Computing Science Course Outlines 2019 Summer

CMPT 310 - D100 Artificial Intelligence Survey

Instructor(s): Toby Donaldson

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 ).