

MASTER OF SCIENCE IN DATA SCIENCE

Program of Study

Total: 36 units

Bridging Courses in Mathematics

In the event where the student has insufficient preparation in mathematics, the Department may prescribe up to 6 units of mathematics as bridging courses (at the undergraduate or graduate level) to fulfill the mathematics requirement. This bridging component must be taken before the Applied Statistics course.

Foundation Courses: 15 units

CSCI 205	Programming with Databases	3 units
CSCI 217	Data Visualization	3 units
CSCI 271	Data Mining	3 units
CSCI 273	Big Data Processing	3 units
MATH 271.1	Statistical Methods	3 units

Methods and Domains Courses: 15 units

Methods and Domains courses tackle the various techniques and application domains that have emerged in the data science field. These include machine learning, pattern recognition, natural language processing, computer vision, social computing, and cloud computing. Students are expected to take 15 units from this grouping.

CSCI 213	Business Intelligence	3 units
CSCI 214	Pattern Recognition	3 units
CSCI 215	Computer Simulation and Modeling	3 units
CSCI 243	Affective Computing	3 units
CSCI 261.03	Introduction to Social Computing	3 units
CSCI 272	Machine Learning	3 units
CSCI 274	Big Data Project Management	3 units
CSCI 275	Computational Science	3 units
CSCI 282.05	Financial Applications	3 units
CSCI 282.06	Natural Language Processing	3 units
CSCI 282.07	Geographic Information Systems and Geospatial Analytics	3 units

Or other courses that cover methods or domains in data science

Thesis Writing and Oral Defense: 6 units

CSCI 299.1	Thesis Writing I
CSCI 299.2	Thesis Writing II

Publication Requirement

Students under this program must prepare a manuscript regarding their thesis work that is ready for submission to a reputable national or international journal or conference.