

Syllabus for ICS 361

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 Thursday: 8:00am - 10:15am, 1:00pm - 5:00pm
Class page: Laulima

Introduction

The objective of the course is to introduce you to concepts in artificial intelligence and the functional and logic programming paradigms. This is fundamental knowledge for all computer science students as described in the current ACM (Association for Computing Machinery) curriculum recommendations. You will learn the fundamentals of artificial intelligence, and become familiar with alternative programming paradigms.

By the end of the course, students should have achieved the following learning objectives, so should:

- Be familiar with the fundamental concepts and algorithms of Artificial Intelligence including searching, planning, problem solving, logic and knowledge representation.
- Be able to implement AI algorithms in a functional (e.g. Scheme or Lisp) or logic (e.g. Prolog) programming language.
- Appreciate the problems, current limitations and future potential of AI.
- Be able to recognize when AI techniques might be successfully applied to a problem and when the problem is beyond the current state-of-the-art in AI.
- Have successfully implemented several small AI programs.

Textbook and other resources

The course textbook (*not* required) is *Artificial Intelligence: A Modern Approach (AIMA)*, by Stuart Russell and Peter Norvig. This large textbook explores the theory and practice of AI quite thoroughly. I will be providing page numbers for the 3rd edition, but you are welcome to use an older edition or an e-book. Note that it was *not* preordered for the campus bookstore, as it can be found at a lower price online.

Why is it not required? Well, although it is an excellent book and highly recommended for students of AI in particular and ICS in general, it is both dense and expensive, and this introductory course only uses a fraction of the material in it. So, it's up to you to

decide to buy it or not. I will direct you to other resources (see Laulima) that cover the same topics. However, it's up to you to do the research and ask the questions to fill in the gaps between AIMA and these other resources.

Assignments

There will be 6-8 assignments assigned over the course of the semester. For all assignments, you have the option of submitting it at least a week in advance of the deadline for instructor feedback. See "Schedule" on Laulima for deadlines.

All assignments should be submitted via Laulima by midnight on the due date. After that (even by a minute!), assignments will lose 10% per day for each day late, up to five. After five days, they will not be accepted.

Exams

The midterm will be in class, and worth 15%. The final, worth 25%, will be held according to the campus-wide schedule (<http://manoa.hawaii.edu/undergrad/schedule/final-exams/fall/>), which says it will be the Thursday of exam week 9:45am – 11:45am (subject to change). If you do not expect to be on campus for this time slot, please *withdraw from this course now*. Only serious, documented reasons (i.e. not "But I have a plane ticket!") for missing the final will be grounds for alternative arrangements.

Grading Breakdown

Assignments (6-8)	50%
Midterm	15%
Final	25%
In-Class Activities	10%

97-100%	A+
94-96%	A
90-93%	A-
87-89%	B+
84-86%	B
80-83%	B-
77-79%	C+
74-76%	C
70-73%	C-
67-69%	D+
64-66%	D
60-63%	D-
< 60%	F

I do not grade on a curve. If the ranges above are changed, they will only be adjusted downwards (e.g. if you have 90%, you will at least receive an A-).

Academic Honesty

Plagiarism and cheating are not tolerated in this course. If a student is caught cheating or plagiarizing, s/he will fail the course, and further disciplinary action may be taken. Please be sure to review the definition of plagiarism, and guidelines on how to avoid it, here:

http://www.cte.hawaii.edu/plagiarism/plagiarism_1.html

KOKUA Program

If you feel you need accommodations due to special circumstances, please contact the KOKUA Program (V/T) at 956-7511 or 956-7612 in room 013 of the QLCSS, and/or speak with me privately to discuss your specific needs. I am happy to work with you and the KOKUA Program to provide the support you need to succeed in this course.

Changes to the Syllabus

The instructor reserves the right to change the syllabus at any time. [Congratulations, you found the hidden bonus question. In your response to Assignment 1, please say in one sentence why you're taking this course, and get five extra points.] If any changes are made, the revised syllabus will be posted on the class website, and students will be informed by email. Please be sure to inform the instructor or TA if your contact information changes.