

## PROGRAM SUMMARY

- **Credit Hours:** 120 hours
- **Concentrations:** Actuarial Science, Statistics
- **Declaring the Major:** Minimum GPA of 2.0 required; no pre-requisite courses; change of major form accepted year-round; orientation/advising session required after declaration
- **Advising (For the Major):** Required on admission to the major, at the end of the fourth semester, and before the beginning of the senior year. Recommended more frequently. Assigned advisors available by appointment
- **Advising (For General Education):** By Mathematics Department advisors or by CLAS advising center
- **Minimum Grades/GPA:** GPA of at least 2.0 in all the MATH, STAT, and OPRS courses taken and GPA of at least 2.0 in all MATH, STAT, and OPRS courses at the 2000 level and above.
- **Teacher Licensure:** YES in MATH, requires specified coursework in Mathematics and Mathematics Education and a minor in Secondary Education
- **Evening Classes Available:** YES (with proper planning can be completed at night)
- **Weekend Classes Available:** NO
- **Other Information:** Departmental Honors, Internships, Co-ops
- **Contact(s):** Dr. Kim Harris, Undergraduate Coordinator [mkharris@uncc.edu](mailto:mkharris@uncc.edu)

## PROGRAM REQUIREMENTS

MATH offers the BA degree with the option of choosing the Statistics or Actuarial Science concentration. Students who want to teach high school level mathematics would complete the BA program and the minor in secondary education. Students in the secondary education program **MUST** make a C or better in each of their MATH, MAED, STAT, and ITCS courses required for the degree. The BA degree is a *relatively structured* program. The program requires four semesters of calculus that must be taken in order. A grade of at least a C in each of the first three courses is required to progress to the next calculus course. Students are also required to take Linear Algebra, Differential Equations, Modern Algebra, Math Awareness Seminar, and the Senior Project. A course in computer programming and four additional upper-level MATH, OPRS, or STAT courses are also required. Students who take Calculus I in their freshman year and begin their major as sophomores can complete the degree on time **if they consult regularly with their advisors**. Students are required to complete either a formal minor or 18 credit hours of *related work* (in consultation with their advisor).

Areas	Credit Hours	Description
<b>Pre-Major/Prerequisites</b>	-	
<b>Major</b>	34-37	Hours vary depending upon concentration. Required courses in the major will satisfy General Education requirements for Mathematics & Logical Reasoning, Writing Intensive course in the discipline, and Oral Communication.
<b>General Education (not satisfied by other major requirements)</b>	28-31	The number of hours reflects the general education coursework required outside the major.
<b>Related Work</b>	21	The requirement for Related Work can be completed with a minor from another department or with 18 hours of approved courses with a common theme. Related work that is not an official minor must be approved by the student's advisor. ITCS 1212+L (3 hours) is also related work.
<b>Foreign Language</b>	0-8	Proficiency in a foreign language can be demonstrated by successful completion of FORL 1202, a placement test given by the Department of Languages and Culture Studies, or three years of high school courses in the SAME language.
<b>Electives</b>	23-37	As needed to complete 120 hours total.
<b>Total Credit Hours</b>	120	

## SUGGESTED PLAN OF STUDY – B.A. IN MATHEMATICS

### Freshman Year

Course Number	Course Title	Credit Hours	General Education	W/O Course	Notes
<i>Fall Semester</i>					
MATH 1241	Calculus I	3	X		An appropriate eligibility level of math placement is required to begin in MATH 1241.
UWRT 1103	Writing and Inquiry in Academic Contexts (or UWRT 1104)	3	X		
LBST 110X	The Arts and Society	3	X		Chosen from LBST 1101, 1102, 1103, 1104, 1105
XXXX 1201	Foreign Language	4			
XXXX XXXX	Elective	3			
<i>Spring Semester</i>					
MATH 1242	Calculus II	3	X		Grade of C or better in MATH 1241 is required
XXXX XXXX	Elective	3			
XXXX XXXX	Social Science	3	X		Chosen from ANTH 1101, ECON 1101 or 2101, GEOG 1105, POLS 1110, SOCY 1101
XXXX 1202	Foreign Language	4			
XXXX XXXX	Elective	3			

32 Credit Hours for Year

### Sophomore Year

Course Number	Course Title	Credit Hours	General Education	W/O Course	Notes
<i>Fall Semester</i>					
MATH 2241	Calculus III	3			Grade of C or better in MATH 1242 is required.
MATH 2164	Linear Algebra	3			
LBST 2301	Critical Thinking and Communication	3	X		
ITCS 1212+L	Introduction to Computer Science	3			Class and lab must be taken concurrently.
XXXX XXXX	Related Work or Minor	3			
MATH 3688	Math Awareness Seminar	0			This course is only offered in the fall semester.
<i>Spring Semester</i>					
MATH 2242	Calculus IV	3			Grade of C or better in MATH 2241 is required.
MATH 2171	Differential Equations	3			
LBST 2102	Global and Intercultural Connections (or LBST 2101 or LBST 221X)	3	X		
LBST 221X	Ethical and Cultural Critique (or LBST 2101 or LBST 2102)	3	X		
XXXX XXXX	Related Work or Minor	3			

30 Credit Hours for Year

### Junior Year

Course Number	Course Title	Credit Hours	General Education	W/O Course	Notes
<i>Fall Semester</i>					
MATH 3163	Modern Algebra	3	X	W	
MATH XXXX	Upper-Level Math Elective	3			Must be MATH, STAT, or OPRS 3000-level or above
XXXX XXXX	Science	3	X		Chosen from list of approved courses.
XXXX XXXX	Related Work or Minor	3			
XXXX XXXX	Elective	3			
<i>Spring Semester</i>					
MATH XXXX	Upper-Level Math Elective	3			Must be MATH, STAT, or OPRS 3000-level or above
XXXX XXXX	Writing Intensive Course	3	X	W	
XXXX XXXX	Science w/ Lab	4	X		
XXXX XXXX	Related Work or Minor	3			
XXXX XXXX	Elective	3			

31 Credit Hours for Year

### Senior Year

Course Number	Course Title	Credit Hours	General Education	W/O Course	Notes
<i>Fall Semester</i>					
MATH 3XXX	Upper-Level Math Elective	3			Must be MATH, STAT, or OPRS 3000-level or above
XXXX XXXX	Related Work or Minor	3			
XXXX XXXX	Electives	9			
<i>Spring Semester</i>					
MATH 3XXX	Upper-Level Math Elective	3			Must be MATH, STAT, or OPRS 3000-level or above
MATH 3689	Mathematics Project Seminar	1	X	O	
XXXX XXXX	Related Work or Minor	3			
XXXX XXXX	Electives	5			

27 Credit Hours for Year

## ADVISING RESOURCES

- General Education Requirements for ALL Students: [ucol.uncc.edu/general-education](http://ucol.uncc.edu/general-education)
- Undergraduate Catalog: [catalog.uncc.edu](http://catalog.uncc.edu)
- Central Advising website: [advising.uncc.edu](http://advising.uncc.edu)
- College of Liberal Arts & Sciences advising website: [clas.uncc.edu/students/Advising-News/](http://clas.uncc.edu/students/Advising-News/)
- University Advising Center website: [advisingcenter.uncc.edu](http://advisingcenter.uncc.edu)

## SUGGESTED PLAN OF STUDY – B.A. IN MATHEMATICS WITH MINOR IN SECONDARY EDUCATION

### Freshman Year

Course Number	Course Title	Credit Hours	General Education	W/O Course	Notes
<i>Fall Semester</i>					
MATH 1241	Calculus I	3	X		An appropriate eligibility level of math placement is required to begin in MATH 1241.
UWRT 1103	Writing and Inquiry in Academic Contexts (or UWRT 1104)	3	X		
LBST 110X	The Arts and Society	3	X		Chosen from LBST 1101, 1102, 1103, 1104, 1105
XXXX 1201	Foreign Language	4			
XXXX XXXX	Science	3	X		Chosen from list of approved courses.
<i>Spring Semester</i>					
MATH 1242	Calculus II	3	X		Grade of C or better in MATH 1241 is required
XXXX XXXX	Elective	3			
XXXX XXXX	Social Science	3	X		Chosen from ANTH 1101, ECON 1101 or 2101, GEOG 1105, POLS 1110, SOCY 1101
XXXX 1202	Foreign Language	4			
XXXX XXXX	Elective	3			

**32 Credit Hours for Year**

### Sophomore Year

Course Number	Course Title	Credit Hours	General Education	W/O Course	Notes
<i>Fall Semester</i>					
MATH 2241	Calculus III	3			Grade of C or better in MATH 1242 is required.
MATH 2164	Linear Algebra	3			
LBST 2301	Critical Thinking and Communication	3	X		
ITCS 1212+1	Introduction to Computer Programming	3			Class and lab must be taken concurrently.
MDSK 2100	Diversity and Inclusion in Secondary Schools	3			Students apply for Teacher Education program after taking this course.
MATH 3688	Math Awareness Seminar	0			This course is only offered in the fall semester.
<i>Spring Semester</i>					
MATH 2242	Calculus IV	3			Grade of C or better in MATH 2241 is required.
MATH 2171	Differential Equations	3			
LBST 2102	Global and Intercultural Connections (or LBST 2101 or LBST 221X)	3	X		
XXXX XXXX	Science w/ Lab	3	X		Chosen from list of approved courses.
XXXX XXXX	Elective	3			

**30 Credit Hours for Year**

### Junior Year

Course Number	Course Title	Credit Hours	General Education	W/O Course	Notes
<i>Fall Semester</i>					
MATH 3163	Modern Algebra	3	X	W	
MATH 3181	Fundamental Concepts of Geometry	3			
MDSK 3151	Instructional Design and the Use of Technology with Middle and Secondary School Learners	3			Acceptance into Teacher Education program is required.
MAED 4105	Geometry in the Secondary School Curriculum	3			
SECD 4140	Adolescence and Secondary Schools	3			
<i>Spring Semester</i>					
MATH 4109	History of Mathematics	3			Required for Teacher Licensure
MATH 3XXX	Upper-Level Mathematics	3			If student has taken statistics, this can be any upper-level course. If not, they are required to take MATH/STAT 3122 or STAT 3128.
LBST 221X	Ethical and Cultural Critique (or LBST 2101 or LBST 2102)	3	X		
READ 3255	Integrating Reading & Writing across Content Areas	3	X	W	
MAED 4103	Using Technology to Teach Secondary School Mathematics	3			

**30 Credit Hours for Year**

### Senior Year

Course Number	Course Title	Credit Hours	General Education	W/O Course	Notes
<i>Fall Semester</i>					
MATH 3XXX	Upper-Level Math Elective (MATH, STAT, or OPRS)	3			Must be 3000-level or above
MATH 3689	Mathematics Project Seminar	1	X	O	
MAED 4252	Teaching Mathematics to Secondary School Learners	3			
EDUC 4291	Modifying Instruction for Students with Diverse Needs	3			
XXXX XXXX	Elective	3			
<i>Spring Semester</i>					
SECD 4452	Student Teaching	12			
MDSK 4150	Assessment, Reflection, and Management Practices	3			

**28 Credit Hours for Year**

## ADVISING RESOURCES

- General Education Requirements for ALL Students: [ucol.uncc.edu/general-education](http://ucol.uncc.edu/general-education)
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- Central Advising website: [advising.uncc.edu](http://advising.uncc.edu)
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## SUGGESTED PLAN OF STUDY – B.A. IN MATHEMATICS, CONCENTRATION: ACTUARIAL SCIENCE

### Freshman Year

Course Number	Course Title	Credit Hours	General Education	W/O Course	Notes
<i>Fall Semester</i>					
MATH 1241	Calculus I	3	X		An appropriate eligibility level of math placement is required to begin in MATH 1241.
UWRT 1103	Writing and Inquiry in Academic Contexts (UWRT 1104)	3	X		
LBST 110X	The Arts and Society	3	X		Chosen from LBST 1101, 1102, 1103, 1104, 1105
XXXX 1201	Foreign Language	4			
XXXX XXXX	Elective	3			
<i>Spring Semester</i>					
MATH 1242	Calculus II	3	X		Grade of C or better in MATH 1241 is required
XXXX XXXX	Elective	3			
ITCS 1212+L	Introduction to Computer Science	3			Class and lab must be taken concurrently.
XXXX 1202	Foreign Language	4			
XXXX XXXX	Elective	3			

**32 Credit Hours for Year**

### Sophomore Year

Course Number	Course Title	Credit Hours	General Education	W/O Course	Notes
<i>Fall Semester</i>					
MATH 2241	Calculus III	3			Grade of C or better in MATH 1242 is required.
MATH 2164	Linear Algebra	3			
LBST 2301	Critical Thinking and Communication	3	X		
ACCT 2121	Principles of Accounting I	3			
XXXX XXXX	Elective	3			
<i>Spring Semester</i>					
MATH 2242	Calculus IV	3			Grade of C or better in MATH 2241 is required.
MATH 2171	Differential Equations	3			
LBST 2102	Global and Intercultural Connections (or LBST 2101 or LBST 221X)	3	X		
LBST 221X	Ethical and Cultural Critique (or LBST 2101 or LBST 2102)	3	X		
ACCT 2122	Principles of Accounting II (ACCT 2122)	3			

**30 Credit Hours for Year**

### Junior Year

Course Number	Course Title	Credit Hours	General Education	W/O Course	Notes
<i>Fall Semester</i>					
MATH 3163	Modern Algebra	3	X	W	
MATH 2428	Theory of Interest	3			Prerequisite for MATH 3128.
XXXX XXXX	Science	3	X		Chosen from list of approved courses.
ECON 2101	Principles of Economics –Micro	3	X		Fulfills Social Science General Edu. Requirement
XXXX XXXX	Elective	3			
MATH 3688	Math Awareness Seminar	0			Offered in Fall only
<i>Spring Semester</i>					
MATH 3128	Actuarial Mathematics I	3			
XXXX XXXX	Writing Intensive Course	3	X	W	
XXXX XXXX	Science w/ Lab (General Education)	4	X		
ECON 2102	Principles of Economics – Macro	3			
XXXX XXXX	Elective	3			

**31 Credit Hours for Year**

### Senior Year

Course Number	Course Title	Credit Hours	General Education	W/O Course	Notes
<i>Fall Semester</i>					
MATH 3129	Actuarial Mathematics II	3			
MATH 3122	Probability and Statistics I	3			
FINN 3120	Financial Management	3			
XXXX XXXX	Electives	6			
<i>Spring Semester</i>					
MATH 3123	Probability and Statistics II	3			
MATH 3689	Senior Project	1	X	O	
FINN 3271	Principles of Risk Management and Insurance	3			
XXXX XXXX	Electives	5			

**27 Credit Hours for Year**

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## SUGGESTED PLAN OF STUDY – B.A. IN MATHEMATICS, CONCENTRATION: STATISTICS

### Freshman Year

Course Number	Course Title	Credit Hours	General Education	W/O Course	Notes
<i>Fall Semester</i>					
MATH 1241	Calculus I	3	X		An appropriate eligibility level of math placement is required to begin in MATH 1241.
UWRT 1103	Writing and Inquiry in Academic Contexts (or UWRT 1104)	3	X		
LBST 110X	The Arts and Society	3	X		Chosen from LBST 1101, 1102, 1103, 1104, 1105
XXXX 1201	Foreign Language	4			
XXXX XXXX	Elective	3			
<i>Spring Semester</i>					
MATH 1242	Calculus II	3	X		Grade of C or better in MATH 1241 is required
XXXX XXXX	Elective	3			
XXXX XXXX	Social Science	3	X		Chosen from ANTH 1101, ECON 1101 or 2101, GEOG 1105, POLS 1110, SOCY 1101
XXXX 1202	Foreign Language	4			
XXXX XXXX	Elective	3			

**32 Credit Hours for Year**

### Sophomore Year

Course Number	Course Title	Credit Hours	General Education	W/O Course	Notes
<i>Fall Semester</i>					
MATH 2241	Calculus III	3			Grade of C or better in MATH 1242 is required.
MATH 2164	Linear Algebra	3			
LBST 2301	Critical Thinking and Communication	3	X		
ITCS 1212+L	Introduction to Computer Science	3			Class and lab must be taken concurrently.
XXXX XXXX	Related Work or Minor	3			
MATH 3688	Math Awareness Seminar	0			This course is only offered in the fall semester.
<i>Spring Semester</i>					
MATH 2242	Calculus IV	3			Grade of C or better in MATH 2241 is required.
STAT 2122	Introduction to Probability and Statistics	3			
LBST 2102	Global and Intercultural Awareness (or LBST 2101 or LBST 221X)	3	X		
LBST 221X	Ethical and Cultural Critique (or LBST 2101 or LBST 2102)	3	X		
XXXX XXXX	Related Work or Minor	3			

**30 Credit Hours for Year**

### Junior Year

Course Number	Course Title	Credit Hours	General Education	W/O Course	Notes
<i>Fall Semester</i>					
STAT 2223	Elements of Statistics II	3			
XXXX XXXX	Writing Intensive Course	3	X	W	
XXXX XXXX	Science	3	X		Chosen from list of approved courses.
XXXX XXXX	Related Work or Minor	3			
XXXX XXXX	Elective	3			
<i>Spring Semester</i>					
STAT 3110	Applied Regression	3	X	W	
XXXX XXXX	Science w/ Lab	4	X		
XXXX XXXX	Related Work or Minor	3			
XXXX XXXX	Elective	6			

**31 Credit Hours for Year**

### Senior Year

Course Number	Course Title	Credit Hours	General Education	W/O Course	Notes
<i>Fall Semester</i>					
STAT 3XXX	Upper-Level STAT Course	3			Chosen from STAT 3140, 3150, 3160, and 4116.
STAT 3XXX	Upper-Level STAT Course	3			Chosen from STAT 3140, 3150, 3160, and 4116.
XXXX XXXX	Related Work or Minor	3			
XXXX XXXX	Electives	6			
<i>Spring Semester</i>					
STAT 3XXX	Upper-Level STAT Course	3			Chosen from STAT 3140, 3150, 3160, and 4116.
MATH 3689	Mathematics Project Seminar	1	X	O	
XXXX XXXX	Related Work or Minor	3			
XXXX XXXX	Electives	5			

**27 Credit Hours for Year**

## ADVISING RESOURCES

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