



Bachelor of Science in Data Science - Business Information Systems

The interdisciplinary Bachelor of Science in Data Science at MSU goes beyond data analytics and embraces a vision in which data become the power behind the digital transformation of every field of human endeavor. Companies are redesigning their organizational structures and processes to leverage data captured by an exploding number of online processes and connected sensors and devices. The concentration in BIS prepares students to solve business problems and identify opportunities in the context of intelligent data analytics and digital transformation.

Freshman Year

Fall Semester		Spring Semester		
EN 1103	English Composition I	3	EN 1113 English Composition II	3
MA 1713	Calculus I	3	MA 1723 Calculus II	3
DSCI 2013	Data Science Literacy	3	PHI 1113 Intro to Logic	3
— —	Natural Science 1 + Lab	3	— — Natural Science 2 + Lab	3
— —	Fine Arts	3	CSE 1284 Introduction to Programming	4

Sophomore Year

Fall Semester		Spring Semester		
— —	Social Science	3	MA/ST 3123 Statistical Inference	3
MA 2733	Calculus III	3	MA 3113 Intro to Linear Algebra	3
DSCI 3013	Fundamentals of Data Acquisition	3	BIS 3233 Management Information Systems	3
DSCI 2012	Lab - Data Wrangling	2	DSCI 4013 Data Visualization	3
CSE 1384	Intermediate Programming	4	CSE 2383 Data Structures and Analysis of Algorithms	3

Junior Year

Fall Semester		Spring Semester		
CSE 2813	Discrete Structures	3	CSE 3763 Legal and Ethical Issues in Computing	3
DSCI 3012	Lab - Desc., Analysis, Inference	2	CO 1003 Fundamentals of Public Speaking	3
DSCI 3022	Lab - Data Visualization	2	DSCI 3032 Lab - Artificial Intelligence	2
BL 2413	*Legal Environment of Business	3	CSE 4503 Database Management Systems	3
CSE 4633	Artificial Intelligence	3	ACC 2013 *Financial Accounting	3
— —	Humanities	3	DSCI 2022 Lab - Cloud, Quantum, HPC	2

Senior Year

Fall Semester		Spring Semester		
EN 3313	Writing for the Workplace	3	MA/ST 4523 Intro to Probability	3
FIN 3123	*Financial Management	3	BIS 4533 Decision Support Systems	3
BQA 4423	Business Decision Analysis	3	BIS 4753 Structured Systems Analysis and Design	3
BIS 4113	BIS Security Management	3	— — 4000 Level Business Course	3
BIS 4763	BIS Senior Seminar (Analytics Project)	3	BQA 4413 Business Forecasting and Predictive Analysis	3

***Choose 3 courses from the following list:**

- BL 2413 Legal Environment of Business
- ACC 2013 Financial Accounting
- ACC 2023 Managerial Accounting
- EC 2113 Macro Economics
- EC 2123 Micro Economics
- FIN 3123 Financial Management
- MGT 3113 Principles of Management
- MKT 3013 Principles of Marketing
- MKT 3323 International Logistics