CMPT 310 - D100 Artificial Intelligence Survey

Instructor(s): Toby Donaldson

SFU Burnaby

Calendar Objective/Description:
Provides a unified discussion of the fundamental approaches to the problems in artificial intelligence. The topics considered are: representational typology and search methods; game playing, heuristic programming; pattern recognition and classification; theorem-proving; question-answering systems; natural language understanding; computer vision.

Instructor’s Objectives:
This course is a broad introduction to the techniques, methodology, and theory of Artificial Intelligence. Depending on time and class interest, the following topics will be discussed.

Prerequisites:
CMPT 225 and (MACM 101 or ENSC 251 and ENSC 252)). Students with credit for CMPT 410 may not take this course for further credit.

Topics:
- Meaning, goals, methods and languages of Artificial Intelligence.
- Knowledge representation.
- Inference in first order logic; logic programming.
- Intelligent searching and planning.
- Natural Language Understanding.
- Robotics.
- Machine learning (e.g. neural networks, decision trees).
- Decision making under uncertainty.
- Philosophical foundations, ethical Issues, and future expectations.

Grading:
Grading will be announced the first week of class.
Students must attain an overall passing grade on the weighted average of exams in the course in order to obtain a clear pass (C- or better).

Required Books:

Academic Honesty Statement:
Academic honesty plays a key role in our efforts to maintain a high standard of academic excellence and integrity. Students are advised that ALL acts of intellectual dishonesty will be handled in accordance with the SFU Academic Honesty and Student Conduct Policies (http://www.sfu.ca/policies/gazette/student.html).