Course Description
This course is intended to provide an introduction into the field of Data Science. Students will

Joins
Arrays
Functions
Modeling/mining the data

Correlation
Chance
Decisions and error probabilities
Classification
Confidence intervals
Simulations
Empirical, Categorical, and Numerical Distributions
Assessing Models

Data visualization - (including graphs, charts, and histograms - univariate qualitative, univariate quantitative, bivariate)
Communication of the Data Science Findings and What It Means
Converting data into actionable information and the role of data in decision making at various levels of society

Accuracy
Misrepresentation
Privacy
Security

A/B Testing
Experiments
Hypothesis testing
Regression/Least squares
Prediction intervals
Inference for the true slope
Bootstrap
Bagging
Clustering
Frequent Patterns (Shopping Basket Analysis)
Information Retrieval
Anomaly Detection

Legal issues surrounding data
Causality and Experiments

The Foundations of Data Science By Ani