

Syllabus of CSC 242: Artificial Intelligence

January 15, 2015

1 Course Objective

This course is a prerequisite course for many advanced AI courses. It aims at providing students basic concepts and popular algorithms in AI.

2 Basic Information

- Instructor: Professor Ji Liu
- Time: TR 2:00 - 3:15pm
- Classroom: MEL 203
- Email: jliu@cs.rochester.edu
- Graduate TAs:
Tianran Hu (chuankui.hu@gmail.com)
Xitong Yang (yangxitongbob@gmail.com)
- Undergraduate TAs:
Jacob Bisnett (jbisnett@u.rochester.edu)
Sean Esterkin (sesterki@u.rochester.edu)
- Lecturer Office Hour: TR 3:20 - 4:20pm (start from the 2nd week) CSB 614
- TA Office Hour (start from the 3rd week): M 12:30-1:30pm Hylan lab 301, W 2:00-3:00pm CSB 603

3 Textbook

- Artificial Intelligence: A Modern Approach (3rd edition), Stuart Russell and Peter Norvig
- Pattern Recognition and Machine Learning, Christopher M. Bishop

4 Topics

- Machine learning (Clustering, Classification, Decision tree)
- Search (Uninformed search, Informed search A^* algorithm, Game theory)
- Logic (Propositional Logic, Order Logic)

5 Point Distribution and Grading Scheme (Total points: 105)

Point Distribution:

- 6-8 homework: 60 points
- 2-3 exams: 45 points

Grading Scheme:

- A: ≥ 95 or above top 10%
- A-: ≥ 90 or above top 20%
- B+: ≥ 80 or above top 35%
- B: ≥ 70 or above top 50%
- C: ≥ 60 or above top 70%
- D: ≥ 50
- E: < 50

6 Late Penalties

All assignments are due at the beginning of class on the due date. One (1) day late, defined as a 24-hour period from the deadline (weekday or weekend), will result in 30% of the total points for the assignment deducted. So, for example, if an 120-point assignment is due on a Wednesday at 8am but it is handed in between Wednesday 8:01am and Thursday 8am, 36 points will be deducted from the point you received from this homework or project. A total of two (2) free late days may be used throughout the semester without penalty. You can choose to use zero, one, or two free late days toward any one late homework, depending on availability. You must specify on the first page of your late homework how many free late days to use.

7 Pre-requisite

- MTH 150 and CSC 172
- You also need to know fundamental concepts in calculus, linear algebra and probability theory, for example, vector, matrix, Bayes' rule, differential (derivative), and integral.
- JAVA is the required programming language in CSC 172. Therefore, students are assumed to be capable of programming in JAVA. It would be better if you know one script language such as Matlab, R, and Python. In some homework, the script language is more convenient than JAVA. How to program is not the responsibility of this course. If you are unfamiliar with any programming language, probably you need to reconsider if you should take this course. We would not respond any request for debugging in email .

8 Academic Honesty Policy (steal from ECE 450)

The University of Rochester academic honesty policy applies to all assignments and exams for this class. The full-text of the academic honesty policy can be found at: <http://www.rochester.edu/College/CCAS/AdviserHandbook/AcadHonesty.html> In addition to the general guidelines mentioned in the above policy, for this course I require that: In examinations, you must work individually with no communication with

others and use only materials/tools that have been explicitly allowed. For homework, you may discuss problems with your colleagues but final solutions need to be worked out, written and submitted individually. Any external material used should be clearly cited. In your own writings (example term papers, homework solutions, proposals etc), no more than one or two sentences may be used verbatim from any source.

READ THESE INSTRUCTIONS CAREFULLY! If any aspect of the academic honesty policy and guidelines for this course are unclear, please ask me for clarifications. Lack of awareness or understanding of this policy will not be an acceptable excuse or defense against disciplinary action.