CS 161 Fundamentals of Artificial Intelligence

1 Course Information

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Teaching Assistant:
Jinghui Chen
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Lecture Times and Location: Tuesday & Thursday 2:00 - 3:50pm, Zoom

Discussion Section Time, Location and TA:
Section B, Friday 10:00 - 11:50pm, Zoom Link 1B, TA: Yue Wu
Section C, Friday 12:00 - 1:50pm, Zoom Link 1C, TA: Shirley Chen
Section D, Friday 2:00 - 3:50pm, Zoom Link 1D, TA: Jinghui Chen
Instructor's Office Hours:
Wednesday 2:00pm-3:00pm, Zoom.
TA's Office Hours:
Jinghui Chen: Tuesday 4:00pm - 6:00pm, Zoom Link 1D
Shirley Chen: Wednesday 9:00pm - 11:00pm, Zoom Link 1C
Yue Wu: Thursday 4:00pm - 6:00pm, Zoom Link 1B
Exams:
Midterm: Tuesday, Feb 16, 2020, 2:00-3:50pm (in class)
Final: Tuesday, March 16, 2020, 11:30am-2:30pm

2 Course Description

This course introduces the design of intelligent agents, including the fundamental problem-solving and knowledge-representation paradigms of artificial intelligence. Topics to be covered include the AI programming language LISP, state-space and problem reduction methods, brute-force and heuristic search, two-player games, and recent developments in game AI. For knowledge representation and reasoning, we will cover propositional and first-order logic and their inference algorithms. Finally, the course covers probabilistic approaches to AI, such as Bayesian networks to improve the agent's performance with experience.

Prerequisites: This course requires knowledge of basic computer science, algorithms and complexity (CS180), and programming principles.

Textbook
1. Stuart Russell and Peter Norvig. Artificial Intelligence: A Modern Approach. (3rd Edition), Pearson 2009.

Programming Language: LISP

3 Tentative Schedule

See course website `https://uclaml.github.io/CS161-Winter2021/`

4 Grading

Grades will be computed based on the following factors:
- Homework 20%
- Quiz 5%
- Midterm 35%
- Final 40%

5 Academic Integrity Policy

Students are encouraged to read the UCLA Student Conduct Code `https://www.deanofstudents.ucla.edu/Individual-Student-Code` for Academic Integrity.

6 Homework

There will be about 6 homework assignments during the semester as we cover the corresponding material. Homework consists of both problem solving and LISP programming. The lowest homework score will be dropped for you.
Collaboration Policy: Unless otherwise indicated, you may talk to other students about the homework problems but each student must hand in their own answers and write their own code in the programming part. You also must indicate on each homework with whom you collaborated and cite any other sources you use including Internet websites. Students should never see another student's solution before submitting their own. Students cannot use old solution sets for this class or solution manual to the textbook under any circumstances.
Submission: Homework assignments will be submitted through CCLE. You should have already been enrolled to CCLE after you get enrolled in this class. Please submit your homework on time.
Late Policy: Homework is worth full credit before the due date. It is worth zero credit after the due date. Since we will drop the lowest homework score for you, basically you have one chance to skip one homework. Therefore, this late policy will be strictly applied to everyone without exception.

7 Quiz

There will be 6 in-class online quiz (on CCLE) for the purpose of reviewing the newly learned concepts. The quizzes are open textbook. We will drop the lowest quiz score for you.

8 Exam

There will be one midterm and then final. The exam is online (on CCLE) and open textbook. You are not allowed to discuss with other people.

9 Grade Cutoff

We use the grade cutoff points defined in Table 1. The final grade might be curved depending on students' overall performance.

Table 1: Grade cutoff points

Letter Grade	Point Range
A+	[97,100)
A	[93,97)
A-	[90, 93)
B+	[87, 90)
B	[83, 87)
B-	[75, 83)
C+	[65, 75)
C	[60, 65)
F	[0, 60)

The instructor reserves the right to curve the grade.