

MATHEMATICS AND COMPUTER SCIENCE (BS)

The B.S. in Mathematics and Computer Science provides students with a strong foundation in both fields. Core courses from the Mathematics and Computer Science curricula will aid students to develop critical thinking and communication skills, as well as a technical and practical understanding of programming and algorithm design. Graduating students will be prepared for any industry jobs requiring scientific computing skills and the ability to analyze, design, and implement algorithms, such as data mining, finance, and risk analysis. This major also prepares students for advanced degrees in computer science, mathematics, and the STEM fields.

Curriculum

(Effective Fall 2023)

AP Credit Policies (<https://catalog.luc.edu/undergraduate/arts-sciences/mathematics-statistics/#policiestext>)

Code	Title	Hours
Math Requirements		
MATH 161	Calculus I	4
MATH 162	Calculus II	4
MATH 263	Multivariable Calculus	4
MATH 201	Introduction to Discrete Mathematics & Number Theory	3
MATH 212	Linear Algebra	3
MATH 264	Ordinary Differential Equations	3
MATH 313	Abstract Algebra	3
MATH 351	Introduction to Real Analysis I	3
STAT 203	Introduction to Probability & Statistics	3
	or MATH 304 / Introduction to Probability STAT 304	
Select two electives in mathematics from the following:		6
MATH 309	Numerical Methods	
MATH 314	Advanced Topics Abstract Algebra	
MATH 315	Advanced Topics in Linear Algebra	
MATH 352	Introduction to Real Analysis II	
MATH 353	Introductory Complex Analysis	
Computer Science Requirements		
COMP 141	Introduction to Computing Tools and Techniques	3
COMP 170	Introduction to Object-Oriented Programming	3
COMP 264	Introduction to Computer Systems	3
COMP 271	Data Structures I	3
COMP 272	Data Structures II	3
COMP 363	Design and Analysis Computer Algorithms	3
Select two 3-credit electives in Computer Science from the following:		6
BIOL 388	Bioinformatics	
Any 300-level COMP course		
MATH 328	Algebraic Coding Theory	
MATH 331	Cryptography	

STAT 321 Computational Aspects of Modeling and Simulation

Total Hours 60

Note: 60 total credit hours. This degree has a waiver for the Quantitative core.

College of Arts and Sciences Graduation Requirements

All Undergraduate students in the College of Arts and Sciences are required to take two Writing Intensive courses (6 credit hours) as well as complete a foreign language requirement at 102-level or higher (3 credit hours) or a language competency test. More information can be found here (<https://www.luc.edu/cas/college-requirements/>).

Additional Undergraduate Graduation Requirements

All Undergraduate students are required to complete the University Core, at least one Engaged Learning course, and UNIV 101. SCPS students are not required to take UNIV 101. Nursing students in the Accelerated BSN program are not required to take core or UNIV 101. You can find more information in the University Requirements (<https://catalog.luc.edu/undergraduate/university-requirements/>) area.