

# SE 447 : Introduction to Machine Learning

This course introduces machine learning with a practical approach covering some of the most common learning models, algorithms, tools, and techniques. From supervised learning, it covers linear regression, logistic regression, and neural networks. From unsupervised learning, it covers K-means clustering, dimensionality reduction (principal component analysis), and anomaly detection. The course also discusses practical aspects considered when applying machine learning: data visualization, model selection, flow, model evaluation (testing, validation, overfitting, underfitting, bias, variance), regularization, and large scale machine learning.

**Credits** 3

**Lab Hours** 0

**Lecture Hours** 3

**Tutoring Hours** 0

**Prerequisite Courses**

SE 312

SE 314