

## **CS385/627 Artificial Intelligence**

Professor D. Paul Benjamin

163 William Street, 2nd floor Robotics Lab

dbenjamin@pace.edu

Office phone: 212-346-1012 (use email to contact me)

Office hours: Monday 12 noon - 1:15pm, Wednesday 12 noon - 1:15pm  
& 3:20-5:50pm

Course Description: Theory and data structures and algorithms related to artificial intelligence and heuristic programming. Topics include description of cognitive processes, definition of heuristic vs. algorithmic methods, state space and problem reduction, search methods, theorem proving, natural language processing and pattern recognition techniques.

Course Objectives: After completing this course, students will be able to:

- Use heuristic programming to solve problems,

- Design intelligent agents using a variety of search algorithms, including A\*, iterative deepening, local search, and genetic algorithms,

- Understand a number of techniques used in machine learning, including neural networks and decision trees,

- Understand the methods used in computer games,

- Translate simple sentences to and from first order logic,

- Understand constraint satisfaction problems,

- Understand basic methods used in computer vision and language translation.

Grading:

There will be two exams, a midterm and a final exam. In addition, there will be a number of homework assignments. The course grade will be determined by the scores received in the following areas:

Homework Assignments	40%
Midterm Exam	25%
Final Exam	35%

There will be **no curves** given for individual assignments. At the discretion of the instructor, a curve may be used for final course grades. The grading scale will be no more stringent than the following:

A:	93-100
A-:	90-93
B+:	87-90
B:	83-87
B-:	80-83
C+:	77-79
C:	72-76
C-:	68-71
D+:	62-67
D:	60-61
F:	0-59

#### Course Policies:

The University disability policy requires that students seeking an accommodation must contact the Office of Disability Services at (212) 346-1526 in New York City or (914) 773-3710 in Westchester.

You are expected to abide by the CSIS Statement of Student Responsibilities, particularly its policy on academic integrity. Any violations of these rules will be handled as described in that document.

This policy can be found at

<http://csis.pace.edu/~benjamin/teaching/Responsibilities.pdf>

**Attendance is required**, as the material covered in class requires team participation and will be difficult or impossible to make up later. Please inform the instructor as soon as possible if you must miss a class meeting. Accommodations will be made for illness or emergency.

If you must miss a test for any reason, you must inform the instructor **BEFORE the test**. Unless there is an emergency or a serious illness, make-up tests will NOT be given.