EECS 348 – Introduction to Artificial Intelligence
Spring Quarter 2015
Professor Sara Owsley Sood

COURSE OVERVIEW:

In this course, you will be introduced to various topics in the broad field of Artificial Intelligence. While it is not possible to introduce you to all subfields of Artificial Intelligence in one semester, you will be exposed to the following topics (note that some may be dropped if we run out of time): Problem Solving via Search, Game Playing, Logical Agents, Reasoning, Speech Recognition, Natural Language Processing, Utility Theory, and Machine Learning. In addition to a firm understanding of these topics and the associated techniques and algorithms, I hope that you also leave this class with an awareness of the state of research in this field, as well as the current challenges.

REQUIRED TEXTBOOK:

Russell, Stuart and Norvig, Peter. (2010) Artificial Intelligence: A Modern Approach (Third Edition). New Jersey, Prentice Hall.

The readings will be assigned from the third edition of this text. If you are using an older version, you can look at the table of contents of the third edition and attempt to map the content as the chapter numbers will differ:
http://aima.cs.berkeley.edu/contents.html.

PREREQUISITES: EECS 111

ASSIGNMENTS:

Approximately every two weeks, you will be given an assignment. The assignments will ask you to implement an algorithm (in Python) that we have discussed in class and apply it to a real-world problem. Some assignments (likely only the first assignment) will require that you work on your own (labeled SOLO), while you will have an option to work in a group (of up to 3 students total) on others (labeled GROUP). You may also have one-two written assignment (related to logical reasoning).

READINGS:

Readings will be taken from the textbook as well as from recent literature. The textbook is quite clear and I strongly recommend that you read it. Material from the readings will be on the exams. The readings for each class (in addition to lecture slides) will be posted on piazza.

(OPTIONAL/UNGRADED) WRITTEN PROBLEMS:

Nearly weekly, I will post written problems related to the lecture and reading content. While these problems are **ungraded and optional**, they will be quite helpful to you in understanding the material and preparing you for assignments and exams.

TIME AND PLACE:

- *Lectures*: Tues, Thurs 12:30-1:50pm (in Tech LR3) by Professor Sood

INSTRUCTOR:

Professor Sara Sood
Ford 3-327
sara.sood@northwestern.edu (please see note below about "Assignment Questions and other Course-related E-mail")
Office Hours: Posted in the 'staff' section (within 'resources') on Piazza.

COURSE ASSISTANTS:

On Piazza, in the 'staff' section (within 'resources'), you will find a list of our course assistants and the times and locations of their mentor hours.

ASSIGNMENT QUESTIONS AND OTHER COURSE_RELATED EMAIL:

When you have questions about an assignment, please post it on Piazza! When you visit Piazza, you should of course first check to make sure that someone else in the class hasn't already asked your question (there's a search tool on the site). Given the size of the class, it is critical that you use Piazza for assignment questions; any assignment questions emailed directly to the Professor or TAs will be forwarded to Piazza. Piazza gives you the option of posting anonymously so that you don't feel intimidated to ask a question. As a general rule, be sure not to post ANY code that would be part of an answer to a problem set question (or the final project). If you have

a question about code that requires you to show the TA or Professor your code, Piazza gives the option of sending a 'private message' to TAs and the Instructor.

Class announcements will also be posted on Piazza, so be sure to monitor the site regularly. When you have questions or concerns about grades or other personal matters in the course, write directly to sara.sood@northwestern.edu.

GRADING:

Assignments	50%
Midterm (TDB – during normal class time)	25%
Final exam (Monday June 8th from 3-5pm)	25%

Grades are assigned on a fixed scale: 93-100 is an A, 90-93 is an A-, 87-90 is a B+, etc. Grades will not be rounded or curved.

Assignments will be approximately every other week. They are due at 11:59pm on the date specified. No late work will be accepted. Thus, an imperfect or incomplete assignment turned in on time is far better than a late assignment. In EXTREME circumstances (e.g, if you leave town for a funeral), you must contact your dean of students and have them contact me if they deem it necessary to give you an extension or make other accommodations.

In your programming assignments, it is critical that you name your functions/classes/files EXACTLY as specified. More generally, failure to follow the specification given in the assignment will result in a score penalty.

Because of the nature and size of the class, we will find it necessary to do some automated testing of your programming assignments. On occasion, this testing/grading may make an error. You will receive your assignment grades via an email from the TA. This note will also indicate that you have **1 week** to appeal this grade via an email to eecs348grades@gmail.com. We will outline a thorough regrade request process prior to your submission of the first assignment.

In other classes, it may be common to "drop the lowest score" for assignments. Each of the assignments are critical to your learning in this class. For that reason, we will NOT drop any scores in this class.

Finally, it is your responsibility to keep up-to-date on class material and announcements. This includes material presented and announcements made in class, via email, or on piazza.

POLICY ON ACADEMIC HONESTY:

In the past, there have been a few unfortunate instances in which students in the class have presented work other than their own. For the programming assignments: You are allowed (encouraged, even!) to discuss general approaches to solving problems, but all work you submit must be your own. Working "together" and presenting variants of the same file is not acceptable unless the assignment is a "GROUP" assignment (in which case, you should only be working closely with members of your group). Here are some specific guidelines to make sure you don't cross the line:

1) Do not exchange programs or program fragments in any form – on paper, via e-mail, or by other means.
2) Do not copy solutions from any source, including the web or previous EECS 348 students.
3) While working with other students, it is perfectly acceptable to 'look' at each other's code (perhaps while helping someone to debug), but you should never be scribing (typing or writing) your own work while looking at someone else's (on a computer screen, paper, whiteboard, etc.).

Contact Professor Sood if you have any questions about what is appropriate.