DATA SCIENCE (BS)

Students earning a BS in data science will gain a wide variety of skills needed to work with many different types of data, and to analyze, visualize, and extract useful information from data in a variety of ways. They will apply those skills in various contexts, especially during their capstone consulting class. The program includes courses from Mathematics, Statistics and Computer Science.

Curriculum

Code	Title	Hours
Math Requirements		
MATH 161	Calculus I	4
MATH 162	Calculus II	4
MATH 212	Linear Algebra	3
STATS Requirements		
STAT 203	Introduction to Probability & Statistics	3
STAT 308	Applied Regression Analysis	3
STAT 310	Categorical Data Analysis	3
Select six credits of STAT 300-level electives [1]		6
Computer Science Requirements		
COMP 141	Introduction to Computing Tools and Techniques	3
COMP 215 / MATH 215	Object Oriented Programming with Mathematics	3
COMP 231	Data Structures & Algorithms for Informatics	3
COMP 353	Database Programming	3
Select six credits of COMP 300-level electives		6
Data Science Core		
DSCI 101	Fundamentals of Modern Data Science with R	3
STAT 338	Predictive Analytics	3
or COMP 379	Machine Learning	
COMP 317	Social, Legal, and Ethical Issues in Computing	3
COMP 358	Big Data Analytics (capstone)	3
STAT 370	Data Science Consulting (capstone)	3
Total Hours		**59**

[1] Excluding STAT 335 Introduction to Biostatistics and STAT 337 Quantitative Methods in Bioinformatics

Suggested Sequence of Courses

The below sequence of courses is meant to be used as a suggested path for completing coursework. An individual student's completion of requirements depends on course offerings in a given term as well as the start term for a major or graduate study. Students should consult their advisor for assistance with course selection.

Course	Title	Hours
Year 1		
Fall		
DSCI 101	Fundamentals of Modern Data Science with R	3
MATH 161	Calculus I	4
	Hours	**7**
Spring		
COMP 141	Introduction to Computing Tools and Techniques	3
MATH 162	Calculus II	4
	Hours	**7**
Year 2		
Fall		
MATH 212	Linear Algebra	3
COMP 215 / MATH 215	Object Oriented Programming with Mathematics	3
	Hours	**6**
Spring		
COMP 231	Data Structures & Algorithms for Informatics	3
STAT 203	Introduction to Probability & Statistics	3
	Hours	**6**
Year 3		
Fall		
STAT 308	Applied Regression Analysis	3
COMP 353	Database Programming	3
	Hours	**6**
Spring		
COMP 300-level Course		3
STAT 300-level Course		3
COMP 317	Social, Legal, and Ethical Issues in Computing	3
	Hours	**9**
Year 4		
Fall		
STAT 388	Topics	1-3
or COMP 379	or Machine Learning	
STAT 370	Data Science Consulting	3
STAT 300-level Course		3
	Hours	**7-9**
Spring		
COMP 358	Big Data Analytics	3
STAT 310	Categorical Data Analysis	3
COMP 300-level Course		3
	Hours	**9**
	Total Hours	**57-59**

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.