

DATA SCIENCE (MS)

The program provides students with the skills and knowledge to be successful in a data science career. At the end of program, graduates have the skills to analyze large datasets and to develop modeling solutions to support decision-making, a good understanding of the fundamental principles of marketing and customer relationship management, and communication skills to present results effectively to a non-technical business audience.

Concentrations

Computational Methods Concentration

The Computational Methods concentration addresses the increasing demand of data scientist with strong technical knowledge and skills to manage and extract information from massive amounts of data. This concentration is recommended for students who are interested in the more technical aspects of data science.

Health Care Concentration

The Health Care concentration addresses the increasing need of data scientists responsible for gathering, integrating, analyzing and presenting health care data. Students will learn analytics methods to support clinical decision systems, to improve patients' outcomes and patients' experience, and to improve clinical care and costs.

Marketing Concentration

The Marketing concentration is designed for data science master's students who want to combine strong technical skills in analytics with competency in marketing analytics and customer relationship management. You'll learn how to extract information and gain insights from data to support business decision making and marketing decisions.

Program Requirements	Quarter Hours
Introductory Courses	0-12
Degree Requirements	48
Total hours required	48-60

Learning Outcomes

Students will be able to:

- Explain how data is represented for analytic applications.
- Select and apply techniques for data preparation including normalization and reduction.
- Develop and evaluate predictive models.
- Perform an independent data science investigation, from data gathering and cleaning to application of data mining algorithms to interpretation of results.

Degree Requirements

Course Requirements

No Introductory Course may be substituted for any other course at any level.

Introductory, Foundation, Advanced, and Elective course selections are determined by the concentration chosen.

Introductory Courses

Introductory courses may be waived for any of the following conditions:

- The student has the appropriate course work to satisfy an Introductory Course.
- The student has appropriate and verified professional experience to satisfy an Introductory Course.
- If an exam is available, the student passes a Graduate Assessment Examination (GAE) in the Introductory Course area.

Degree Requirements

Students in this degree program must meet the following requirements:

- Complete a minimum of 48 graduate credit hours in addition to any required introductory courses of the designated degree program.
- Complete all graduate courses and requirements listed in the designated degree program.
- Earn a grade of C- or better in all courses of the designated degree program.
- Maintain a cumulative GPA of 2.5 or higher.
- Students pursuing a second (or more) graduate degree may not double count or retake any course that applied toward the completion of a prior graduate degree. If a required course in the second degree was already completed and applied toward a previous degree, the student must meet with a faculty advisor to discuss a new course to be completed and substituted in the new degree. This rule also applies to cross-listed courses, which are considered to be the same course but offered under different subjects.
- Students pursuing a second master's degree must complete a minimum of 48 graduate credit hours beyond their first designated degree program in addition to any required introductory courses in their second designated degree program.

Students with a GPA of 3.9 or higher will graduate with distinction.

Concentration Requirements

Concentrations, tracks and specializations provide focus to the degree. In addition to any degree requirements, students are required to choose one of the following:

- Computational Methods Concentration, Data Science (MS) (<https://catalog.depaul.edu/programs/data-science-ms/computational-methods-concentration-data-science-ms/>)
- Health Care Concentration, Data Science (MS) (<https://catalog.depaul.edu/programs/data-science-ms/health-care-concentration-data-science-ms/>)
- Marketing Concentration, Data Science (MS) (<https://catalog.depaul.edu/programs/data-science-ms/marketing-concentration-data-science-ms/>)