UNIVERSITY OF NORTH CAROLINA
CHARLOTTE
MATHEMATICS AND STATISTICS

Mathematics, B.S.
with a Minor in Secondary Education

math.charlotte.edu

Degree Requirements

The B.S. in Mathematics degree with a Minor in Secondary Education prepares students for licensure to teach mathematics in secondary school (grades 9-12). Students major in Mathematics and their coursework consists of a minimum of 42 credit hours of approved Mathematics (MATH) and Statistics (STAT) courses, and 4 credits of one programming course in computer science (ITSC). The Minor in Secondary Education consists of 26 credit hours and 15 credit hours of student teaching.

General Education Courses (18-26 credit hours)
For details on required courses, refer to the General Education Program. 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.

Core Courses (34 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 3141: Adv Calculus of One Variable
MATH 3142: Adv Calculus of Several Variables
MATH 3163: Introduction to Modern Algebra

Restricted Elective Courses (12 credit hours)

MATH 3181: Fundamental Concepts of Geometry
MATH 4109: History of Mathematical Thought

***STAT 3122** or **STAT 3128**
*If students have not had any statistics. Otherwise, select 3 credits of elective courses from MATH, STAT, or OPRS at the 3000-level or above.

Select 3 credits from: MATH 3123, 4163, 4164, 4181, or OPRS 3111.

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Minor in Secondary Education Courses (41 credit hours)

MDSK 2100: Foundations of Education in Secondary Schools.
MDSK 3100: Inclusive Classrooms
MDSK 3151: Instructional Design and Technology Integration
MDSK 4210: Classroom Leadership
SECD 4140: Adolescence and Secondary Schools
MAED 4252: Teaching Mathematics to Middle and Secondary School Learners
MDSK 4300: Content Area Instruction and Assessment
MAED 4103: Using Technology to Teach Secondary School Mathematics
MAED 4105: Highschool Mathematics from an Advanced Standpoint
SECD 4440: Inclusive Classrooms

Restricted Science Elective Courses (11 credit hours)

Any science course with prefix BIOL, CHEM, ESCI, GEOL, or PHYS is permissible.

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 2.75 (all courses)

Minimum major GPA of 2.75 (degree courses)

B.S. in Mathematics
with a Minor in Secondary Education

Name: _____ 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 (WAIVE)		
MATH 3163- Introduction to Modern Algebra		
MATH 3689- Senior project (WAIVE)		
MATH 3141- Advanced Calculus of One Variable		
MATH 3142- Advanced Calculus of Several Variables		

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

Course Number	Semester/Year	Grade
1.) MATH 3181- Fundamental Concepts of Geometry		
2.) MATH 4109- History of Mathematical Thought		
3.) *		
4.)**		

*If students have not had any statistics at any level (such as STAT 1220 or 1222), they are required to take either STAT 3122 or STAT 3128 as one of their upper-level math courses. If they have already had statistics, they can take any courses to complete the required upper-level math courses.

**Must be one of the following: MATH 3123, 4163, 4164, 4181, or OPRS 3111

Science Electives: 11 hours of approved science courses from BIOL, CHEM, ESCI, GEOL, PHYS.

Minor in Secondary Education Courses:	Semester/Year	Grade
MDSK 2100 (Sophomore year)		
MDSK 3100 (Junior year, semester 1)		
MDSK 4210 (Junior year, semester 1)		
MDSK 3151 (Junior year, semester 2)		
SECD 4140 (Junior year, semester 2)		
MAED 4252 (Senior year, semester 3)		
MDSK 4300 (Senior year, semester 3)		
SECD 4440 (Senior year, semester 4, 15 credit hours of student teaching)		
MAED 4103 (offered in Spring semesters only)		
MAED 4105 (offered in Fall semesters only)		

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.S. in Mathematics, with Minor in Secondary Education

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 2171	Differential Equations		MATH 3181	Fundamental Concepts of Geometry	
XXXX	Theme Course		XXXX	Theme Course	
CTCM 2530	Critical Thinking and Communication		MDSK 2100	Foundations of Ed in Sec Schools	
XXXX	Science		*STAT XXXX	STAT 3122 or STAT 3128	

Junior Year					
I			II		
Course ID	Course Name	Grade	Course ID	Course Name	Grade
MATH 3141	Advanced Calculus of One Variable		MATH 3142	Advanced Calculus of Several Variables	
MATH 3163	Intro to Modern Algebra		MATH 3 or 4xxx	Upper-level Math elective	
MATH 4109	History of Mathematical Thought		SECD 4140	Adolescence and Secondary Schools	
MDSK 3100	Inclusive Classrooms		MDSK 3151	Intructional Design and Tech Integration	
MDSK 4210	Classroom Leadership (2 credits)		MAED 4103	Using Tech to Teach Sec School Math	

Senior Year					
I			II		
Course ID	Course Name	Grade	Course ID	Course Name	Grade
MAED 4105	Highschool Math from Adv Standpoint				
MDSK 4300	Content Area Instruction & Assessment		SECD 4400	Student Teaching (15 credits)	
MAED 4252	Teaching Math to Sec School Learners				
XXXX	Elective or as needed				

Color Legend

Minor

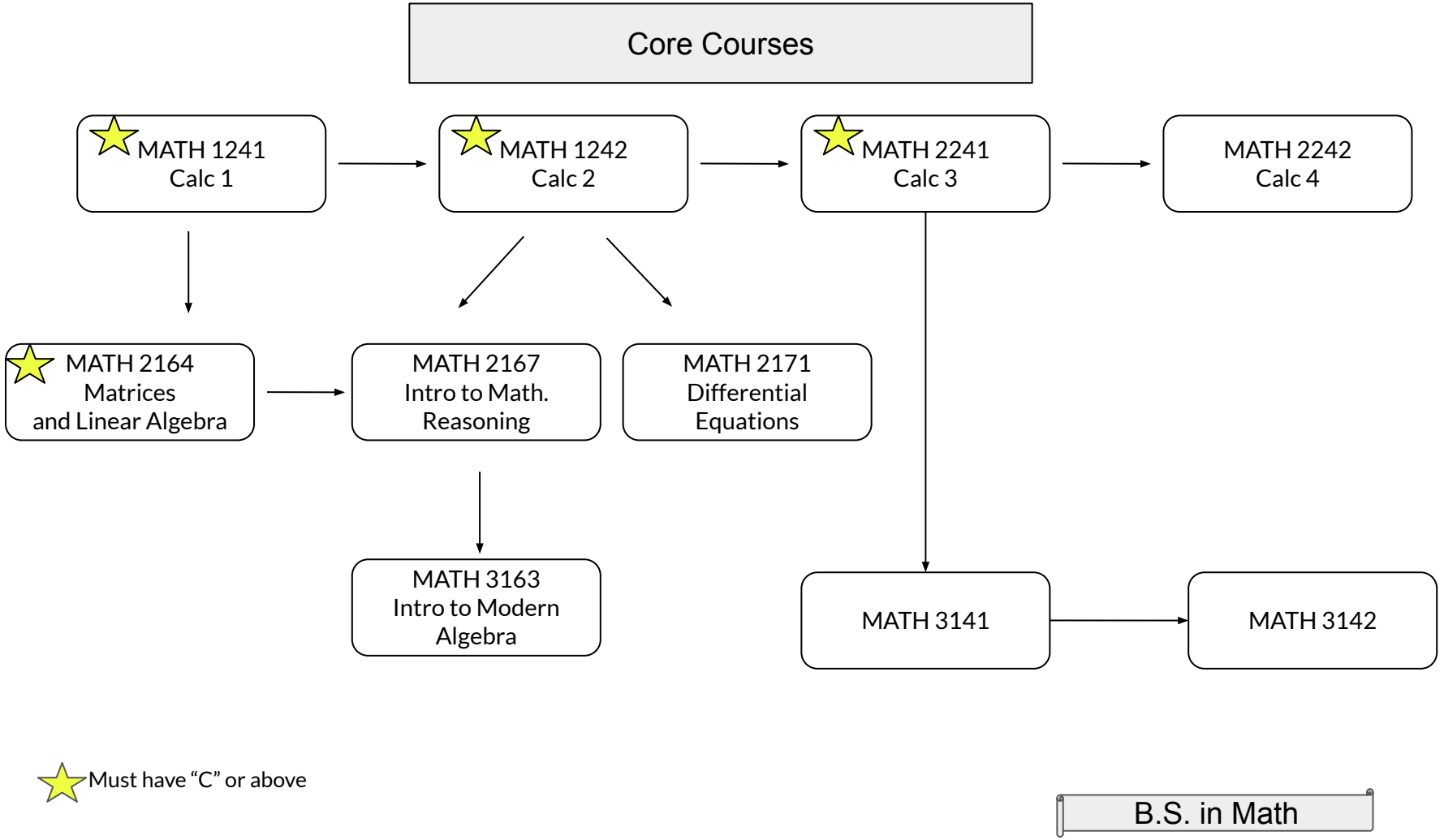
General Education

MATH 3 or 4xxx	Upper-level Math elective

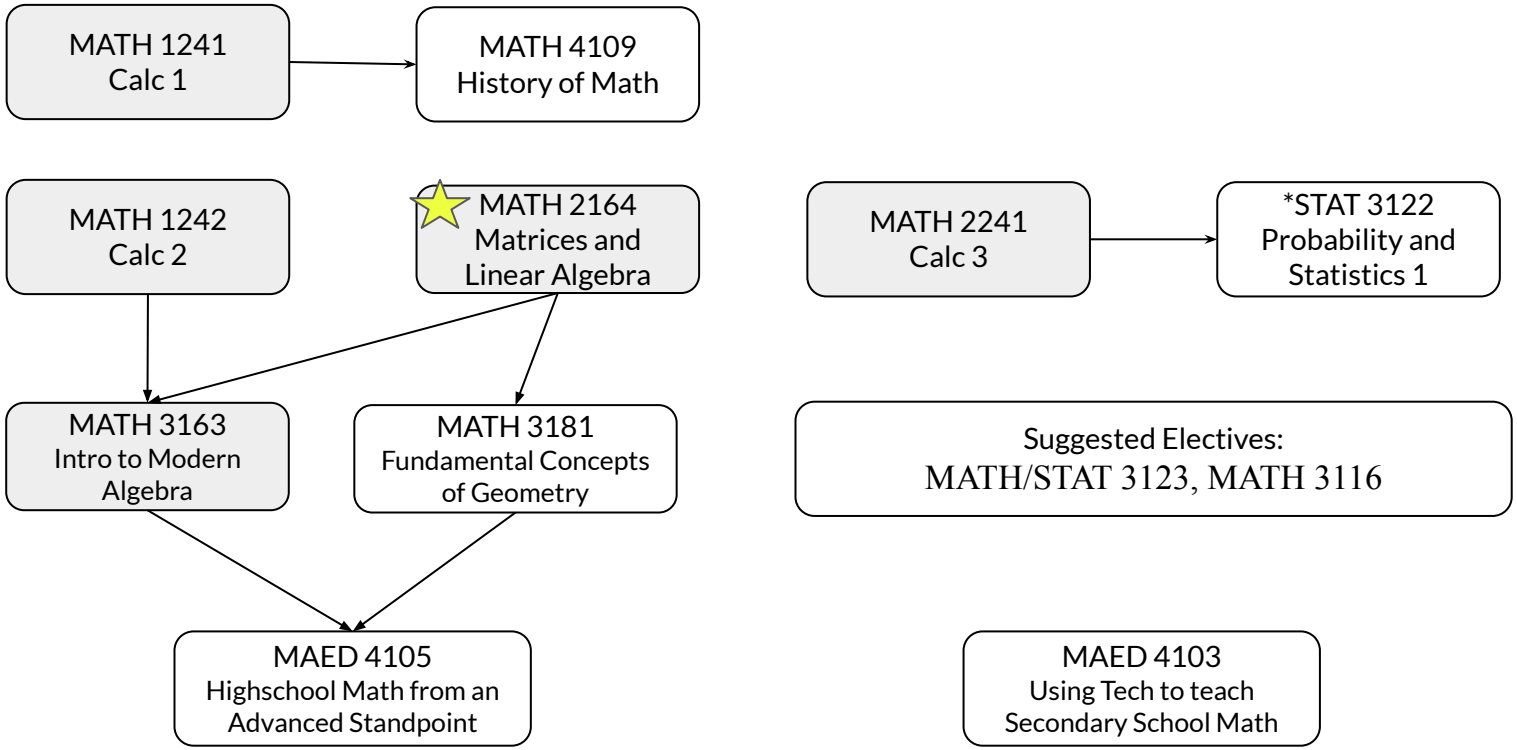
Suggested: MATH/STAT 3123, MATH 3116

MAED 4103	Springs only
MATH 4109	Falls only
MAED 4105	Falls only
MAED 4252	Falls only

*If students have not had any statistics. Otherwise, select 3 credits of elective courses from MATH, STAT, OPRS 3xxx or 4xxx.


Core Courses
MATH 1241
Calc 1
MATH 1242
Calc 2
MATH 2241
Calc 3
MATH 2242
Calc 4
MATH 2164
Matrices
and Linear Algebra
MATH 2167
Intro to Math.
Reasoning
MATH 2171
Differential
Equations
MATH 3163
Intro to Modern
Algebra
MATH 3141
MATH 3142
Must have “C” or above
B.S. in Math

Upper Level Courses (Math Ed)



Must have "C" or above

*Students with GenEd exception. Otherwise, any STAT.

Core course

Minor in Secondary Education