# CS161: FUNDAMENTALS OF ARTIFICIAL INTELLIGENCE

## Syllabus - Fall 2014

[http://ccle.ucla.edu](http://ccle.ucla.edu/)

**Instructor:** Professor Adnan Darwiche, 4532D Boelter Hall, phone 310-206-5201, email [darwiche@cs.ucla.edu](mailto:darwiche@cs.ucla.edu). Office Hours: 2:30-3:30pm Wednesday, or by appointment.

**Teaching Assistants**:

Doga Kisa (doga@ucla.edu) and Umut Oztok (umut@ucla.edu).

**Text:** “Artificial Intelligence: A Modern Approach,” by S. Russell and P. Norvig, Prentice Hall, Third Edition, 2010.

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

**Assignments:** Weekly assignments, released usually on Thursday. Late work cannot 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, local search. Chapters 3, 4.

6. Constraint satisfaction. Chapter 6

7. Game playing. Chapter 5.

8. Propositional logic: Representation. Chapter 7.

9. Propositional logic: Inference. Chapter 7

10. First-order logic: Representation. Chapter 8.

11. Midterm exam.

12. First-order logic: Inference I. Chapter 9.

13. First-order logic: Inference II. Chapter 9.

14. Reasoning under uncertainty. Chapter 13.

15. Belief networks: syntax and semantics. Chapter 14.

16. Belief networks: Inference. Chapter 14.

17. Belief networks: Knowledge engineering.

18. Learning I. Chapter 18.

19. Learning II. Chapter 20.