



CSE 471: Introduction to Artificial Intelligence (Spring 2018)

Information herein is subject to change.

1. Course Description:

This course provides a first introduction to a myriad of topics in Artificial Intelligence. The focus of the course is the study of modern approaches to Artificial intelligence. In particular, we will study:

- **Problem solving** deals with general problem solving; techniques behind DeepBlue and AlphaGo.
- **Modeling and reasoning** deals with knowledge representation and reasoning over the knowledge base.
- **Probabilistic modeling and reasoning** deals with uncertain modeling and reasoning. Almost all real-world problems are subject to uncertainty.
- **Machine learning** deals with learning from examples and more advanced learning techniques that contribute to most modern AI applications.

2. Course Information:

Lecture:

T & Th 6:00–7:15 PM LSE104

Instructor: Yu (“Tony”) Zhang Email: yzhan442@asu.edu

Instructor Office Hours:

T & Th 4:30PM–5:30PM BYENG 594

TAs: Mehrdad Zaker Shahrak mzakersh@asu.edu
Ze Gong zgong11@asu.edu

Office Hours for TAs:

M	3:00PM—4:00PM	BYENG M1-28	Mehrdad
F	10:00AM—11:00AM	BYENG M1-28	Mehrdad
W	2:00PM—4:00PM	BYENG M1-28	Ze Gong

Remarks on Electronic Communication: For questions regarding personal issues, email **BOTH** the TA(s) and me. Before sending an email please follow the excellent advice <http://www.wikihow.com/Email-a-Professor>. For questions about class materials (e.g., homework, quizzes and etc.), see the respective sections below.

3. Textbooks:

Required: Artificial Intelligence - A Modern Approach
Stuart Russell & Peter Norvig, 3rd Edition

- **Note:** The 2nd Edition can still be used. However, you might have to consult with your classmates regarding the mapping of homework problems and pages between the two editions.
- **Note:** International editions of the textbook have different numbering in the exercises. If you are using the international edition, you will have to consult with your classmates regarding the mapping of homework problems and pages between the 2 editions.

Supplementary reading: will be announced on BB and via course website.

4. Resources (more may be added):

Course web page (will be active soon):

<http://www.public.asu.edu/~yzhan442/teaching/CSE471/>

Schedule (will be active soon and updated incrementally):

<http://www.public.asu.edu/~yzhan442/teaching/CSE471/schedule.html>

On-line discussions and polls (Piazza):

<http://piazza.com/asu/spring2018/cse471/home>

To sign up:

<http://piazza.com/asu/spring2018/cse471>

5. Homework:

Homework problems will be posted on Blackboard. Submission of homework is done **electronically** via Blackboard before the deadline (specified by date **AND** time). **Single PDF file submission (unless noted otherwise); ONLY TYPED** homework will be accepted; *plagiarism will be checked, penalized and reported*. You can add pictures to explain your solutions. You are encouraged to use [Overleaf](#) to typeset your homework. Homework problem solutions are going to be provided on Blackboard after the due date.

General policy:

- If the homework is turned in late **AND within 48 hours of the deadline**, the maximum grade you can expect is **50%** of the total grade (if you do submit a late homework, you need to send BOTH me and the TA(s) an email with the homework as an attachment); **no grade will be given after 48 hours**. [Only under extremely rare situations will exceptions be made. Make sure to plan ahead.]
- If you are stuck, you must **FIRST** consult the textbook, handouts, and notes again to attempt your own solutions. If you are still stuck afterwards, you may post questions on Piazza (about where you are stuck) under the most relevant topic, consult online resources (**NOT** the solution manual), or visit the TA(s) or me during office hours [however, make sure to post on Piazza **BEFORE** visiting us]. **However, AT NO POINT OF TIME should you blatantly ask for solutions to homework problems on Piazza, or copy others' or online solutions.**
- If you find yourself unable to start **AFTER** consulting the textbook, handouts, and notes, visit the TA(s) or me during office hours.
- If you cannot come up with satisfactory solutions to homework problems, submit your attempted solutions.
- In some cases, the instructor or the TA may send you additional questions or ask you to clarify your solutions. If you get such a message, you must respond **within 2 business days**.
- **If cheating/plagiarism is detected (e.g., directly copying others' or online solutions), then the homework score will be zero AND your final grade will be lowered by an additional 5% AND you will be reported.**
- For questions posted on Piazza, the TA(s) and me will be responding **after 1 business day**. If you plan to rely on our answers, make sure to **PLAN AHEAD**. This will let your classmates enough time to attempt to answer your questions for class participation credit.
- The homework with the **lowest score** will be discarded.

6. Exams and quizzes:

Before every Tuesday's lecture (in most cases), there will be an online quiz for testing reading assignments (which will be assigned after Thursdays' lectures) for your understanding of the materials that **WILL** be covered in the lectures. **You can take a quiz at most TWICE; only the LAST submission will be recorded. Quizzes with the lowest score will be discarded.**

- The class follows the Just-In-Time-Teaching (JITT) philosophy. This means that **you have to read the assigned material BEFORE coming to class**. This will help me identify potential problems and revise the following lectures based on your answers and feedbacks.

There will be one final exam and one mid-term exam.

- **Mid-term:** In class, 1hr 15 min exams. In class, closed book and closed notes. A cheat sheet (double-sided) will be allowed which must be hand written. Nothing else must be on your desks besides your pen and/or pencil. Not even scrap paper. For scrap paper you can use space on the exam booklet (e.g., backside). The exact material for each midterm exam will be announced in class. Study guide will be distributed.
- **Final:** In class, closed book and closed notes. A cheat sheet (double-sided) will be allowed which must be hand written. Nothing else must be on your desks besides your pen and/or pencil. Not even scrap paper. For scrap paper you can use space on the exam booklet (e.g., backside). The final exam is comprehensive. Study guide will be distributed.
- Makeup exams will be given only for medical reasons or other personal emergency. You must submit verifiable documentation with your petition for a makeup exam.

7. Project:

- Python based project that is composed of 5-6 parts covering different topics throughout the class.
- This is an individual project. ***Plagiarism will be checked; do NOT bet on your luck.*** Your code will be compared among all those who have ever submitted the programming project plus online resources. Detection of copied or isomorphic code will be automatically performed.
- **If cheating is detected, that projection assignment score will be zero AND you will get 10% off your final grade AND you will be reported. Read also the plagiarism section below.**

8. Participation:

- **1 extra credit for online (Piazza) and 1 extra credit for in-class participation (in-class participation is **NOT** about whether you show up or not but how you participate in the class discussion).**
- Contributing to both on-line and in-class discussions. This should be an activity throughout the semester.
- Correcting your instructor and/or TA(s) in class!
- Helping others figure out fallacies in their line of thought when attempting to solve a problem.
- Giving hints to your classmates, but not the complete answer.

9. Grading:

Homework	15%
Project	30%
Quizzes	10%
Mid-term Exam	20%
Final Exam	25%
Participation	2%
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Total	102%

Final grades will be determined as follows*:

A+	[97-102]
A	[93-97)
A-	[90-93)
B+	[85-90)
B	[80-85)
B-	[75-80)
C+	[70-75)
C	[65-70)
D	[60-65)
E	[0-60)

*The instructor reserves the rights to curve if necessary.

10. Grading Questions:

If you believe that there is a mistake in grading, you must inform the TA(s) and/or the instructor **within 2 business days** when the graded work was returned to you.

11. Attendance:

I do not have an attendance policy. Come to class only if you like. Most of the material are available (or will be available) on-line.

However, if you skip classes, **you do miss the chance for in-class participation bonus.**

If you cannot come to an exam, then I will need some back-up documentation from a third party, e.g., a doctor, to schedule a make-up exam. Notification: If a student has to miss a test/homework/project for reasons out of his/her control, he/she should send the instructor & TAs an email as soon as possible, but no later than the deadline, with **an official document attached** (e.g., if you are sick, a doctor's note stating that you are unable to attend/work for a specific period).

12. Class evaluations and feedback:

I take very seriously class evaluations and feedback. During the semester, **I will be posting surveys on Piazza** for feedback on both the course organization and the course content. I will appreciate it if you respond to these surveys. Ideally, the changes I implement will help you better succeed in the course.

Finally, it is **extremely important** that you respond to the final anonymous survey solicited by the university at the end of the school year. The overall feedback helps me make changes for the next year. The survey is often released 1-2 weeks before the final at: <https://fultonapps.asu.edu/eval/>

13. Honors Contract (Choose one):

- Extend the class project to use 1-2 AI methods NOT covered in class
- Solve a real-world problem using the AI methods learned
- 8-10 page report summarizing reading of 4-5 recent AI research papers (after 2010 and from major AI conferences and journals) that are relevant to the class.
- Come up with your own idea and discuss it with your instructor!

14. Academic Dishonesty:

- Your work for this course must be the result of your own individual effort. Having said that, you are allowed to discuss problems with your classmates, the TA(s), or me, but you must not blatantly copy others' or online solutions.
- Copying (or slightly changing) solutions from online sources, other books or your friends is **easily detectable**.
- **If copying or plagiarism is detected, then a zero grade will be applied to the respective assignment & your final grade will be penalized, and a formal report**

will be filed!

- Do not forget that if you can find an answer online, so can we! Actually, the automatic plagiarism-checking system will have many different versions of solutions to check against your answers for copying.