# CSE 571: Artificial Intelligence

## Tentative Syllabus (subject to change)

Spring 2022
3:00 pm – 4:15 pm Tuesdays and Thursdays
COORL1-20 Tempe Campus

### Instructor

Prof. Siddharth Srivastava
Office Hours: Thursdays 9:30am -- 10:30am

### Teaching Assistant

Pulkit Verma
Office Hours: Tuesdays 10:00 am - 11:00 am

## Overview

This course covers introductory and advanced topics in the design of AI systems. Students will learn about informed and uninformed search, probabilistic inference, Markov decision processes, reinforcement learning, statistical learning, and modeling and representation of AI agents and problems.

*Avoid taking this class if your objective is to get an easy grade!* AI is an intensively mathematical field and the topics covered in this class require firm foundations in mathematics (discrete mathematics, probability theory) and computer science (algorithms, data structures and Python programming). This course develops advanced topics building on these foundations, so in all likelihood you will find the class challenging but you will learn a lot.

## Course Format

All classes will be in-person only. There will be regular meetings on Tuesdays and Thursdays unless stated otherwise. Students will be evaluated based on performance in in-class hands-on activities (30%); homeworks (15%); programming projects (15%); and exams (30%). Where applicable, students will also need to submit the source code for programming projects. All activities, assignments and exams are assigned to individuals (not groups); each student is required to submit his or her own original work. A detailed schedule is available on canvas.

## Late Submission Policy

Assignments submitted up to 2 hours after the due date will receive 70% of the scored credit; assignments submitted up to next 22 hours after the due date will receive 30% of the scored credit; and assignments submitted more than 24 hours after the due date will not be graded.

Programming projects will be autograded and require compliance with instructions for the autograder to work. Failure to comply with these submission instructions will result in ungraded assignments.

## Prerequisites

- CSE 310
- Proficiency with the Python programming language on Linux systems, e.g., Ubuntu
- Probability theory

## Resources

*Textbook:* Artificial Intelligence: A Modern Approach, 4th Ed. by Stuart Russell and Peter Norvig

## Absence and Make-up Policies

If a student is unable to take up the mid-term or final exam due to unavoidable circumstances, it is the student's responsibility to notify the instructor beforehand to make necessary accommodations, if possible. Students are advised to notify the instructor as early as possible. Students who expect to miss class due to officially university-sanctioned activities should inform the instructor early in the semester. Alternative arrangements will generally be made for any examinations and other graded in-class work affected by such absences. Absences not noted at the beginning of class will be considered only with a note from a reliable third-party (e.g., a doctor).

The preceding policies are based on ACD 304–04, "Accommodation for Religious Practices" and ACD 304–02, "Missed Classes Due to University-Sanctioned Activities."

## Classroom Behavior

Cell phones and pagers must be turned off during class to avoid causing distractions, unless instructed by the presenters (e.g., for online polling software). The use of recording devices is not permitted during class. Any violent or threatening conduct by an ASU student in this class will be reported to the ASU Police Department and the Office of the Dean of Students. In ASU Sync classes, please keep your mic muted unless instructed otherwise by the instructor.

## Academic Integrity

All students in this class are subject to ASU's Academic Integrity Policy (available at http://provost.asu.edu/academicintegrity) and should acquaint themselves with its content and requirements, including a strict prohibition against plagiarism.

All violations will be reported to the Dean's office, who maintain records of all offenses. Students are expected to abide by the FSE Honor Code (http://engineering.asu.edu/integrity/)

## Disability Accommodations

Suitable accommodations will be made for students having disabilities and students should notify the instructor as early as possible if they will require same. Such students must be registered with the Disability Resource Center and provide documentation to that effect.

## Sexual Discrimination

Title IX is a federal law that provides that no person be excluded on the basis of sex from participation in, be denied benefits of, or be subjected to discrimination under any education program or activity. Both Title IX and university policy make clear that sexual violence and harassment based on sex is prohibited. An individual who believes they have been subjected to sexual violence or harassed on the basis of sex can seek support, including counseling and academic support, from the university. If you or someone you know has been harassed on the basis of sex or sexually assaulted, you can find information and resources at https://sexualviolenceprevention.asu.edu/faqs.

As a mandated reporter, I am obligated to report any information I become aware of regarding alleged acts of sexual discrimination, including sexual violence and dating violence. ASU Counseling Services, https://eoss.asu.edu/counseling, is available if you wish discuss any concerns confidentially and privately.

**Notice:** Any information in this syllabus (other than grading and absence policies) may be subject to change with reasonable advance notice.

**Notice:** All contents of these lectures, including written materials distributed to the class, are under copyright protection. Notes based on these materials may not be sold or commercialized without the express permission of the instructor. [Note: Based on ACD 304-06.]