Introduction to Artificial Intelligence Section 03

CS 156

Spring 2025   In Person   3 Unit(s)   01/23/2025 to 05/12/2025   Modified 01/22/2025

👤 Contact Information

Instructor: Rula Khayrallah

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Office: MH 218
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Office Hours

Tuesday, 3:00 PM to 4:00 PM, in-person (MH 218) and online via Zoom

Wednesday, 4:00 PM to 5:00 PM, online via Zoom

🕐 Course Information

Class Meetings (in-person)

Tuesday, Thursday, 12:00 PM to 1:15 PM, Science Building 311

Please note that in case of a heat advisory, our class will be conducted over Zoom. A Canvas announcement will be sent out with details.

💻 Course Description and Requisites

Basic concepts and techniques of artificial intelligence: problem solving, search, deduction, intelligent agents, knowledge representation. Topics chosen from logic programming, game playing, planning, machine learning, natural language, neural nets, robotics.

Prerequisite(s): CS 146 (with a grade of "C-" or better); Allowed Majors: Computer Science, Data Science, Applied and Computational Mathematics or Software Engineering; or instructor consent.

Letter Graded

✳ Classroom Protocols

Regular attendance is an integral part of the learning process. Please arrive to class on time and make sure your cell phones are silent during the lecture.

Class time will be spent in interactive lecture. You are required to bring your wireless laptop to class. Your laptop must remain closed except for designated activities.

We'll use iClicker to gather your feedback and check understanding during the lecture. iClicker helps me understand what you know, gives everyone a chance to participate, and allows you to review the material after class. You must be in the classroom to participate in the iClicker activity.

▤ Program Information

Diversity Statement - At SJSU, it is important to create a safe learning environment where we can explore, learn, and grow together. We strive to build a diverse, equitable, inclusive culture that values, encourages, and supports students from all backgrounds and experiences.

📘 Course Materials

Artificial Intelligence: A Modern Approach (Optional)

Author: Stuart Russell and Peter Norvig
Publisher: Pearson
Edition: 4th
ISBN: 978-0134610993
Optional

☑ Course Requirements and Assignments

Homework

Homework assignments will be posted and submitted on Canvas. For full credit, they must be submitted by the posted due date and time. A detailed grading rubric is provided for all programming assignments. Please make sure you read and follow the grading rubric to ensure full credit.

No use of generative AI tools is permitted in this class. Students must submit work that is authentically their own.

Some assignments will be individual work. Others will be team assignments. I will make it clear whether the assignment is an individual assignment or a team assignment. All work submitted on individual assignments must be your own. You may not share or copy code or answers from fellow

students or from the web.

Infractions will be detected and will lead to an automatic 0. If someone else copies your work, with or without your permission, you will be held responsible.

For team assignments, teams will consist of two students. The work must be done by both team members and both team members will receive the same grade. Teams may not share or copy code from other teams or from the web. Both team members will receive a zero if that happens regardless of who copied or shared the work. Both team members will also be reported to the Student Conduct and Ethical Development office.

Use of Generative AI

No use of generative AI tools is permitted.
Students must present work that is authentically their own.

Questions of the Week

We will have a single question every week to check your understanding of the previous week's material. I will count the 10 best scores out of the 12 total questions in the semester. You must be in the classroom and must use the LockDown browser to access and answer the question on Canvas. Missed questions cannot be made up.

Class Participation

You are expected to attend all class meetings as you are responsible for all the material discussed. Since active participation is essential to ensure maximum benefit, we'll use iClicker to give everyone a chance to participate. The iClicker participation points may be used to give your final grade in the course a slight boost.

Midterm Exam

The midterm exam will take place in the classroom during class time on March 13.

Final Exam

The final exam is scheduled according to the SJSU Final Exam Schedule, on Wednesday, May 14 10:45am – 12:45pm.

✔ Grading Information

The final grade in the course will be calculated based on the homework assignments, questions of the week and the three exams.

The iClicker points may be used to give your final grade a slight boost. Students with the highest iClicker scores will get up to 1 bonus point. Students who violate the academic integrity policy are not eligible.

No extra credit options will be given.

Late Work

Assignments are due by 5 PM on the due date. Late assignments will be accepted with a 1-point penalty for each day or partial day late. Late days include weekend days. For example, an assignment due on Tuesday by 5 PM will incur a penalty of 1 point if submitted at 8 AM on Wednesday. Everyone gets two free 'late days' for the semester. No submissions will be accepted more than 2 days late.

Academic Dishonesty

Students who are suspected of cheating will be referred to the Student Conduct and Ethical Development office and depending on the severity of the conduct, will receive a zero on the assignment or a grade of F in the course. Grade Forgiveness does not apply to courses for which the original grade was the result of a finding of academic dishonesty.

Criteria

Type	Weight	Topic	Notes
Homework Assignments	30%		
Questions of the Week	10%		
Midterm	30%		
Final Exam	30%		

Breakdown

Grade	Range	Notes
A plus	98 to 100%	
A	93 to 97%	
A minus	90 to 92%	
B plus	87 to 89%	
B	83 to 86%	
B minus	80 to 82%	

Grade	Range	Notes
C plus	77 to 79%	
C	73 to 76%	
C minus	70 to 72%	
D	60 to 69%	
F	below 60%	

🏛 University Policies

Per [University Policy S16-9 (PDF) (http://www.sjsu.edu/senate/docs/S16-9.pdf)](http://www.sjsu.edu/senate/docs/S16-9.pdf), relevant university policy concerning all courses, such as student responsibilities, academic integrity, accommodations, dropping and adding, consent for recording of class, etc. and available student services (e.g. learning assistance, counseling, and other resources) are listed on the [Syllabus Information (https://www.sjsu.edu/curriculum/courses/syllabus-info.php)](https://www.sjsu.edu/curriculum/courses/syllabus-info.php) web page. Make sure to visit this page to review and be aware of these university policies and resources.

📅 Course Schedule

When	Topic	Notes
Week 1: Jan 23	Course Logistics	Form a team by January 29
Week 2: Jan 28, 30	What is AI? Intelligent Agents	Readings AIMA: Chapters 1, 2
Week 3: Feb 4, 6	Python Essentials, Problem Solving and Search	Q1 on Feb 4 Readings AIMA: Sections 3.1-3.3 Homework 0 (Python Essentials) due February 10
Week 4: Feb 11, 13	Uninformed Search, Informed Search	Q2 on Feb 11 Readings AIMA: Sections 3.4-3.5 Homework 1 due February 18
Week 5: Feb 18, 20	Heuristics, Local Search	Q3 on Feb 18 Readings AIMA: Sections 3.6, 4.1 Homework 2 due February 25

When	Topic	Notes
Week 6: Feb 25, 27	Constraint Satisfaction Problems	Q4 on Feb 25 Readings AIMA: Chapter 6 Homework 3 due March 4
Week 7: Mar 4, 6	Adversarial Search	Q5 on Mar 4 Readings AIMA: Chapter 5 Homework 4 due March 11
Week 8: Mar 11, 13	Review, Midterm	Q6 on Mar 11 Midterm on Mar 13
Week 9: Mar 18, 20	Logical Agents	Readings AIMA: Chapter 7, 8, Section 9.5 Homework 5 due March 26
Week 10: Mar 25, 27	Automated Planning	Q7 on Mar 25 Readings AIMA: Chapter 11
Week 11	Spring Recess - No Classes	
Week 12: Apr 8, 10	Uncertainty, Bayes Nets	Q8 on Apr 8 Readings AIMA: Chapter 12, Sec. 13.1-13.3, 14.1-14.3 Homework 6 due April 17
Week 13: Apr 15, 17	Machine Learning, Naive Bayes	Q9 on Apr 15 Readings AIMA: Sections 19.1-19.2, 20.1-20.2
Week 14: Apr 22, 24	Perceptron, Neural Nets, Nearest Neighbor	Q10 on Apr 22 Readings AIMA: Sections 21.1-21.2, 19.7 Homework 7 due May 1
Week 15: Apr 29, May 1	Unsupervised Learning, The Ethics of AI	Q11 on Apr 29 Readings AIMA: Chapter 27
Week 16: May 6, 8	Applications, Final Review	Q12 on May 6
Final Exam	Wednesday, May 14, 10:45 AM-12:45 PM	