ANALYTICS AND DATA SCIENCE MAJOR: ANALYTICS OPTION (B.S.)

https://ceps.unh.edu/computer-science/program/bs/analytics-data-science-major-analytics-option

Description

The option in Analytics is intended for students interested in either heading into industry immediately upon graduation, or pursuing graduate work in a professionally oriented program such as the Master of Science in Analytics at UNH. The option in Analytics places its emphasis on applications of data science in business and industry.

Program Objectives

This program has been designed to prepare students for professional careers working with data, with an emphasis on the extraction of meaning from data. The program is not targeted to any one industry; rather, it provides a flexible, practical skillset that can be applied widely. This skillset includes elements of computer science, applied mathematics and statistics, communication skills, and business savvy. Graduates of the bachelor of science in analytics and data science program are expected to have:

- An understanding of the role of data in guiding decision-making in industry
- An understanding of how data is generated, stored, and accessed
- An understanding of data security
- An understanding of the ethical use of data
- An understanding of structured vs. unstructured data
- An understanding of the methods, statistical and other, used to derive actionable information from data
- Experience with multiple programming languages
- Experience with multiple statistical and data analysis software programs
- The ability to communicate detailed, technical information to a variety of audiences clearly and concisely, without the use of jargon
- The ability to work effectively, both as an individual or as a member of a team
- The ability to successfully lead a team
- The ability to adapt to a dynamic, rapidly changing work environment
- Completed projects and other work experiences on a larger scale than is typical in a bachelor's degree program.

During the course of the program, students will demonstrate their acquisition of these skills by successfully completing their program coursework, their internship experience, and their capstone project.

Requirements

Successful completion of the program entails earning at least 128 credits, meeting the requirements of the University’s Discovery program, completing all of the 24 required courses in the major as listed below, including the capstone course, the internship preparedness course, and a three-credit internship. In all major courses, the minimum allowable grade is a C-. The minimum overall GPA for graduation is 2.0. Transfer students may transfer up to a maximum of 32 credits to satisfy major requirements (not counting those courses used to satisfy Discovery requirements).

Program Requirements

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For additional information about the Analytics and Data Science: Analytics Option, contact Wheeler Ruml, program co-director (Durham campus), at wheeler.ruml@unh.edu or Jeremiah Johnson.
program co-director (Manchester campus), at (603) 641-4127 or jeremiah.johnson@unh.edu.

Student Learning Outcomes

• Analyze a complex computing problem and to apply principles of computing and other relevant disciplines to identify solutions.
• Design, implement, and evaluate a computing-based solution to meet a given set of computing requirements in the context of the program’s discipline.
• Communicate effectively in a variety of professional contexts.
• Recognize professional responsibilities and make informed judgments in computing practice based on legal and ethical principles.
• Function effectively as a member or leader of a team engaged in activities appropriate to the program’s discipline.
• Apply theory, techniques, and tools throughout the data analysis lifecycle and employ the resulting knowledge to satisfy stakeholders’ needs.