

MATHEMATICS MAJOR: CONCENTRATION IN STATISTICS AND MODELING

Admission Requirements for the Mathematics Major

Rigorous high school coursework with above-average grades in mathematics and/or computer science courses.

Requirements for a Major in Mathematics

Students must complete a core of six mathematics courses and one computer science class and in addition select one of three concentrations.

Code	Title	Credits
Core Courses (25 credits)		
MA-200	Calculus I	4
MA-201	Calculus II	4
MA-240	Theory of Proof	4
MA-260	Linear Algebra	3
MA-310	Calculus III	4
MA-470	Capstone Experience	3
<i>Ancillary Course</i>		
CS-135	Programming for Non-CS Majors	3
Total Credits		25

MA-200, MA-201 and MA-240 must be completed with grades of at least C- by the end of the sophomore year. A student may only retake any of these courses at most once to increase a grade below C-; and may retake at most two of these courses to increase a grade below C-.

Requirements for the Concentration in Statistics and Modeling

Code	Title	Credits
CS-265	Database Applications	3
MA-302	Probability and Statistics	3
MA-303	Mathematical Modeling	3
MA-304	Data Analysis	4
MA-380	Probability	3
MA-410	Real Analysis	3
Three additional credits of mathematics at the 300 or 400 level, to be chosen in consultation with the academic advisor.		3
Total Credits		22

Department of Mathematics: Mathematics Major Concentration in Statistics and Modeling Sample Timeline for Completion of Degree

Year One		Credits
Semester One		
LASC	First-Year Seminar (FYS)	3
EN-101	College Writing I	3
MA-200	Calculus I	4
CS-135	Programming for Non-CS Majors (QR)	3
LASC	LASC Elective (CA)	3
Credits		16

Semester Two		
EN-102	College Writing II	3
LASC	LASC Elective (CON)	3
MA-201	Calculus II	4
MA-240	Theory of Proof ¹	4
LASC	LASC Elective (USW)	3
Credits		17

Year Two		
Semester Three		
MA-310	Calculus III	4
MA-260	Linear Algebra	3
LASC	LASC Elective (NSP)	3-4
CS-265	Database Applications	3
MA-302	Probability and Statistics	3
Credits		16-17

Semester Four		
Elective		3
MA-303 or MA-304	Mathematical Modeling ^{2,3} or Data Analysis	3
SELECT	General Elective	3
LASC	LASC Elective (NSP LAB)	3
SELECT	General Elective	3
Credits		15

Year Three		
Semester Five		
MA-380	Probability (300 Level Elective in Major) ^{4,5}	3
SELECT	Elective	3
SELECT	Elective	3
LASC	LASC Elective (GP)	3
LASC	LASC Elective (ICW)	3
Credits		15

Semester Six		
MA	Upper Level Elective ⁴	3
MA-303 or MA-304	Mathematical Modeling or Data Analysis	3
SELECT	Elective	3
LASC	LASC Elective (TLC)	3
LASC	LASC Elective (HBS)	3
Credits		15

Year Four		
Semester Seven		
MA-410	Real Analysis	3
MA-380	Probability	3
MA-470	Capstone Experience ⁶	3
LASC	LASC Elective	3
SELECT	General Elective	3
Credits		15

Semester Eight		
LASC	LASC Elective	3
SELECT	General Elective	3
SELECT	General Elective	3
SELECT	General Elective	3
Credits		12
Total Credits		121-122

¹ Dual Math/CS majors may substitute Discrete Math I with permission of department.

² MA-304 is offered every Spring.

⁴ Only one elective is required; it may be taken in either the Spring or Fall.

⁵ MA-380 is offered every Fall.

⁶ Student should discuss capstone project with advisor during preceding semester.

Students are required to meet with their academic advisor to review their courses for the upcoming semester. A minimum of 120 credits is required for graduation. First-year and transfer students with 45 or fewer credits at the time of admission shall complete two academic programs (a major/major or major/minor) to qualify for graduation. For more information, please view the MajorPlus section of this catalog.