

# CPSC 420-502 Artificial Intelligence: Fall 2002

## Syllabus

**NEWS:** 9/1/03, 11:53AM (Mon)

1. [Posted 9/1] First class tomorrow 9:35am, ZACH 105B

[ **Read-Only Bulletin Board:** 9/1/03, 06:02PM (Mon) ]

*Keep an eye on this news box for the latest.*

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*Last modified: 9/1/03, 10:11PM Monday.*

## I. General Information

### Instructor:

[Dr. Yoonsuck Choe](#)

Email: [choe\(a\)tamu.edu](mailto:choe(a)tamu.edu)

Office: HRBB 322B

Phone: 845-5466

Office hours: T/TR 12pm-1:30pm (other times: by appointment).

### TA:

[Subramonia P. Sarma](#)

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Office: HRBB 322A

Phone: 845-xxxx

Office hours: TBA

### Prerequisite/Restrictions:

CPSC 311

### Lectures:

T/TR 9:35am-10:50am, ZACH 105B

### Goals:

To understand the problems in AI and to learn how to solve them:

1. traditional AI techniques (search, pattern matching, logical inference, theorem proving, etc.).
2. modern approaches in AI (learning, probabilistic approaches, etc.).

### Textbook:

Stuart Russell and Peter Norvig, *Artificial Intelligence: A Modern Approach* (AIMA, hereafter), **2nd Edition**, Prentice Hall, New Jersey, 2003.  
ISBN 0-13-790395-2  
[Book Homepage](#)

### Computer Accounts and Usage:

1. Computer accounts: if you do not have a unix account, ask for one on the CS web page. We will be using the [GNU Common Lisp](#) as our main language. You can choose your own language to use for the assignments, but you have to first get permission from the instructor.
2. GNU Common Lisp:

Details will be made available as soon as CSG makes GCL available on the unix machines.

### Topics to be covered:

See the [Weekly Schedule](#) section for more details.

1. Introduction : 1 week
2. LISP : 1 week
3. Search : 1.5 weeks
4. Game Playing : 0.75 week
5. Propositional Logic, First-order logic: 3.5 weeks
6. Uncertainty : 1 weeks
7. Learning : 2.5 weeks
8. Special Topics : 1 week

### Grading:

1. Exams: 45% (midterm: 20%, final: 25%)
2. Homeworks (about 3): 15%
3. Programming Assignments (about 3): 36%
4. Paper comments (about 1): 4%

Grading will be on the absolute scale. The cutoff for an 'A' will be at most 90% of total score, 80% for a 'B', 70% for a 'C', and 60% for a 'D'. However, these cutoffs might be lowered at the end of the semester to accomodate the actual distribution of grades.

### Academic Dishonesty:

The TAMU student rules (<http://student-rules.tamu.edu/>), [Part I Rule 20](#) will be **strictly** enforced. To quote from the page, the following are unacceptable. See the same page for your rights.

- **Acquiring Information:** Acquiring answers for any assigned work or examination from any unauthorized source. Working with another person or persons on any assignment or examination when not specifically permitted by the instructor. Observing the work of other students during any examination.
- **Providing Information:** Providing answers for any assigned work or examination when not specifically authorized to do so. Informing any person or persons of the contents of any examination prior to the time the examination is given.
- **Plagiarism:** Failing to credit sources used in a work product in an attempt to pass off the work as one's own. Attempting to receive credit for work performed by another, including papers obtained in whole or in part from individuals or other sources.

- **Conspiracy:** Agreeing with one or more persons to commit any act of scholastic dishonesty.
- **Fabrication of Information:** The falsification of the results obtained from a research or laboratory experiment. The written or oral presentation of results of research or laboratory experiments without the research or laboratory experiment having been performed.
- **Violation of Departmental or College Rules:** Violation of any announced departmental or college rule relating to academic matters, including but not limited to abuse or misuse of computer access or information.
- **Falsification of Information:** Changing information on tests, quizzes, examinations, reports, or any other material that has been graded and resubmitting it as original for the purpose of improving the grade on that material.

#### Local Course Policy:

- All work should be done **individually** and **on your own** unless otherwise allowed by the instructor.
- Discussion is only allowed immediately before, during, or immediately after the class, or during the instructor's office hours.
- If you find solutions to homeworks or programming assignments on the web (or in a book, etc.), you may (or may not) use it. Please talk to the instructor first for permission.

## II. Resources:

1. [LISP quick reference](#)
2. [GCL manual](#) (very in-depth and technical).
3. [GNU Common Lisp](#)
4. [Lisp resources](#)
5. [My general resources page](#)

## III. Weekly Schedule and Class Notes

- **Lecture notes (in PDF format):** all notes will be uploaded in this directory.
- It is **your responsibility** to download, print, and bring the notes to the class. Notes will be available 24 hours before each class.
- See the **2003 Fall TAMU Calendar** for breaks, etc. December 9 (Tue) is the last class day.
- When reading the chapters, you do not have to memorize everything. A separate list of terms you need to know will be handed out prior to each exam.
- All reading material below refers to the AIMA book 2nd edition. The (*old XX*) tags next in the Reading field are the corresponding chapters in the old AIMA book (1st edition).
- More detail will be available as we go along.

Week	Date	Topic	Reading	Assignments	Notices and Dues	Notes
1	9/2	Introduction	Chapter 1 1.1 and 1.2		First day of class	<a href="#">slide01.pdf</a>
1	9/4	Introduction	Chapter 26 26.1 and 26.2		Unix basics	
2	9/9	Lisp	<a href="#">Lisp quick ref</a>			
2	9/11	Lisp		Prog. Asmt. #1		
3	9/16	Search	Chapter 3			
3	9/18	Search	Chapter 4			

4	9/23	Search and Game Playing	Chapter 4 and 5	HW Asmt. #1		
4	9/25	Game playing	Chapter 6 (old 5)		Prog. Asmt. #1 due	
5	9/30	Propositional Logic	Chapter 7 (old 6)			
5	10/2	Theorem proving	Chapter 9		HW Asmt. #1 due	
6	10/7	First-order logic	Chapter 8 (old 7)	HW Asmt. #2		
6	10/9	"		Prog. Asmt. #2		
7	10/14	Inference for FOL	Chapter 9		HW Asmt. #2 due	
7	10/16	<b>Midterm</b>	<b>Exam</b>	<b>(tentative)</b>	In class exam.	
8	10/21	Theorem proving for FOL	Chapter 9 (old 10)		10/20 (mid-semester grades due)	
8	10/23	"				
9	10/28	Uncertainty	Chapter 13 (old 14)			
9	10/30	"		Prog. Asmt. #3	Prog. Asmt. #2 due	
10	11/4	Probabilistic reasoning	Chapter 14 (old 15)			
10	11/6	"				
11	11/11	Learning	Chapter 18			
11	11/13	"				
12	11/18	Neural nets	Chapter 20 (old 19)			
12	11/20	"		HW Asmt. #3	Prog. Asmt. #3 due	
13	11/25	Neural nets	Chapter 20 (old 19)			
13	11/27	<b>Thanksgiving</b>	<b>Holiday</b>	<b>No class</b>		
14	12/2	Special topics	Selected papers (TBA)			
14	12/4	"			HW Asmt #3 due	
15	12/9	Final exam review			Last day of class	
	12/12	<b>Final</b>	<b>Exam</b>		12:30-2:30pm	

## \* Credits

Many ideas and example codes were borrowed from [Gordon Novak's AI Course](#) and [Risto](#)

[Miikkulainen's AI Course](#) at the University of Texas at Austin (Course number CS381K).

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