

**CAP 4630 Introduction to AI. Fall 2012**

Instructor: Dr. Fernando Gomez (gomez@cs.ucf.edu)

Office Harris Building 318. Off. Hours: M, T, Th 3 to 3:50 pm

Week 1

Introduction to Artificial Intelligence (AI)  
Historical Perspective  
AI Programming Languages

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Week 2

Lisp  
Basic Operations

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Week 3

Lisp  
Recursion

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Week 4

Lisp  
Iterative vs. Recursive Solutions  
Property Lists

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Week 5

Lisp  
Functionals  
Macros

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Week 6

Search Techniques

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Week 7

Search Techniques (continuation)

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Week 8

General Problem-Solving Methods

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Week 9

Knowledge-Based Systems

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Week 10

Knowledge Representation  
Semantic Networks

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Week 11

Knowledge Representation  
Frames  
Ontologies (CYC, WordNet, ConceptNet)

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Week 12

Logic

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Week 13

NLP (Natural Language Processing)

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Week 14

NLP

POS Taggers + Syntax

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Week 15

NLP (natural language processing)

Grammars, Semantics

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Week 16

NLP (concluding)

Learning

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This course will require programming in Lisp. We will briefly discuss Prolog. First, we will assign simple functions and then we will have two or three projects. These projects could be about any of the following: the implementation of a search algorithm, an expert system, a knowledge representation language and/or a simple English grammar.

Grading: Test 1 25%; Test 2: 25%; Final 30%; Programs + homeworks: 20%. If there is a QUIZ, it would be worth 10% of the grade, in which case the first 2 tests will be 20% each. All projects *must be done individually, unless indicated otherwise*. Students are responsible for all announcements made in class. If a student misses a class, she/he must ask a friend to take notes. Attendance to class is essential for succeeding in the course.

Date of Tests:

Test 1: October 11th

Test 2: Two/Three weeks before Thanksgiving.

Final: to be announced by the University.

Text Books: *Artificial Intelligence* by George F Luger and (optional) *Common Lisp Craft* by R. Willensky. These books will be used as a reference to the lectures given in class.

Plus and Minus Grades (A- 90-92, B+ 87-89, B 83-86, B- 80-82, C+ 77-79, C 73-76, C- 70-72, D+ 67-69, D 63-66, D- 60-62, F 59-0).