CMPT 310: Artificial Intelligence Survey

Spring 2018
Course Information

Instructor:
Jim Delgrande, T9015; email: jim
Office hours: Tues., Thurs. 2:00-3:00

TA:
Mahmoud Khademi, email: mkhademi
Office hours: Wed., Fri. 10:00-11:00 in CSIL (ASB9810)

Lecture Hours:  MWF 11:30 – 12:30
Lecture Room:  M: AQ3003, WF: AQ3159

Course Home Page: www.cs.sfu.ca/CourseCentral/310/jim
Course Info

Goal:
Introduction to Artificial Intelligence

- Survey current work
- Look at historically-important topics.
- Examine representational issues and reasoning in AI.

⚠️ Can’t hope to cover all topics, given the scope of the field

Prerequisites:

- CMPT 225 and (MACM 101 or (ENSC 251 and ENSC 252)).
- *Interest*
Course Grading

Grading

- 40% - 4 assignments, each worth 10%
- 20% - midterm test
- 40% - final exam

- The final is Friday, April 13, 08:30 – 10:30
- You *must* be able to make the final.
Course Grading

Letter Grades
Letter grades will be assigned as follows:
\[\begin{align*}
A+ & : \geq 90, & A & : 84-89, & A- & : 80-83, \\
B+ & : 77-79, & B & : 74-76, & B- & : 70-73, \\
D & : 50-57, & F & : < 50.
\end{align*}\]

Note

- In calculating a final mark, grades will not be scaled down.
- They might be scaled up, but this is rare.
Course Policies

Coursework and Academic Honesty

• All course work must be done individually by each student.
• It’s ok to discuss general principles and directions for an assignment, but the solutions you submit must be yours i.e., you must have created them entirely on your own.
• Failing to do so will be considered academic dishonesty and appropriate penalties will be applied.
• If you’re in doubt, please ask.
Course Policies

Marking Issues

• For questions concerning the assignments, please see the TA first, and then talk to me if you still have concerns.

• If you have any concerns regarding grading of an assignment or a test, please notify myself or the TA within one week of the material being handed back.
Even More Course Policies

Office Hours and Email

- Please use email only for brief questions or for points of clarification.
- For longer questions or problems please see the TA or myself during office hours.

Due Dates

Unless announced otherwise, all assignments are due at 23:59 on the given date; and late assignments will not be graded.
Text and references

Textbook:

AI References:
The following may prove useful for supplemental material.


- Lots of others...
Language

- Previous offerings of CMPT 310 that I’ve taught used the programming language *Scheme* for assignments.
- Given time constraints, this time we’ll be using Python.
- If you would like to use another language for an assignment, please see the TA first.
Topics

Outline (may be subject to change):

1. Introduction
2. Search: Uninformed, informed, adversarial
3. Constraint satisfaction
4. Logical Agents
5. Planning
6. Reasoning under uncertainty (probability)
7. Bayesian networks
8. Learning
9. Neural Networks
Beyond 310

Other AI Courses:

CMPT 411: Knowledge representation
CMPT 412: Computational vision
CMPT 413: Computational linguistics
CMPT 414: Model-based computer vision
CMPT 417: Intelligent systems
CMPT 419: Special topics in artificial intelligence (Often offered as machine learning)