

Mathematics Major (BA)

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Mathematics is the language of nature, the Rosetta stone by which we come to understand the inner structure and form of our universe. It is also the language of computers and the key to the burgeoning Information Age. As a tool for understanding the world, it is perhaps the oldest and most enduring— and still, today, one of the most dynamic and exciting. Students in the mathematics major develop an understanding of mathematics as a vital tool of the mind.

The mathematics major is both rigorous and flexible. It provides students a foundation upon which to pursue graduate studies in mathematics or professional training in areas such as law or engineering while permitting them the flexibility to pursue minors in other liberal arts disciplines and to prepare themselves to teach in secondary school. Graduates receive a Bachelor of Arts degree in mathematics.

Students who wish to teach secondary school mathematics must satisfy admission requirements for the Liberal Arts Teacher Education Concentration (LATEC) and complete the general education core and education theory curriculum in the secondary education certification program. Additionally, prospective mathematics teachers must take MTH 400, which may be used as a general elective but not as a mathematics elective. We recommend that prospective mathematics teachers take MTH 360 and 380 as mathematics electives.

NOTES

MTH 210 may be used to satisfy core requirements.

MTH 400 may NOT be used to satisfy the Mathematics Elective requirement.

PHY 240, 241, 250, and 251 are recommended general electives.

NOTE: To graduate with a Bachelor of Arts or Bachelor of Science degree from Lyon College, students must successfully complete a minimum of 120 semester credit hours comprised of our required Core curriculum (44-48 hours), the requirements of at least one major (credit hours vary per major), and a selection of our Liberal Arts electives. They must also earn at least a 2.00 cumulative grade point average for all work taken at Lyon College and a 2.00 cumulative grade point average in their major, minor, and concentration.

Summary of Requirements for a Major in Mathematics

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Item #	Title	Credits
MTH 210	Calculus I	4
MTH 220	Calculus II	4
MTH 230	Calculus III	4
MTH 290	Foundations of Modern Mathematics	3
MTH 300	Differential Equations	3
MTH 330	Linear Algebra	3
MTH 420	Abstract Algebra I	3
MTH 440	Advanced Calculus I	3
	Mathematics Major Electives (9 credits)	9
	CSC 100, CSC 109, or CSC 115	3

CORE CURRICULUM

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Item #	Title	Credits
	Core Curriculum Requirements (In addition to Major hours)	44-48
	Total Credits	83-87

Mathematics Major Electives (9 credits)

Select three mathematics courses at the 300/400 level. MTH 400 may not be used for this requirement.

CSC 100, CSC 109, or CSC 115

One of the following:

Item #	Title	Credits
CSC 100	Introduction to Programming in C++	3
CSC 109	Introduction to Programming in Python	3
CSC 115	Introduction to Programming in Java	3