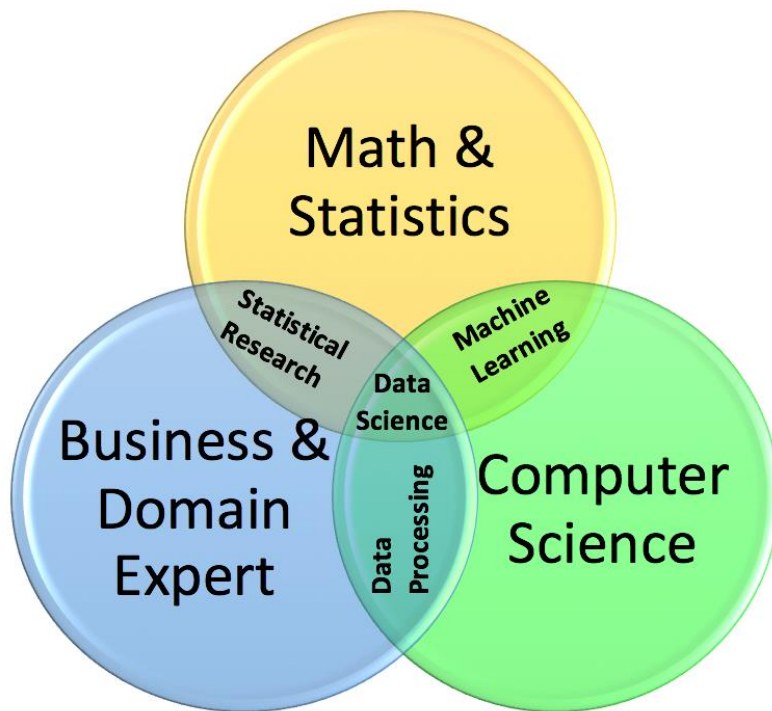


Data Science

WHAT IS DATA SCIENCE?

The discovery of hidden patterns from raw data using various tools, skills, and techniques.



WHAT DOES A DATA SCIENTIST DO?

- Collects massive amounts of data and converts it to an analysis-friendly format;
- Helps solve STEM or business-related challenges while using data-driven techniques and tools;
- Uses a variety of programming languages and programs for data collection and analysis;
- Communicates findings and suggestions through effective visuals and comprehensive reports;
- Identifies patterns and trends in data;
- Provides improvement plans and anticipate future demands;
- Contributes to data mining architecture, modeling, reporting, and analysis methods;
- Invents new algorithms to solve problems and build analytical tools.

WHERE DO I START?

DATA SCIENCE A.S. DEGREE

TRANSFER AND EARN A BA/BS DEGREE

FACULTY ADVISOR

Crystal Wiggins

cwiggins@nwcc.edu

Technology Studies: Data Science Option

Associate of Science Degree

Mission

Consultation with a faculty advisor is strongly recommended. The Technology Studies – Data Science Option associate degree program prepares students primarily to transfer to complete a B.S. degree in Data Science or Technology Management. Graduates will receive a background in mathematics, science, data literacy, programming, and general education courses for transfer into a four-year program.

Outcomes

Upon successful completion of all program requirements, graduates should be able to:

1. Transition seamlessly into a Bachelor of Science Degree Program in Data Science or Technology Management
2. Apply appropriate mathematical and scientific principles to Data Science applications.
3. Demonstrate proficiency in technical fundamentals to analyze and resolve technology problems.
4. Apply knowledge and skills to develop, interpret, and select appropriate technological processes.
5. Demonstrate the ability to assist in research, development, design, production, testing and various other functions associated with Data Science.
6. Demonstrate a good understanding of Data Science principles/concepts.
7. Demonstrate a good understanding of mathematical concepts.
8. Demonstrate the ability to think through a problem in a logical manner.
9. Organize and carry through to conclusion the solution to a problem.
10. Demonstrate good communication skills.
11. Demonstrate teamwork skills.

Coursework

This is the suggested course sequence for full-time students who aim to graduate in two years.

Semester 1

ENG*101 Composition – 3 credits

MAT*167 Principles of Statistics – 3 credits

MAT*186 Pre-Calculus – 4 credits

CHE*121 General Chemistry OR CHE*111 Concepts of Chemistry – 4 credits

History or Economics Elective – 3 credits

Total credits: 17

Semester 2

COM*173 Public Speaking – 3 credits

ENG 202 Technical Writing – 3 credits

MAT*222 Statistics II with Technology Apps – 3 credits

CAD or Directed Elective – 3 credits

Psychology or Sociology Elective – 3 credits

Total credits: 15

Semester 3

DTS*201 Data Science in R – 3 credits

PHY*121 General Physics OR PHY*110 Intro to Physics – 4 credits

Math or Programming or Computer Applications Elective – 3 credits

Directed Elective – 3 credits

MAT* 254 Calculus I - 4 credits

Total credits: 17

Semester 4

DTS*220 Intro to Machine Learning – 3 credits

Math or Programming Elective – 3 credits

Math or Programming Elective – 3 credits

Geography or Political Science Elective – 3 credits

Directed Elective – 3 credits

Fine Arts Elective – 3 credits

Total credits: 18

Total Credits 67