DATA SCIENCE ANALYTICS (DSA)

DSA-201: Introduction to Data Science and Analytics (3 Credits)
In this course students are introduced to the fundamental concepts and tools of data science and analytics. Topics include the "data science life-cycle," programming environment such as R or Python, data collection and sampling in real-world problems, unstructured data, brief review of descriptive statistics and statistical plots, data transformations and missing data, visualization of multivariate data, clustering, univariate and multivariate regression, confirmatory data analysis.

DSA-202: Data Analysis and Visualization (3 Credits)
Pre-requisite(s): DSA-201 and CSC-103 are required., STA-173 or a MTH course numbered 172 or higher are required.
In this course students study data structures, data representation, data cleaning, visualization techniques, software for visualization and analysis, data patterns, time-dependent data, hypothesis generation, and descriptive statistics. Use of software such as Python along with selected data-science-related Python libraries and Tableau.