

Course Code            Course Title  
**COMP 3211            Fundamentals of Artificial Intelligence**

Course Description

Foundations underlying design of intelligent systems. Relations between logical, statistical, cognitive, biological paradigms; basic techniques for heuristic search, theorem proving, knowledge representation, adaptation; applications in vision, language, planning, expert systems.

List of Topics

Topics to be covered

- Introduction to AI
- Machine Learning
  - Overview, Neural Network, Generalization, Cross-validation, Unsupervised learning
- Problem-solving by search
  - Uninformed Search, Informed Search, Constraint Satisfaction
- Markov Decision Processes and Reinforcement Learning
- Games
  - minimax, Alpha-beta pruning
- Probabilistic Reasoning
- Logic
  - Propositional logic, First-order logic
- AI Applications

Textbooks

N/A

Reference books

N/A

Grading Scheme

3 assignments	40%
Midterm	20%
Final examination	40%
Total	100%

Course Intended Learning Outcomes

N/A

Assessment Rubrics

N/A