**CSCI 405/ CIS 605: Artificial Intelligence**
**COURSE SYLLABUS, Spring 2006**
**Department of Computer Science**
**University of Wisconsin-Parkside**


| Instructor |
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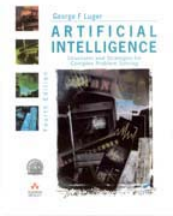
| J. Ubaldo Quevedo<br>*quevedo@cs.uwp.edu*<br>Molinaro 249<br>**Office Hours:**<br>Monday to Wednesday 11:30 AM to 12:30 PM<br>and by appointment<br>***Web Page:*** *http://www.cs.uwp.edu/staff/quevedo/* |


## Required text


Luger, F., George. *Artificial Intelligence: Structures and Strategies for Complex Problem Solving.* Addison-Wesley, 5th edition, 2005.

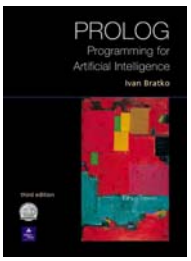
OR



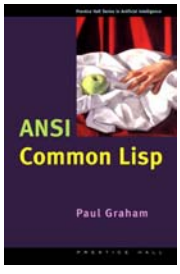

Luger, F., George. ***Artificial Intelligence: Structures and Strategies for Complex Problem Solving.*** Addison-Wesley, 4th edition, 2002.

## Recommended texts


Russell, S. and Norvig, P. *Artificial Intelligence A Modern Approach.* Prentice Hall, 2nd edition, 2003.




Bratko, I. *Prolog Programming for Artificial Intelligence.* Addison-Wesley, 3rd edition, 2001.




Graham, P. *ANSI Common Lisp.* Prentice Hall, 1996.

**Other references:**

Rich and Knight: "Artificial Intelligence"

Stephen Tanimoto : "The Elements of Artificial Intelligence using common LISP"

Touretzky: "A Gentle Introduction to Common Lisp "

Richard A. O'Keefe: "The Craft of Prolog"

Leon Sterling: "The Practice of Prolog"

Carlton McDonald: "Prolog Programming a Tutorial Introduction"

Thomas H. Cormen: "Introduction to Algorithms"

## Course Requirements:

1. Every student must have access to a computer with Prolog and Lisp installed to run and test some assignments.
2. Each student will be responsible for completing the assigned reading, exercises and attending classes.
3. The assignments must be turned in on the due date to receive full credit (assignments are due in the beginning of the class).
4. There will be 2 announced tests and a final exam.
5. If you miss a class, you are still responsible for knowing everything that took place. Your absence does not change the due date of an assignment.
6. There will be a sign-in sheet for recording student attendance. Every student must write his or her initials on it each class.
7. Programming, reading and other assignments will be announced in class as needed.
8. Late projects/assignments will be penalized by 10% per calendar day after the due date.
9. The use of laptops is not allowed in class.

## Exams:

1. Exam dates are scheduled in the syllabus but will be confirmed one week before the exam date.
2. Exams may be open or close notes and book (this will not be announced). Be prepared for both. Moreover, this policy can change anytime once the exam has started or apply to a specific section of it. Exams will be designed such that there is not need to use your notes or the book; therefore, it should not affect your performance their use.
3. Open notes and book (if allowed) may be granted only to students with good (80%-90%) attendance.
4. Make-up exams: If possible, prior notice should be given to me. No make-ups will be granted unless satisfactory documentation is produced to show an extenuating circumstance. There will be a final exam given according to the final exam schedule in the course selection booklet.

**Graduate Students:**

Graduate students will be expected to complete an additional project or paper not required for undergraduate students. Students should begin identifying areas of interest as soon as possible.

**Incompletes policy:**

Incompletes are not to be used as a shelter from potentially low grades. To take an incomplete, you must have "maintained a passing grade in the course until near the end of the course" (UW-Parkside catalog).

**Plagiarism:**

Plagiarism is a form of cheating. Copying someone else's program, changing a few lines, and turning it in as your own is plagiarism; thus, this is cheating. Each student is to write his or her own programs and assignments.

| GRADING |
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| Exam 1 (15%) |
| Exam 2 (15%) |
| Final Exam (20%) |
| Quizzes (15%) |
| Projects/assignments (30%) |
| In class assignments (5%) |

***"Tentative"* class schedule**

1. Introduction to AI, chapter 1
2. Introduction to Prolog, chapter 14
3. Basis of Prolog, lists, operators, arithmetic, chapter 14
4. List processing in Prolog, chapter 14
5. Data structures in Prolog, chapter 14
6. Structure and strategies for state space search, DFS, BFS, chapter 3
7. Heuristic search, Hill climbing, Best search first, A* algorithm, , chapter 4
8. **Exam 1**
9. Knowledge representation, chapter 6
10. Strong method problem solving, Rule-Based Expert Systems, chapter 7
11. The predicate calculus, chapter 2
12. Programming in LISP, chapter 15
13. Understanding Natural Language, ELIZA: dialog with a machine, chptrs 13 & 15
14. Reasoning in uncertain situations, chapter 8
15. **Exam 2**
16. Topics in Machine learning, chapter 10
17. Student presentations