

Mathematics and Statistics

Department Information

- **Credential Offered:**
B.S.; B.A.
- **Official Program Curriculum:**
catalog.ndsu.edu/undergraduate/program-curriculum/mathematics-statistics/ (<http://catalog.ndsu.edu/undergraduate/program-curriculum/mathematics-statistics/>)

Pre-Actuarial Science Option

Actuarial Science is the study of the evaluation and measurement of risk. The Actuary Science option is a pre-professional program designed to provide the background needed to enter the field. Entrance into the profession is regulated under a system of examinations run by actuarial professional societies. The curriculum for this option is designed to prepare the student to pass several of these examinations.

The nature of the actuarial profession requires its practitioners to have a broad knowledge of finance, law, mathematics, management, and statistics. This option leads to a double major in Mathematics and Statistics with either a minor in Economics or additional courses in business. Students selecting this option are requested to visit with the actuarial advisers in both the Departments of Mathematics (<https://www.ndsu.edu/math/>) and Department of Statistics (<https://www.ndsu.edu/statistics/>) early and often to confirm their progress and to inform themselves of changes in the examination curriculum.

Sample Program Guide

IMPORTANT DISCLAIMER: This guide is not an official curriculum. This guide is a sample four-year degree plan of how students might plan this major with other degree requirements to complete their education in four years. Student plans will vary from this sample due to a variety of factors, such as, but not limited to, start year, education goals, transfer credit, and course availability. To ensure proper degree completion, enrolled students should utilize Degree Map (<https://www.ndsu.edu/registrar/degreemap/>) and Schedule Planner (<https://www.ndsu.edu/onestop/degree-map-and-planning/>) in Campus Connection and consult regularly with academic advisors to ensure graduation requirements are being met.

Math and Statistics

Freshman			
Fall	Credits	Spring	Credits
MATH 165 ¹		4 MATH 166	4
MATH 129		3 MATH 329	3
CSCI 160		4 STAT 330	3
ENGL 110 or 120 (based on placement)		3 CSCI 161	4
		Gen Ed Science & Tech	3
		14	17
Sophomore			
Fall	Credits	Spring	Credits
MATH 265		4 MATH 266	3
MATH 270		3 MATH 346	3
STAT 367		3 STAT 368	3
STAT 461		3 COMM 110	3
Gen Ed Social/Behavioral Science & Global Perspectives		3 Gen Ed Humanities/Fine Arts & Cultural Diversity	3
		16	15
Junior			
Fall	Credits	Spring	Credits
MATH 450		3 STAT 468	3
STAT 467		3 MATH 300-400 Elective	3
Gen Ed Humanities/Fine Arts		3 STAT 400 Electives	6

Gen Ed Social/Behavioral Science	3	Gen Ed Upper Level Writing	3
Elective	3		
	15		15

Senior			
Fall	Credits	Spring	Credits
MATH 491		1 STAT 462 (Capstone)	3
STAT 400 Electives		3 STAT 400 Electives	3
Gen Ed Science & Tech w/lab		4 Electives	9
Gen Ed Science & Tech		3	
Gen Ed Wellness		2	
	13		15

Total Credits: 120

1
Students who are not ready for Math 165 may need an additional semester to complete their degree.

Sample Program Guide

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Math and Statistics (Pre-Actuarial)

Freshman			
Fall	Credits	Spring	Credits
MATH 165 ¹		4 MATH 166	4
MATH 129		3 MATH 329	3
STAT 330		3 COMM 110	3
ENGL 110 or 120 (based on placement)		3 ECON 202	3
ECON 201		3 Gen Ed Humanities & Fine Arts	3
	16		16

Sophomore			
Fall	Credits	Spring	Credits
MATH 265		4 CSCI 161	4
MATH 270		3 MATH 266	3
CSCI 160		4 MATH 346	3
STAT 367		3 STAT 368	3
		STAT 461	3
	14		16

Junior			
Fall	Credits	Spring	Credits
MATH 450		3 STAT 468	3
STAT 467		3 ACCT 201	3
ACCT 200		3 MATH 300-400 Elective	3
STAT 400 Elective		3 STAT 400 Elective	3

Gen Ed Upper Level Writing		3	Actuarial Elective (Select from official curriculum guide)	3
		15		15
Senior				
Fall	Credits	Spring	Credits	
STAT 400 Elective		3	STAT 476	1
Gen Ed Science & Tech		3	STAT 462 (Capstone)	3
Gen Ed Science & Tech w/ Lab		4	Gen Ed Science & Tech	3
Actuarial Elective (Select from the official curriculum guide)		3	Gen Ed Hum & Fine Arts/ Cult Div	6
		Gen Ed Wellness		2
		13		15
Total Credits: 120				

1
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