Syllabus: CS345 Survey of Artificial Intelligence

Course Number: CS345-01

Course Title: Survey of Artificial Intelligence Concepts and Practices

Instructor: Richard Scherl

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Class Times: Mondays 2:00 –3:50  Wednesdays 2:00 - 3:50

Class Location: E113

Office Hours: Mondays 4:00-5:30; Tuesdays 4:00-5:30; Other times by appointment.

Texts:


Expected Work: Regular reading assignments, two midterm examinations, a number of homework assignments, and a final examination.

Class Day Changes: On the Mondays September 10, October 1, November 5 and December 3 we will not have class. Class will be held on the following Fridays instead: September 14, October 5, November 9, and December 7.

Ecampus All computer-generated overheads and handouts will be put ecampus.

Grading:

+ Midterms 25 %
+ Final 25 %
+ Homeworks 40 %
+ Quizes 10 %
Exam Dates Midterms to be announced, Final during exam week.

Class Participation: If you miss a class, it is your responsibility to find out about any announcements made in class, and about the material covered. Similarly you are responsible for all information included in any assignments whether handed out or transmitted online and for all the information in this syllabus. Class participation is strongly encouraged, but you will not be graded for your class participation. Feel free to ask questions. When in doubt, ASK.

Late Policies: Homeworks should be handed in on the date due. The deduction for late homeworks is 5% per day up till 1 week late. Late homeworks may not be handed in by email except by special arrangement under special circumstances. They should be handed in to me directly. If you leave them in my mail box or under my door, you should also send me an email saying that you left it. They may also be mailed in by U.S. mail with the postmark date being used as the date handed in. After the one week has ended, late homeworks can be corrected, but will not receive credit as the solutions will have been discussed in class.

Computer: All students will need an account on rockhopper. You may do your assignments on any machine (including your own PC), but I can only guarantee that code I distribute will work as intended on rockhopper.

Prerequisites: Completion of CS176. Some familiarity with Unix. CS305, Recommended.

Goals of the Course: This is an introductory artificial intelligence course that will cover theoretical issues, applications and implementation techniques. The purpose of this course is to familiarize you with the basic techniques of artificial intelligence.

Academic Honesty: Cheating in this course will not be tolerated. The penalty is likely to be an F in the course and may very well lead to expulsion from Monmouth University. All such cases will be handled as outlined in the Monmouth University Student Handbook.

Homeworks may NOT be solved in collaboration. You may talk about problems with each other. Where does talking end and cheating start? My rule of thumb is: you may not have a pen/pencil in your hand while you are talking (and no keyboard!).

Special Accommodations Students needing accommodations are encouraged to see me during office hours or to make a specific appointment to discuss their needs. Students with disabilities who need special accommodations for this class are encouraged to meet with me and/or the appropriate disability service provider on campus as soon as possible. In order to receive accommodations, students must be registered with the appropriate disability service provider on campus as set forth in the student handbook.
and must follow the University procedure for self-disclosure, which is stated in the University Guide to Services and Accommodations for Students with Disabilities. Students will not be afforded any special accommodations for academic work completed prior to the disclosure of the disability and prior to completion of the documentation process with the appropriate disability service office.

**Regrades** All disagreements about grading must be discussed in my office only. A request for an assignment or exam to be regrades must include a written note explaining the disagreement and also the original exam or assignment. These requests may be submitted in class or in my office. Regrade requests for a particular exam or assignment can only be accepted until the next test or assignment is due.

**Topics** A very tentative schedule, subject to change.

- **Week 1** Introduction, Beginning Python
- **Week 2** Agents, Representation, More Python
- **Week 3** Logic
- **Week 4** Search
- **Week 5** Informed Search
- **Week 6** Knowledge Representation, Logic Programming
- **Week 7** Inference in 1st Order Logic
- **Week 8** Python Robotics Simulation
- **Week 9** Planning
- **Week 10** Neural Networks
- **Week 11** Uncertainty
- **Week 12** Machine Learning
- **Week 13** NLP
- **Week 14** Conclusions

**Initial Assignment** Chapters 1 and 2 of Russell and Norvig. You do not need to know all the details from Chapter 1. Skim through Part I of Lutz and Ascher.