

Course Code            Course Title  
**COMP 4211**            **Machine Learning**

Course Description

Fundamentals of machine learning. Concept learning. Evaluating hypotheses. Supervised learning, unsupervised learning and reinforcement learning. Bayesian learning. Ensemble Methods. Deep learning.

List of Topics

Topics to be covered

- Introduction to machine learning
- Supervised learning
  - deep networks (perceptrons, multilayer perceptron, convolutional neural networks, recurrent neural networks)
  - traditional supervised learning algorithms: naive Bayes classifiers, decision trees, ...
- Unsupervised learning
  - clustering, principal component analysis, generative adversarial network,
- Reinforcement learning
  - Q learning, deep reinforcement learning

Textbooks

N/A

Reference books

N/A

Grading Scheme

3 assignments	30%
Midterm	20%
Final examination	50%
Total	100%

Course Intended Learning Outcomes

N/A

Assessment Rubrics

N/A