

CS161: FUNDAMENTALS OF ARTIFICIAL INTELLIGENCE

Syllabus – Spring 2002

<http://www.cs.ucla.edu/classes/spring02/cs161/1/>

Instructor: Professor Adnan Darwiche, 4531C Boelter Hall, phone 206–5201, email darwiche@cs.ucla.edu. Office hours: 10–12am Wednesdays, or by appointment.

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Text: "Artificial Intelligence: A Modern Approach," by Russell and Norvig, Prentice Hall, 1995.

Grading: 30% homework, 30% midterm, and 40% final.

Assignments: Weekly assignments. Late work will not be accepted. In exceptional circumstances, arrangements must be made in advance of the due date to obtain an extension.

Outline: The outline below is tentative and subject to change.

1. Introduction to course, artificial intelligence, and LISP. Chapters 1–2.
2. LISP continued.
3. Problem solving as search. Chapter 3.
4. Systematic search strategies. Chapter 3.
5. Informed search strategies. Chapter 4.
6. Game playing. Chapter 5.
7. Propositional logic. Chapter 6.
8. First–order logic. Chapter 7.
9. Logical inference I: clausal form, resolution. Chapter 9.
10. Logical inference II: unification, theorem provers. Chapters 9–10.
11. Midterm exam.
12. Reasoning under uncertainty. Chapter 14.
13. Belief networks: syntax and semantics. Chapter 15.
14. Expert systems: knowledge engineering and inference. Chapters 15.
15. Learning. Chapter 18.
16. Neural networks. Chapter 19.
17. Planning. Chapter 11.
18. Natural language processing. Chapter 22.
19. Perception. Chapter 24.
20. Philosophical foundations and outlook. Chapters 26–27.