

Symbolic Processing – CSCE 3210 Fall 2008

Instructor: Dr. Kathleen Swigger
F253 RP or A144 RP
Office Hours: 3:30- 5:00 Tues./Thurs.
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Course Description:

The course isn't REALLY suppose to be about Artificial Intelligence, but a lot of symbolic processing deals with problems related to artificial intelligence; hence some of the topics will be similar to what you might cover in an AI course. The other reason is that most students would rather know something about AI rather than something called "symbolic processing."

Why do we learn LISP in this class? Well, it is the "language" of AI. Just like a good systems programmer knows and uses Assembly Language (or C), a good AI programmer knows and uses LISP (or at least knows it). The other thing is that some of the "ai" things that were done in the past were 'exciting' because they used tricks in LISP. Also, most of the "old stuff" in AI was written in LISP. So, to understand the "old things," you need to know LISP – otherwise it will look like GREEK (or Pascal or even Basic!).

So...this course is a little bit about AI, a little bit about LISP, a little bit about data abstraction, and, hopefully, a lot of fun.

Text:

James L. Noyes, *Artificial Intelligence with Common Lisp*. You may LISP book. I would suggest that you get something CHEAP. Most of them are pretty good. I like the book by Wilensky called "lispcraft," but I've posted some free tutorials (and a book) on the website.

Grading:

Tests (3 tests)	50%
Programming Assignments and Laboratories	40%
Quizzes	10%

All assignments must be handed in by 11:59 pm on the due date. Assignments must be submitted using the electronic "project" system, including BOTH written and programming portions of each assignment. Instructions for using the project system are on the student computer science system. Written assignments slipped under a door or left in the main office will not be accepted because they can be easily lost.

All programs must be written in common Lisp. Because Lisp has been standardized, you can write LISP programs using some of the PC software and it will run on the UNIX machines. All files necessary to run your program must be handed in, including a readme file that tells the grader how to run your program.

Late Assignments

The electronic project system will allow us to know when you handed in the assignment. My late policy is as follows: 10% off for each class period that the program is late. Allowing late assignments however holds up the grading process and the distribution of solutions. We will do our best to grade the assignments and hand out solutions promptly so that everyone will get feedback in a timely fashion.

Schedule (subject to change):

These are the topics we will cover in the order that we will cover them.

Chapter 1 - An Introduction to AI

Chapter 2 - An Introduction to LISP

(This is going to take more than a week – like several weeks)

Chapter 3 - Intermediate LISP – same as above.

Chapter 5 - Search

Chapter 6 – Games

Avatars, Agents, Personalities

Chapter 4 -- Knowledge Representation (objects and semantic networks)

Chapter 9 - Expert Systems

Chapter 12 and parts of 13 – Machine Learning Systems

Student Etiquette for the Class

- Think of this class as you would a job. So, students should...
- Turn off their cell phones before coming to class
- Not be late for class
- Attend all classes
- Not leave the classroom once they are here

If you do all this, then you can expect a good recommendation from me for the job that you would like to have after you graduate!