DATA SCIENCE (DATA)

DATA 125 SURVEY OF DATA SCIENCE (4 credits)
Introduction to emerging field of data science. Topics include necessary math and statistics principles, introduction to computer tools and software for data analytics, overview of algorithms.
Typically offered: Fall Semester, Annually
(QUANTITATIVE REASONING)

DATA 135 FAIRNESS AND RESPONSIBILITY IN DATA SCI (4 credits)
Discussion and readings of ethical issues in data science including how data is collected andused in decision-making, and how algorithms are impacting peoples lives. Major themes will include issues of fairness, bias, privacy, and transparency.
Typically offered: Spring Semester, Even Years
(ULTIMATE QUESTIONS)

DATA 225 INTRODUCTION TO VISUALIZATIONS (4 credits)
Creating data visualizations using Excel, R, and Python. Discussions of different types of visual aids. Methods to improve common ineffective visualizations.

DATA 445 MACHINE LEARNING (4 credits)
Basic theory and practice of machine learning algorithms. Topics include regression, classification, supervised and unsupervised learning, deep learning, and other statistical modeling tools. Includes programming projects and in-class labs.
Prerequisites: DATA 125, MATH 250, MATH 140 or 340, COMP 260.
Typically offered: Spring Semester, Annually
(QUANTITATIVE REASONING)

DATA 485 SENIOR SEMINAR (3 credits)
Department capstone course. Examination of the nature of mathematics and its role within liberal arts. Focus on reading current mathematics, writing survey article, and presenting results. (Listed as DATA 485 and MATH 485)
(MAJOR WRITING INTENSIVE)

DATA 488 DATA SCIENCE CONSULTING (3 credits)
Applied data science in team setting, project based. Training in data science consulting; assisting in collaboration with faculty and/or clients on pre-determined projects.
Prerequisites: DATA 225, DATA 445.

DATA 490 CAPSTONE PROJECT (4 credits)
Research or software application development on topic within discipline of interest. (Listed as COMP 490 and DATA 490)