

# Introduction to Artificial Intelligence

## CS 156

Spring 2026 Section 06 In Person 3 Unit(s) 01/22/2026 to 05/11/2026 Modified 01/15/2026

### Contact Information

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Instructor: Rula Khayrallah

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Office: MH 218

Phone: (408) 924-5153

#### Office Hours

Tuesday, 4:00 PM to 5:00 PM

online via Zoom

Wednesday, 12:15 PM to 1:15 PM

in-person only (MH 218)

### Course Information

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#### Class Meetings (in-person)

Monday, Wednesday, 3:00 PM to 4:15 PM, MacQuarrie Hall 520

### Course Description and Requisites

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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, Computer Science and Linguistics, Applied and Computational Mathematics or Software Engineering; or instructor consent.

Grading: Letter Graded

Cross-listed with SE 156. Computer Science is responsible for scheduling.

## \* Classroom Protocols

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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

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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

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### Artificial Intelligence: A Modern Approach (Optional)

**Author:** Stuart Russell and Peter Norvig

**Publisher:** Pearson

**Edition:** 4th

**ISBN:** 978-0134610993

**Optional**

## ☰ Course Requirements and Assignments

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### 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 assignments. Please make sure you read and follow the grading rubric to ensure full credit.

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.

## 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 9 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 18.

## Final Exam

The final exam is scheduled according to the SJSU Final Exam Schedule, on Wednesday, May 13.

## Grading Information

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

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 will receive a zero on the assignment. 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  | 22%    |       |       |
| Questions of the Week | 18%    |       |       |
| 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%  |       |
| C plus  | 77 to 79%  |       |
| C       | 73 to 76%  |       |
| C minus | 70 to 72%  |       |
| D       | 60 to 69%  |       |
| F       | below 60%  |       |

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

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| When               | Topic   | Notes  |
|--------------------|---|--|
| Week 1: Jan 26, 28 | Course Logistics, What is AI?                 | Readings AIMA: Chapter 1<br>Form a team by January 29                        |
| Week 2: Feb 2, 4   | Intelligent Agents, Python Essentials         | Readings AIMA: Chapter 2<br>Homework 0 (Python Essentials) due February 10   |
| Week 3: Feb 9, 11  | Problem Solving and Search, Uninformed Search | Q1 on Feb 9<br>Readings AIMA: Sections 3.1-3.4<br>Homework 1 due February 18 |
| Week 4: Feb 16, 18 | Informed Search: greedy, A* search            | Q2 on Feb 16<br>Readings AIMA: Sections 3.5.1-3.5.2                          |
| Week 5: Feb 23, 25 | Heuristics, Local Search                      | Q3 on Feb 23<br>Readings AIMA: Sections 3.6, 4.1<br>Homework 2 due Mar 2     |
| Week 6: Mar 2, 4   | Constraint Satisfaction Problems              | Q4 on Mar 2<br>Readings AIMA: Chapter 6<br>Homework 3 due Mar 9              |
| Week 7: Mar 9, 11  | Adversarial Search                            | Q5 on Mar 9<br>Readings AIMA: Chapter 5<br>Homework 4 due Mar 16             |
| Week 8: Mar 16, 18 | Review, Midterm                               | Q6 on Mar 16<br>Midterm on Mar 18  |

| When                | Topic                                     | Notes   |
|---------------------|---|---|
| Week 9: Mar 23, 25  | Logical Agents                            | Readings AIMA: Chapter 7, 8   |
| Week 10             | Spring Recess                             |   |
| Week 11: Apr 6, 8   | Resolution, Automated Planning            | Q7 on Apr 6<br><br>Homework 5 due Apr 13<br><br>Readings AIMA: Section 9.5, Chapter 11                |
| Week 12: Apr 13, 15 | Uncertainty, Bayes Nets                   | Q8 on Apr 13<br><br>Readings AIMA: Chapter 12, Sec. 13.1-13.3, 14.1-14.3<br><br>Homework 6 due Apr 27 |
| Week 13: Apr 20, 22 | Machine Learning, Naive Bayes             | Q9 on Apr 20<br><br>Readings AIMA: Sections 19.1-19.2, 20.1-20.2                                      |
| Week 14: Apr 27, 29 | Perceptron, Neural Nets, Nearest Neighbor | Q10 on Apr 27<br><br>Readings AIMA: Sections 21.1-21.2, 19.7.1<br><br>Homework 7 due May 8            |
| Week 15: May 4, 6   | Unsupervised Learning, The Ethics of AI   | Q11 on May 4  |
| Week 16: May 11     | Final Review                              | Q12 on May 11   |
| Final Exam          | Wednesday, May 13                         | 3:15-5:15 PM  |