CS385/627 Artificial Intelligence

Professor D. Paul Benjamin

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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 on the exams and assignments.

Course Policies:

Procedures for Disabilities, Emergencies and Academic Integrity

Procedure for Students with Disabilities Who Wish to Obtain Reasonable Accommodations for a Course: The University's commitment to equal educational opportunities for students with disabilities includes providing reasonable accommodations for the needs of students with disabilities. To request a reasonable accommodation for a qualified disability a student with a disability must self-identify and register with the Office of Disability Services for his or her campus. No one, including faculty, is authorized to evaluate the need for or grant a request for an accommodation except the Office of Disability Services. Moreover, no one, including faculty, is authorized to contact the Office of Disability Services on behalf of a student. For further information, please see Resources for Students with Disabilities at http://www.pace.edu/counseling-center/resources-students-disabilities.

Continuity Plan: In the event of a major campus emergency, course requirements, deadlines and grading percentages are subject to change when necessitated by revised course delivery, semester calendar or other circumstances. Information will be communicated online. If the course is not able to meet face-to-face, students should immediately read any announcements and/or alternative assignment. Students are also encouraged to continue the readings and assignments as outlined on this syllabus or subsequent syllabi.

Academic integrity: For academic integrity procedures, please visit:

Pace University Academic Integrity Code
http://www.pace.edu/sites/default/files/files/Pace%20University%20Academic%20Integrity%20%20%20Code_9_1_2017.pdf

University Policies in the Student Handbook
http://www.pace.edu/student-handbook/university-policies-disciplinary-and-grievance-procedures

Attendance is required (for the in-class version of this course but not for the online version), as the material covered in class 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.

CAREER SERVICES:

Looking for an internship or a job? Career Services is here to assist you in reaching your professional goals!

Career Services can help you secure internships and jobs through virtual workshops and one-on-one appointments and expose you to professional opportunities through employer spotlights and career fairs.
Explore the Career Services program on Classes (**Career Resources Seidenberg** or **INSPIRE)**.
Visit Career Services online and reach out at career@pace.edu.