# Artificial Intelligence CSCI-4150
# Fall 2006

Course: CSCI-4150 CRN: 60105
Lectures: Mon, Thu 12:00-1:50PM DCC 330
Home Page: http://www.cs.rpi.edu/~hollingd/ai

Instructor: Dave Hollinger
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Office Hours: Mon 6-8PM, Thu 3-5PM (or by appt.)

TAs: Cagri Ozcaglar ozcagc@rpi.edu
Joshua Taylor tayloj@rpi.edu
Office Hours will be listed on the course home page.

Texts: Artificial Intelligence, A Modern Approach 2nd ed.
Russel & Norvig
ISBN: 0-13-790395-2

Grading: Tests (2): 30%
Homework/Projects: 40%
Term Paper/Term Project: 30%

**Course Home Page:** The course home page will include homework assignments, lecture notes, references, handouts and announcements. Hardcopy of any class handouts will be provided only on request.

**Homework:** All homework must be done individually unless explicitly stated otherwise in the homework description. Assignments will be submitted electronically (webCT). There will be **significant** programming projects to be done using Scheme. On some projects you will be able to use whatever programming language you want.

**Homework and Test Grading:** Adjustments to homework and test grades will take place only during the week after grades have been returned to students. This means that you must bring any problems to our attention within one week of receiving a grade.

**Cheating will not be tolerated.** Any duplicate or near duplicate submissions will result in a minimum of a 2 letter grade drop for the final course grade for all students involved and may result in a failure for the entire course. For programming projects, you may *discuss* homework with other students (this includes WebCT discussion boards) but sharing of code in any form is not acceptable. Looking at another student's code or showing your code to another student is **not** permitted. If you need help with a project - send mail to Dave and/or the TAs. Please contact the instructor if there is any part of this policy you do not understand.

**Term Project/Paper:** A significant project or paper will be due on December 8th. This project will involve either writing a research paper or survey, and/or code. Details on the term project will be discussed during the second week of class (and made available on the web).

**Tests:** The two tests will be given in class: Monday, October 30th and on Thursday Dec 7th. Each test will cover roughly 1/2 of the course material (the last test is **not** a comprehensive final exam). There is no final exam.

**Tentative Lecture Topic and Reading Schedule**

| Week of | | Topics | Readings |
|---|---|---|---|
| August | 28 | Course Intro, Agents, Scheme Intro | Ch.1,2 |
| September | *4 | Scheme Programming | |
| | 11 | Scheme, Uninformed Search | Ch. 3 |
| | 18 | Scheme, Informed Search | Ch. 4 |
| | 25 | CSP, Search as game playing strategy | Ch. 5, 6 |
| October | 2 | Search & Games | Ch. 6 |
| | 9 | Probability and Probabilistic Reasoning | Ch. 13,14 |
| | 16 | Reasoning over time | Ch. 15 |
| | 23 | Utility Theory, Decision Networks<br>Complex Decisions | Ch 16,17 |
| | 30 | **Test #1 (on the 30th)**<br>Learning and Decision Trees | <br>Ch. 18 |
| November | 6 | Statistical Learning<br>Reinforcement Learning | Ch. 19<br>Ch. 20 |
| | 13 | Propositional Logic<br>First Order Logic | Ch. 7,8 |
| | *20 | First Order Logic, Inference | Ch. 8,9 |
| | 27 | Knowledge Representation | Ch. 10 |
| December | 4 | TBA<br>**Test #2 (on the 7th)** | |

* is short week (one meeting)