Course Description

CMPSC 370
Artificial Intelligence
Spring 2006
Bob Roos

Home page: http://cs.allegheny.edu/~rroos/cs370s2006/

Course Description

My Office Hours:
Tues., Thurs. 9 – 10 a.m., Weds., Thurs. 2 – 4 p.m. and by appointment (e-mail me to set up an appointment).

Grading:
(all percentages are approximate)

- Attendance (lectures, labs) 10%
- Homework and Labs 50%
- Two exams 25%
- Final paper/project 15%

Textbook
Artificial Intelligence Illuminated by Ben Coppin (Jones & Bartlett, 2004).

Catalogue Description
A survey of the theory, computational techniques, and applications of artificial intelligence. Topics include agents, knowledge representation, machine learning, general problem solving, natural language processing, neural networks, evolutionary computation, computer vision, robotics, and philosophical questions.

Departmental Late Policy
The following policy was adopted by the entire computer science department, effective beginning in fall of 2004:

All assignments will have a given due date. The assignment is to be turned in at the beginning of the class on that due date. Late assignments will be accepted for up to one week past the assigned due date with a 10% penalty. All late assignments must be submitted at the beginning of the class that is scheduled one week after the given due date.

Collaboration and the Honor Code
No collaboration on homeworks, quizzes, or exams is permitted unless specifically provided for as part of the assignment. The Department of Computer Science interprets the Honor Code Policy as follows:

Handed out on 18 January 2006
Handout # 1
It is recognized that an important part of the learning process in any course, and particularly in computer science, derives from thoughtful discussions with teachers, student assistants, and fellow students. Such dialogue is encouraged. However, it is necessary to distinguish carefully between the student who discusses the principles underlying a problem with others, and the student who produces assignments that are merely variations on someone else’s work. It will therefore be understood that all assignments submitted to faculty of the Department of Computer Science are to be the original work of the student submitting the assignment, and should be signed in accordance with the provisions of the Honor Code. Appropriate action will be taken when assignments give evidence that they were derived from the work of others. You are encouraged to periodically review the specifics of the Honor Code as stated in the College Catalogue and elsewhere.

**Learning Goals**

Here’s a random list of things I hope you’ll get out of this course. Of course this is not an exhaustive list, and I hope you’ll suggest additions to it:

- some familiarity with the history of AI and some famous AI programs (such as Newell and Simon’s “General Problem Solver” or Lenat’s Cyc project)
- an appreciation of distinctions between “classical” symbolic AI and more modern AI paradigms (connectionism, natural computation paradigms)
- a working knowledge of Common Lisp and Python
- an understanding of some of the “famous” AI algorithms and problem-solving approaches (e.g., alpha-beta pruning, hill-climbing, fundamental ideas of knowledge representation, etc.)
- an understanding of the principles of evolutionary, neural network, and other “soft” computing approaches to AI
- some familiarity with modern AI applications