Data Science

Data Science (DATA) Classes

DATA210G : Elements of Data Science

This course is the foundation for introducing students to key topics in data science, including data acquisition/preparation and exploratory data analysis. Major topics include an introduction to the R programming language and RStudio integrated development environment, working with modern data formats (e.g. XML, CSV, JSON, XLS, XHTML), data import/export (e.g. files, APIs – application programming interfaces – , web sites, databases), finding data to augment analyses, and exploratory data analysis & visualization.
Credits 3
Theory Hours 3

Lab Hours 0
Prerequisites
MATH145G/147G or MATH150G/152G or higher. Some prior programming experience is helpful but not required
Semester Offered
Fall/Spring semesters

DATA220G : Data Analysis with R

This course is an applied statistics course that introduces students to key topics in data science, including exploration, statistical data analysis and communicating the results of data analyses. Major topics include advanced R programming language concepts, working as a standalone data analyst and within a team, organizing analysis projects, modeling with univariate, bivariate and multivariate data and basic clustering, classification and time series analysis and forecasting.
Credits 3
Theory Hours 3

Lab Hours 0
Prerequisites
C or better in DATA210G (or by department approval) and MATH235G (may be co-requisite)
Semester Offered
Spring semester

DATA225G : Analytics Capstone

This course serves as a final project for students who are seeking either the Certificate in Practical Data Science or the Associate Degree in Analytics. Students will need to combine knowledge gained in Statistics, including descriptive statistics, regression and analysis of variance, as well as advanced R programming language concepts and data extraction techniques to research a topic, perform data analysis and create a reproducible report.
Credits 2
Theory Hours 2

Lab Hours 0
Prerequisites

Successful completion of [DATA220G](#) and [MATH235G](#) with a C or better or by dept/program advisor approval
Semester Offered
Spring semester