elective Courses (12 credit hours)

Select 12 credits of elective courses from MATH, STAT, or OPRS at the 3000-level or above.

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Restricted Related Elective Courses (18 credit hours)

Courses that count towards this requirement must have a discipline prefix other than MATH, STAT, or OPRS. A minor or second major satisfies this requirement.

Capstone Project (1-6 credit hours)

MATH 3689: Mathematics Project Seminar or the sequence
MATH 3790: Junior Honors Seminar
MATH 3791: Senior Honors Tutorial

Unrestricted Elective Courses

As needed to complete the 120 credit hours required for graduation.

Other Important Requirements:

Minimum 120 credit hours (all courses)

Minimum overall GPA of 2.0 (all courses)

Minimum major GPA of 2.0 (degree courses)

Mathematics, B.A.

B.A. in Mathematics

Name: _____ Minor:_____ From AY 2024-2025

Core Courses	Semester/Year	Grade
ITSC 1212+L- Introduction to Computer ScienceI		
MATH 1241- Calculus I		
MATH 1242- Calculus II		
MATH 2164- Matrices and Linear Algebra		
MATH 2167- Introduction to Mathematical Reasoning		
MATH 2171- Differential Equations		
MATH 2241- Calculus III		
MATH 2242- Calculus IV		
MATH 2688- Mathematics Awareness Seminar		
MATH 3163- Introduction to Modern Algebra		
MATH 3689- Senior project (or honors MATH 3790/3791)		

Restricted Elective Courses: from MATH, STAT, or OPRS at the 3000-level or above.

Course Number	Semester/Year	Grade
1.)		
2.)		
3.)		
4.)		

Minor/Related Work: 18 Hours

_____ _____ _____

_____ _____ _____

Check DegreeWorks for General Education and College's Foreign Language Requirements. A minimum of 120 credits are required for graduation.

Academic Plan of Study
B.A. in Mathematics

Name: _____ ID: _____

Freshman Year					
I			II		
Course ID	Course Name	Grade	Course ID	Course Name	Grade
MATH 1241	Calculus I		MATH 1242	Calculus II	
WRDS 1103/1104	Writing and Inquiry in Academic Contexts		ITSC 1212	Introduction to Computer Science	
XXXX	Theme Course		XXXX	Theme Course	
XXXX	Natural Science		XXXX	Natural Science with Lab	
FORL 1101/1201	Foreign Language or elective		FORL 1101/1201	Foreign Language or elective	

Sophomore Year					
I			II		
Course ID	Course Name	Grade	Course ID	Course Name	Grade
MATH 2241	Calculus III		MATH 2242	Calculus IV	
MATH 2164	Matrices and Linear Algebra		MATH 2167	Intro to Mathematical Reasoning	
MATH 2688	Math Awareness Seminar		XXXX	Theme Course	
CTCM 2530	Critical Thinking and Communication		XXXX	Theme Course	
XXXX	Related work or Minor		XXXX	Related work or Minor	

Junior Year					
I			II		
Course ID	Course Name	Grade	Course ID	Course Name	Grade
MATH 2171	Differential Equations		MATH 3 or 4xxx	Upper-level Math elective	
MATH 3163	Intro to Modern Algebra		MATH 3 or 4xxx	Upper-level Math elective	
XXXX	Related work or Minor		XXXX	Related work or Minor	
XXXX	Elective or as needed		XXXX	Elective or as needed	
XXXX	Elective or as needed		XXXX	Elective or as needed	

Senior Year					
I			II		
Course ID	Course Name	Grade	Course ID	Course Name	Grade
MATH 3689/3790	Math Project Seminar (or Honors)		MATH 3 or 4xxx	Upper-level Math elective	
MATH 3 or 4xxx	Upper-level Math elective		XXXX	Related work or Minor	
XXXX	Related work or Minor		XXXX	Elective or as needed	
XXXX	Elective or as needed		XXXX	Elective or as needed	
XXXX	Elective or as needed				

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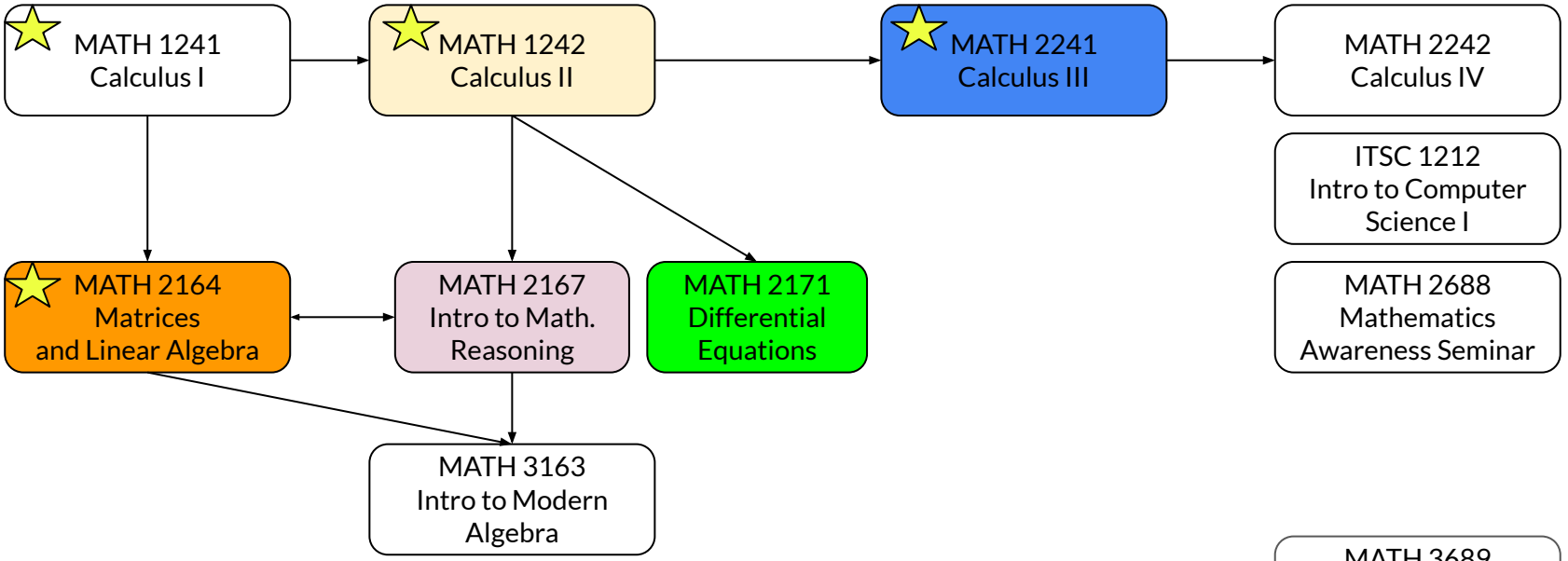
Related work or Minor

General Education

Suggested Unrestricted Elective Courses:

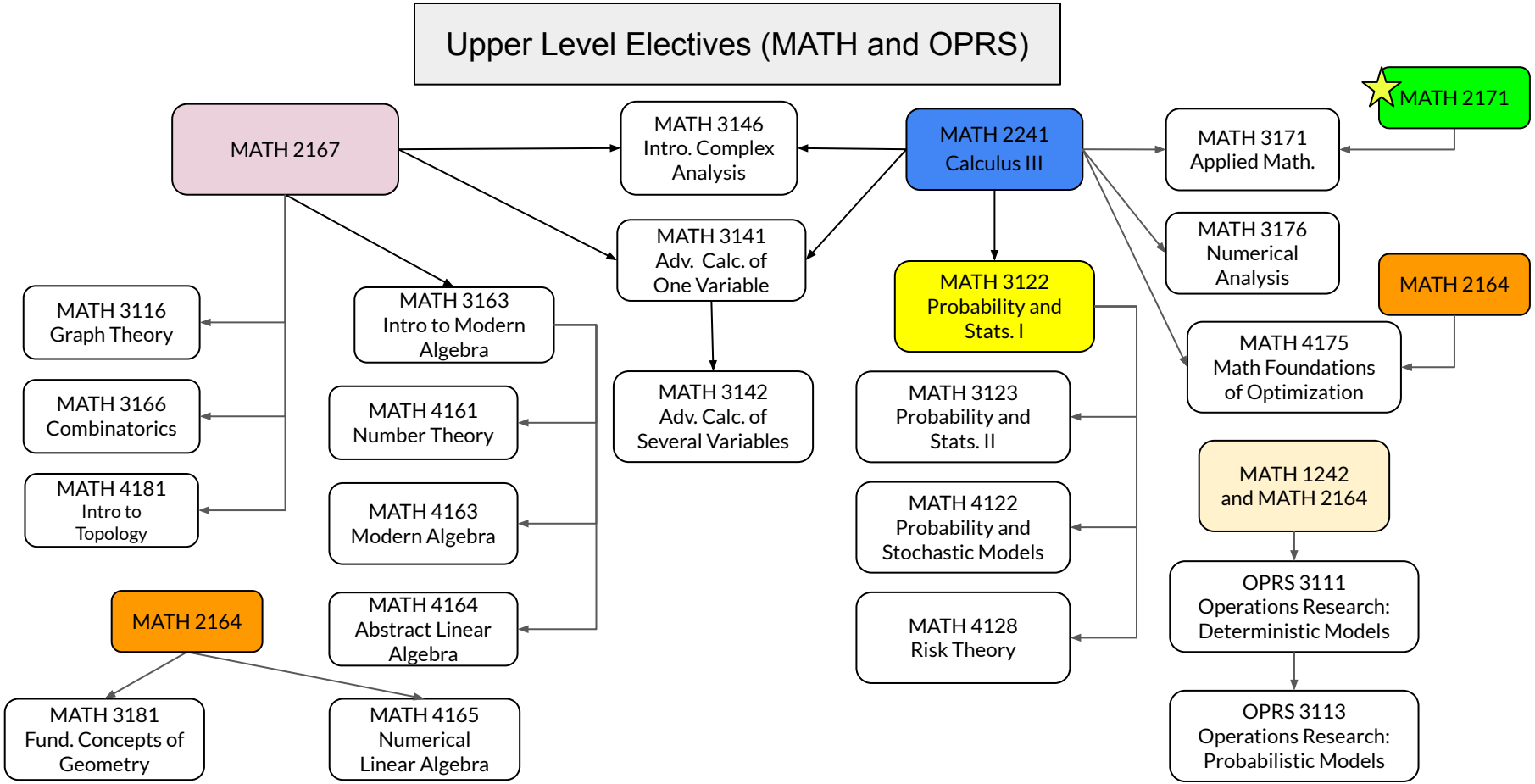
MATH 3116- Graph Theory
MATH 3122/3123- Probability and Statistics I/II
MATH 3146- Intro to Complex Analysis
MATH 3166- Combinatorics
MATH 3181- Fundamental Concepts of Geometry
MATH 3171- Applied Mathematics
MATH 4128- Risk Theory
MATH 4161- Number Theory
MATH 4163- Modern Algebra
MATH 4164- Abstract Linear Algebra
MATH 4181- Intro to Topology

Core Courses (Required for B.A. in Math)



Must have "C" or above

B.A. in Math


Upper Level Electives (MATH and OPRS)
MATH 2167
MATH 3146
Intro. Complex
Analysis
MATH 2241
Calculus III
MATH 3171
Applied Math.
MATH 2171
MATH 3141
Adv. Calc. of
One Variable
MATH 3176
Numerical
Analysis
MATH 3116
Graph Theory
MATH 3163
Intro to Modern
Algebra
MATH 3122
Probability and
Stats. I
MATH 2164
MATH 4175
Math Foundations
of Optimization
MATH 3166
Combinatorics
MATH 4161
Number Theory
MATH 3142
Adv. Calc. of
Several Variables
MATH 3123
Probability and
Stats. II
MATH 1242
and MATH 2164
MATH 4181
Intro to
Topology
MATH 4163
Modern Algebra
MATH 4122
Probability and
Stochastic Models
OPRS 3111
Operations Research:
Deterministic Models
MATH 2164
MATH 4164
Abstract Linear
Algebra
MATH 4128
Risk Theory
MATH 3181
Fund. Concepts of
Geometry
MATH 4165
Numerical
Linear Algebra
OPRS 3113
Operations Research:
Probabilistic Models

Upper Level Electives (STAT and Actuarial Science)