CS 4100/5100: Foundations of Artificial Intelligence, Fall 2013

Northeastern University
Thursdays, 6pm–9pm, Shillman Hall 320

Course Information:

Course website: `http://www.cse.buffalo.edu/~robplatt/cs5100/index.html`

Primary Instructor: Professor Robert Platt
email: r.platt@neu.edu
Office: 208B West Village H
Office hours: TBD, or by appointment

TA: Maryam Aziz
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Lab: 472 West Village H
Office hours: Monday 8am - 10am

TA: Yupeng Gu
email: ypgu@ccs.neu.edu
Lab: 208 West Village H
Office hours: 9:30 to 11:30 am on Wednesday

Prerequisites: CS 2800 and CS 3500.

Reading: The primary textbook for this course is *Artificial Intelligence, A Modern Approach*, 3rd ed. Please make sure you get the third edition. Additional readings may also be assigned as described on the course website.

Course Description:

This course will introduce the student to the fundamentals of artificial intelligence including the following topics:

- Search

    - classical search
    - optimization
    - adversarial search / game playing
    - constraint satisfaction

- Introduction to logic and planning

- Reasoning under uncertainty

    - Bayesian representations
    - exact and approximate inference
    - decision theory

- Machine learning

    - Linear classification
    - Nonparametric learning
    - Statistical learning / Expectation Maximization

Attendance: Most class periods will begin with a short quiz that tests basic facts from the reading. Taken together, these quizzes will comprise 10% of your grade. If you miss a class, then you will also miss the associated quiz. This will result in a zero for that quiz. I will drop the lowest two quiz grades. If you expect to miss more than two classes, please talk to me.

Collaboration Policy: Students are encouraged to read and study the material in groups. However, all homework assignments must be completely on your own. You may not collaborate on the homework assignments in any way. If you have a question about a homework, please talk to me or the TAs.

Late homework policy: Assignments are due at 5pm on the due date. Late assignments will be penalized by 10% for each day late. For example, if you turned in a perfect homework assignment two days late, you would receive an 80% instead of 100%.

Grade Breakdown:
In-class quizzes, 10%
Midterm exam, 20%
Final exam, 20%
Homework assignments, 50%

Schedule: Subject to change. See course website.