Nebraska Wesleyan University

Integrative Data Science (B.A., B.S.)

Catalog

2021-2022

Program Description

The Integrative Data Science major is a technology-oriented liberal arts major that brings together twenty-first century skills in computer programming, quantitative reasoning, collaboration, communication, design, and creative thinking. Students who pursue this major will develop the skills to collaborate with and lead interdisciplinary teams in many industries. By taking courses and pursuing internships in a range of disciplines, students will acquire flexible and integrative problem-solving skills for a rapidly-changing professional environment.

Departments

1. Mathematics and Computer Science

Integrative Data Science Major (B.A. or B.S.**, 44-47 hours plus supporting program)

Programming and Quantitative Research	20-22 hours
CMPSC 1000 Introduction to Computational Problem Solving	3 hours
CMPSC 1500 Program Design	4 hours
CMPSC 2000 Data Structures	4 hours
CMPSC 3100 Data Visualization	4 hours
BUSAD 3300 Quantitative Methods	3 hours
Statistics course (take one of the following): • BUSAD 2100 Business and Economic Statistics • MATH 1300 Statistics • MATH 3300 Mathematical Statistics I • POLSC 2000 Introduction to Political Science Statistics • PSYCH 2100 Psychological Statistics • SOC 2910 Social Statistics	2-4 hours
Visual Communication	**8 hours**
ART 1050 Art Research	4 hours
ART 1200 Introduction to Digital Media	4 hours
Professional Communication and Leadership	**7 hours**
BUSAD 2500 Principles of Management or LEAD 3100 Introduction to Leadership	3 hours
COMM 4100 Communication in the Professions or ENG 3150 Professional and Community Writing	4 hours
Research or Disciplinary Practice	**3-4 hours**

The research or disciplinary practice requirement is a one- or two-course introduction to methods of inquiry and/or techniques of practice central to the supporting program. Examples are provided below, but students may propose alternatives. • BUSAD 3100 Managing Information Systems • COMM 3500 Research Methods • ENG 2000 Introduction to Textual Studies • HHP 4800 Research And Statistical Methods AND HHP 4810 Senior Research • HIST 2800 Historical Methods • IDS 2020 Design Labs • MATH 4980 Mathematics Seminar • POLSC 3010 Research Methods: Qualitative Research AND POLSC 3020 Research Methods: Quantitative Research • PSYCH 2110 Research Methods in Psychology • SOC 3930 Quantitative Research Methods (SOC 3940 Qualitative Research Methods also recommended) • SOCWK 4650 Research Informed Practice	3-4 hours
Experiential Learning Capstone	**6 hours**
CMPSC 4980 Capstone Project	3 hours
CMPSC 4970 Internship	3 hours
Required Supporting Program	**20 hours**
In addition to the major requirements listed above, students must also complete a minor or major (hereinafter referred to as a "supporting program") in another discipline. The supporting program serves as a context in which students can exercise the skills developed in the core of the major. Students with a supporting program in a natural, health, or social science will earn a B.S. in Integrative Data Science. Students with a supporting program in an arts or humanities discipline will earn a B.A. in Integrative Data Science. (Students may not choose Computer Science as their supporting program.) The Program Director will approve the student's major or minor choice for the supporting program.	

***An Integrative Data Science major may earn either a B.A. or B.S. degree. The Program Director will help the student determine which degree is appropriate based on the student's supporting program.*