

University of the Incarnate Word®

Bachelor of Science in Data Science

School of Mathematics, Science and Engineering

PROGRAM OVERVIEW

The Bachelor of Science (B.S.) in Data Science at the University of the Incarnate Word is designed to prepare future professionals with the mathematic, computer information system, statistic and analytical skills to manage and understand the data that fuels growth across sectors.

The B.S. in Data Science is a 120-hour degree program integrating higher mathematics, computer information systems, statistics, machine learning and programming. Through this combination of courses and skill development, students will build a strong foundation in the fields of study that make them sound logicians, information analysts and highly coveted in the job market. Data Science majors can further tailor their education through elective courses that emphasize data mining, design, predictive analytics, business intelligence and more. UIW's core curriculum will also develop communication and critical soft skills, ethics and a broader world view.

To complete the degree program, data science students will complete a capstone project course in the spring semester of their senior year. The capstone challenges students to apply their data science knowledge to solve a problem or innovate.

ADMISSION REQUIREMENTS

The requirements for admission to the B.S. in Data Science program are the same as the requirements for admission to the University of the Incarnate Word.

CONTACT

UIW Admissions

(210) 829-6005

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This publication is available in alternate format by request. To request an alternate format, please contact the UIW Office of Admissions at (210) 829-6005. 5/2021 500

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Data Science

B.S. in **Data Science****FRESHMAN YEAR****Fall**

ENGL 1311: Composition I (3 hours)
 PHIL 1381: Intro to Philosophy (3 hours)
 History (3 hours)
 MATH 1304: College Algebra (as Math core) (3 hours)
 General Elective (3 hours)

Total Hours: 15**Spring**

ENGL 1312: Composition II (3 hours)
 DWHP 1200: Dimensions of Wellness (2 hours)
 PEHP 11XX (1 hour)
 MATH 1311: Pre-Calculus (general elective) (3 hours)
 DATA 2365: Intro to Data Science (3 hours)

General Elective (3 hours)

Total Hours: 15**SOPHOMORE YEAR****Fall**

ENGL 2310 World Literature (3 hours)
 Foreign Language I (3 hours)
 PHIL 3312: Logic or upper level PHIL/RELS (3 hours)
 MATH 2312: Calculus I (3 hours)
 MATH 2322: Linear Algebra (3 hours)

Total Hours: 15**Spring**

Fine Arts (3 hours)
 Modern Language II (3 hours)
 General Elective (3 hours)
 MATH 2313: Calculus II (3 hours)
 MATH 2340: Computer Programming (3 hours)

Total Hours: 15**JUNIOR YEAR****Fall**

MATH 3331: Foundations of Probability and Statistics
 (4 hours)
 MATH 3314: Calculus III (3 hours)
 CIS 2335: Scripting Languages (3 hours)
 Science with Lab (4 hours)
 General Elective (3 hours)

Total Hours: 16**Spring**

MATH 3332: Foundations of Statistical Inference (3
 hours)
 MATH 4333: Regression Analysis (3 hours)
 RELS 1305, 1315, 1325, 1335 or 1327 (3 hours)
 Social Science (3 hours)
 General Elective (3 hours)

Total Hours: 15**SENIOR YEAR****Fall**

CIS 3310: Database Systems (3 hours)
 DATA 4365: Data Mining & Machine Learning (3 hours)
 Data Science Elective (3 hours)
 Data Science Elective (3 hours)
 General Elective (3 hours)

Total Hours: 15**Spring**

DATA 4999: Capstone Project (3 hours)
 Data Science Elective (3 hours)
 Data Science Elective (3 hours)
 General Elective (3 hours)
 General Elective (2 hours)

Total Hours: 14

120 hours needed to complete the B.S. in Data Science.