

## SYLLABUS

- I. Title: CSC 412 Special Topics in Computer Science: Artificial Intelligence
- II. Time and Place: Fall Semester 2012,  
TR 10:00-10:50 a.m. , RS14;  
**Research Papers and code due: Tuesday, May 1<sup>st</sup> , 10:30 a.m.-12:30 p.m.**  
**Term project class presentation during the last week of classes.**
- III. Credit: Two units
- IV. Instructor: Dr. McKinstry, Professor of Computer Science
- V. Office Hours: Rohr Science 216, (619) 849-2269; email: jeffmckinstry@pointloma.edu  
Monday: 10:45-11:50, 1:30-2:35  
Tuesday: 11:00-11:50  
Wednesday: 10:45-11:50, 1:30-2:35  
Thursday: 11:00-11:50  
Friday: 10:45-11:50, 1:30-2:35
- VI. Text: Russell S., and Norvig, P. Artificial Intelligence: A Modern Approach 3/e, Prentice Hall, 2010.
- VII. Objectives of the course: The student should understand the field of Artificial Intelligence, with an emphasis on problem solving, game playing, learning and perception. In addition, students should gain an appreciation for the difficulty of the problems faced in the field. Students will gain exposure to current research in the area by choosing a research paper related to the chosen term project topic and presenting the results to the class. Students will get a taste of what graduate school is like by completing a term project involving original research.
- IX. Course Organization: The Course Schedule provides an outline with dates for some of the important activities of the course. Class time will be used for:
1. Introduction of material in the text to be assigned.
  2. Discussion of assigned material in the text.
  3. Discussion of student questions or class material, including exercises attempted.
  4. Laboratory type projects
- X. Late Assignments: Late assignments will be worth 70% if turned in after the class period in which they are due, and are not accepted if late by more than 7 days, so start early.
- XI. Student Evaluation:
- |                                    |     |
|------------------------------------|-----|
| Homework                           | 15% |
| Programming Assignments/labs       | 25% |
| Term Project demonstration/results | 25% |
| Term Project Paper                 | 15% |
| Term project status reports        | 10% |
| AI Paper classroom presentation    | 10% |

There will be several computer programming projects. You will be required to either demonstrate your programs to the professor or turn in a screen-shot of the program results, and to turn in a printout of your code.

The prof. will provide a list of suggested project topics. Groups will be able to choose from among the listed topics. Talk with the professor if you have your own project ideas.

Grades will be determined as follows:

93-100%	A
90-92%	A-
87-89%	B+
83-86%	B
80-82%	B-
77-79%	C+
73-76%	C
70-72%	C-
67-69%	D+
63-66%	D
60-62%	D-
0-59%	F

X. Course Schedule (subject to change).

Week 1, Jan 9: Chapter 1 Intro to AI

Week 2, Jan 16: Chapters 2 and 3 Agents, and Problem solving

Week 3, Jan 23: Searching and game playing: chapter 4

Week 4, Jan 30: Lab and AI: chapter 5.

Week 5, Feb. 6: Uncertainty and simple decision making: AI 15.1-3, 16.1

Week 6, Feb. 13: Learning and Neural Networks: AI 18

Week 7, Feb. 20: Matlab intro

Week 8, Feb. 27: Reinforcement learning: chapter 17

Week 9, Mar. 5: **Spring Break; no classes**

Week 10, Mar. 12: Reinforcement learning: chapter 21.

Week 11, Mar 19: **Student Presentations of current AI research papers (related to term project).**

Week 12, Mar. 26: chapter 13

Week 13, Apr. 2: chapter 14 (**Easter recess Thursday**)

Week 14, Apr. 9: Group research presentations. Groups will describe their term project progress to professor/class.

Week 15, Apr. 16: Group research presentations. Groups will describe their term project progress to professor/class.

Week 16, Apr. 23: Final presentations of research (**Must use powerpoint slides**).

Week 17, **Tuesday, May 1<sup>st</sup>**: Research papers + demos due at professors office between 10:30 and 12:30 a.m.

Outline for research papers will be as follows.

**Abstract**

**1.0 Introduction**

**2.0 <Your model here, i.e. Genetic algorithms, etc.>**

**3.0 Results**

**4.0 Summary and Future Work.**