University of Indianapolis – Shaheen College of Arts & Sciences
2025-2026 Curriculum Guide for Data Science (DATA)
Bachelor of Arts or Science

Freshman and Sophomore Year

- **MATH 185** Orientation to the Mathematical Sciences (1)
- **MATH 190** Calculus and Analytic Geometry I (4)
- **MATH 191** Calculus and Analytic Geometry II (4)
- **MATH 195** Discrete Math (4)
- **MATH 225** Introduction to R Programming (2)
- **MATH 280** Linear Algebra (4)
- **MATH 350** Probability and Statistics I (3)
- **MATH 351** Probability and Statistics II (3)
- **CSCI 155** Introduction to Programming using C (3)
- **CSCI 156** Introduction to Object-Oriented Programming (3)

Junior and Senior Year

- **MATH 345** Applied Statistical Methods (4)
- **MATH 415** Bayesian Analysis and Statistical Decision Making (4)
- **MATH 425** Statistical Learning (4)
- **MATH 435** Capstone Research in Data Analysis (4)
- **CSCI 240** Data Structures and Algorithms (4)
- **CSCI 370** Database Systems (4)
- **CSCI 424** Big Data Mining (4)

Electives (Taken during the Junior or Senior Year):
(3 credits of electives will fulfill degree requirements.)

- **MATH 325** Special Topics in Mathematics (.5-4)
- **MATH 335** Operations Research I (3)
- **MATH 365** Time Series Analysis (3)
- **CSCI 400** Topics in Computer Science (2-6)
- **ISEN 420** Statistical Quality Control (3)

NOTES: MATH 270, Calculus and Analytic Geometry III is strongly recommended.

NOTE: A grade of C- (1.7 on a 4.0 scale) or higher is required in all courses applying toward the DATA Major.

The Bachelor of Arts and Bachelor of Science degrees require a minimum of 120 hours.

See the General Education Core Guide for additional course requirements.

REMEMBER: If you have any questions about Data Science major and its requirements, contact Dr. Livia Hummel, Department of Mathematical Sciences (317-788-3320; hummell@uindy.edu; Martin Hall, Room 301D) . Courses and requirements sometimes change so keep in contact with your advisor.