Introduction to Artificial Intelligence

CS 1571 – Fall 2007

Lecture meeting time: Tuesday, Thursday**:** 11:00 AM- 12:15 PM
Classroom: 5129 Sennott Square (SENSQ)

Instructor:	**Milos Hauskrecht**	**TA:**	**Chenhai Xi**
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Course Web page:	http://www.cs.pitt.edu/~milos/courses/cs1571/	**Web Page:**	

Course Description:

This course will provide an introduction to the fundamental concepts and techniques underlying the construction of intelligent computer systems. Topics covered in the course include: problem solving and search, logic and knowledge representation, planning, reasoning and decision-making in the presence of uncertainty.

Prerequisites: CS 1501 and CS 1502 or the permission of the instructor.

Text:

Stuart Russell, Peter Norvig. *Artificial Intelligence. A modern approach*. 2nd edition. Prentice Hall, 2002.

Requirements and Grading:

- Lectures 15 %
- Homework assignments 40%
- Midterm 20 %
- Final 25 %

Homework

There will be weekly homework assignments. The homework assignments will include a mix of paper and pencil problems, and programming assignments. Homework **must be handed** in at the **beginning of lecture** on the day that it is due (penalty will apply otherwise). No late homework will be accepted.

Programming assignments

Knowledge of C/C++ language is necessary for the programming part. C/C++ programs submitted by you should compile with g++ compiler under Unix. Please see the rules for submitting programming assignments on the course webpage.

Lectures

Unannounced short quizzes, that count 15% of the total grade, will be given throughout the term to prepare you for the exams. Quizzes will be based on lecture material, reading assignments, and homework. Quizzes may be given in lecture without prior announcement. No make up quizzes are allowed.

Policy on Cheating

All the work in this course should be done independently. **Collaborations on *quizzes, exams* and *homework assignments* are not permitted.** Cheating and any other anti-intellectual behavior, including giving your work to someone else, will be dealt with severely. If you feel you may have violated the rules speak to us as soon as possible.

Please make sure you read, understand and abide by the Academic Integrity Code for the Faculty and College of Arts and Sciences (http://www.fcas.pitt.edu/academicintegrity.html).

Students With Disabilities

If you have a disability for which you are or may be requesting an accommodation, you are encouraged to contact both your instructor and Disability Resources and Services, 216 William Pitt Union, (412) 648-7890/(412) 383-7355 (TTY), as early as possible in the term. DRS will verify your disability and determine reasonable accommodations for this course.

Tentative syllabus:

- **Problem solving and search.** Formulating a search problem, Search methods, Constraint Satisfaction Search, Combinatorial and Parametric Optimization.
- **Logic and knowledge representations.** Logic, Inference.
- **Planning.** Situation calculus, STRIPS, Partial-order planners.
- **Uncertainty.** Modeling uncertainty, Bayesian belief networks, Inference in BBNs, Decision making in the presence of uncertainty.
- **Machine Learning.** Intro to machine learning.