

CSE 4308/5360: Artificial Intelligence

Fall 2026

As the instructor for this course, I reserve the right to adjust the syllabus and schedule in any way that serves the educational needs of the students enrolled in this course. – Vamsikrishna Gopikrishna.

Instructor Information

Name

Vamsikrishna Gopikrishna, Ph.D.

Office Location

[ERB](#) 553

Office Phone

(817) 272-3785

Email

vamsikrishna.gopikrishna@uta.edu [Please put course and section number in Subject line]

Faculty Profile

<https://mentis.uta.edu/explore/profile/vamsikrishna-gopikrishna>

Office Hours

Fridays, 01:30 PM – 03:00 PM in ERB 553 or Via TEAMS

Communication Guidelines

My preferred communication method is via TEAMS Messages.

I can also be reached via the Canvas Messaging system or via email sent from an '@uta.edu' or an '@mavs.uta.edu' email address (Please ensure it is sent to the correct address and has the course and section number included in the Subject Line)

I will respond to TEAMS Messages within 1 weekday. I will respond to Canvas messages or emails within 1 calendar week.

Students will also be added to a TEAMS group for the course. You can reach me there too. (Note: Messages sent to TEAMS group will be visible to all students in class)

Course Information

Section Information

CSE 4308 003; CSE 4308 004; CSE 5360 003

Course Description

Course Title: Artificial Intelligence / Artificial Intelligence - I

This course introduces the basic philosophies and techniques of Artificial Intelligence. AI techniques have become an essential element in modern computer software and are thus essential for a successful career and advanced studies in computer science. Topics covered in this course include search algorithms (such as breadth-first, depth-first, A*), game-playing algorithms (such as Minimax), knowledge and logic reasoning, planning methods, probabilistic reasoning, and machine learning.

Prerequisites: C or better in CSE 3318 & (IE 3301 or MATH 3313)

Course Delivery Method

This course is designated as ON-CAMPUS, which means the majority of course instruction, exams and projects delivered on-campus or at designated instructional sites, in-person. If the university is closed due to unforeseen circumstances or instructor is unable to be on campus due to some reason, lectures will be held online as a TEAMS meeting. If Instructor is unable to conduct a lecture in person and at the scheduled time, lecture will be conducted asynchronously as a video recording provided on canvas available on the day of the scheduled lecture.

Time and Place of Class Meetings

CSE 4308 003 / 5360 003: [WH](#) 311 – Mondays / Wednesdays 01:00 PM – 2:20 PM

CSE 4308 004: [PKH](#) 103 – Tuesday / Thursday 03:30 PM – 4:50 PM

Time Zone

This course operates on Central Time. All times listed for class meeting times, exams, and assignment deadlines are in Central Time (CT).

Classroom/Lecture Recording Policy

Faculty maintain the academic right to determine whether students are permitted to record classroom and online lectures. Recordings of classroom lectures, if permitted by the instructor or pursuant to an ADA accommodation, may only be used for academic purposes related to the specific course. They may not be used for commercial purposes or shared with non-course participants except in connection with a legal proceeding.

Recording classroom and online lectures in this course is allowed. Lectures will be livestreamed and recorded via the Echo360 system and provided on the canvas page of the course. Any lectures that are conducted online as TEAMS meetings (due to any unforeseen circumstances) will be recorded and available on the TEAMS group for the course. All recordings (including any made by students) are only for use of students registered to the class and are not for redistribution.

Expectations for Out-of-Class Study

Beyond the time required to attend each class meeting, students enrolled in this course should expect to spend at least an additional 3 to 4 hours per week of their own time in course-related activities, including reading required materials, completing assignments, preparing for exams, etc.

Student Learning Outcomes

By the end of this course, you will be able to:

1. Have a broad understanding of the various approaches to building rational agents
2. Be able to look at a complex problem and determine which AI agent would be best suited to solve it
3. Have knowledge of some of the common hardcoded approaches for building problem solving agents
4. Have an introduction to Machine Learning and some Supervised Learning Approaches for building problem solving agents.

Course Materials & Technology

Textbook Information

Slides of course content will be posted on the website. Recommended textbook: **Artificial Intelligence: A Modern Approach, 4th Edition by Stuart Russell, Peter Norvig**. Price: \$64.98 – \$260.00 at the [UTA Bookstore](#). Other sources for the book may be available [here](#). Note: 3rd or 2nd Edition is also acceptable.

Technology & Equipment Requirements

Students will need access to a Laptop/Desktop. They will need to be able to program in C, C++, Python or Java for their programming assignments. They will need to be able to use Canvas to view supplementary material provided by the instructor, view any video material posted by the instructor and to submit assignments. They are also strongly recommended to get used to TEAMS as a way to get in touch with the instructor. If any exams must be moved online, students will have to use the Lockdown browser with the Respondus monitoring system for the exams in which case they will need a webcam for their Laptop/Desktop.

Visit the [OIT Services page](#) for a list of Applications and Software available through UTA.

Visit the [UTA Libraries Technology page](#) for a list of items that can be checked out or used at the library.

Assignments & Exams

Assignments

There will be several programming assignments during this course. If you find yourself in an emergency and cannot deliver the assignments on time, immediately inform the instructor. The work done for the assignment must be your individual work. Any external resources or code segments you want to use must first be cleared by the instructor and cited appropriately in your work. **Violations of this will not be tolerated and result in severe penalties for all parties involved, in strict compliance with official UTA policy.**

The assignments must be coded in base versions of C, C++, Python, Java. Alternatively, they can be coded to run on the ACS machine omega (All students will have an account on the ACS machine omega). Note that Omega compatibility is not required (just provided as an option for students). If any partial code is provided as part of the assignment, it will generally only be provided in a limited number of languages. However, you are under no obligation or requirement to use it. Additional details will be announced in class.

All assignments are required. No assignments will be dropped from your final score (unless in case of a documented emergency) but the highest scoring assignment will be weighed more in the final grade and the lowest scoring assignment will be weighed less in the final grade.

All submissions must be submitted via [Canvas](#). No other method of submission is accepted under any circumstances

Exams

There will be four non-cumulative exams spread out throughout the course. Your highest scoring exam will have an increased weight, and your lowest will have a reduced weight, but all exams will be used. The exam will be held on campus as in-person exams barring any extended university closures. If the university requires exams to be moved online, then they will be held online via the Lockdown browser with Respondus monitoring system. The exams are closed book/closed notes. However, exam relevant formulae and algorithms will be provided as a handout for the students to use. No other material is allowed during the exam. Students may also need a non-programmable standard or scientific calculator. For the exams, please follow all instructions regarding what information needs to be provided in your answer booklet. Missing information will be penalized. These penalties will **not** be reverted under any circumstances

Final Exam

There will be one Final Exam held during finals week that covers all testable material discussed in class during the semester. The exact date, time and location of the Exam will be determined by the university and posted [here](#). The exam is a closed book exam. All relevant formulae and algorithms will be provided as a handout with the question booklet. In addition, Students are allowed 1 sheet of **handwritten** notes they can use during the exam. These notes can contain whatever information the students feel might be useful during the exam but cannot contain solutions to problems discussed during the class or from the exams or from other sources and will have to be submitted along with your exam (more details will be given in class). Students will also need a non-programmable standard or scientific calculator. No other material is allowed during the exam. **The presence of unauthorized material in your notes or in any other form will be treated as cheating and penalized as such.** For the Final, please follow all instructions regarding what information needs to be provided in your answer booklet. Missing information will be penalized. These penalties will **not** be reverted under any circumstances.

Grading Information

You will be assigned a numerical final score based on your performance in your assignments, your exams and in your final exam.

Material	Value (%)
Policy Acknowledgement	5 %
Average Exam Score	30 %
Average Assignment Score	30 %
Final Exam	30 %
Attendance	5 %
	Total: 100%

Note: Not completing policy acknowledgement form submission by its due date (Weekend before Exam 1) may result in students not being allowed to sit for Exams and the Final.

The exams and assignments averages will be calculated as the weighted average of the percentage scores of each assignment and exam:

$$Score_{avg} = \frac{\sum_{i=1}^n \left(w_i * \frac{Score_i}{Score_{max}} * 100 \right)}{\sum_{i=1}^n w_i}$$

Note: All exams/assignments will be used in the grading. Weight of the lowest scoring exam/assignment is 0.5. Weight of the highest scoring exam/assignment is 1.5. All other exam/assignments weigh 1

For the Exams and Assignments, if any tasks were graded incorrectly (a correct answer given less than full credit) or if there is a totaling error, please contact either the TA or the instructor ASAP. Any partial credit obtained for incorrect tasks is not up for discussion/negotiation.

Students are expected to track their performance throughout the semester, which Canvas facilitates, and seek guidance from available sources, including the instructor, if their performance drops below satisfactory levels. Refer to the [Student Support Services](#) section below.

Final Grade Calculations

Earned % Range	Letter Grade
>= 90	A
>= 70 & < 90	B
>= 50 & < 70	C
>= 40 & < 50	D
Otherwise	F

Note: If there are two or more unexcused absences from exams, you will be given a grade of F for the course.

Late Work Policy

The points each assignment graded out of will be provided as part of its description. Assignments submitted late will be automatically penalized, at a rate of **2% of assignment max points per hour late**. Note that the link to submit the assignment will be removed **1 week** after the due date (**any assignment specific changes to this policy will be mentioned in class**). The submission due time (and the time the submission link will be available till) will be shown in [Canvas](#). **No submissions will be accepted after the link is no longer available**. Exceptions to the late penalty will only be made for documented emergencies, in strict adherence to UTA policy. Computer/Network crashes, Submission of Incomplete files, Submission of Incorrect Files, Submitting at Incorrect Link are NOT acceptable excuses for late submissions. **No exceptions will be made**. To avoid problems with such crashes and last-minute problems, students are encouraged to submit as early as possible. They are also advised to ensure that their file was uploaded correctly once you finish submitting it and make a resubmission ASAP in case of any errors. You can always revise your submission till the deadline. If you are unable to work on/submit an assignment due to a valid documented reason (illness, critical family emergencies, military service obligations, observance of major religious holidays, and certain university service commitments) and provide the documentation before the deadline for the assignment, one assignment will be excused from your final grade calculation.

Make-Up Exams Policy

Absence from exams may be excused, with appropriate documentation for illness, critical family emergencies, military service obligations, observance of major religious holidays, and certain university service commitments. Requests for excused absence, and documentation for such absences, must be provided either before the exam or within one week following it. In case of excused absence, a makeup exam covering the same material will be set up and conducted by the instructor on a date before the last day of finals week. **Even if the reason for an absence/non-attendance is valid, a request for an excused absence will be rejected if provided later than one week following the exam.** An unexcused absence will be given a score of 0. **If there are two or more unexcused absences for exams, you will be given a grade of F for the course.** The dates for all the exams are subject to change. Any changes will be announced in class at least a week in advance (unless in case of an emergency or unforeseen university closure).

Absence from the final exam may be excused, with appropriate documentation, for illness, critical family emergencies, military service obligations, observance of major religious holidays, and certain university service commitments. Requests for excused absence, and documentation for such absences, must be provided before the end of Finals Week. In case of excused absence, the student will be given a grade of Incomplete (I). A makeup final will be set up and conducted by the instructor at a date at some point in Spring 2026 (or during the winter break) and the grade updated based on the score from that exam. The exact date, time and location of the Exam will be determined by the university and posted [here](#). Students are expected to be available till the last day of finals week. No accommodation/makeup exam will be provided if the student misses the Final exam due to being unavailable before the last day of finals week due to travel plans.

Please note that no makeup assignments or exams will be provided for the purpose of bumping up your grade under any circumstances

Extra Credit Policy

Assignments/Exams may have certain tasks that are for students of CSE 5360. These tasks will be available as Extra Credit for students of CSE 4308. There may also be certain tasks available as Extra Credit for all students.

Please note that no extra credit tasks will be provided to individual students for the purpose of bumping their grade under any circumstances

Grades and Feedback Timeline

Each exam will be graded and the scores posted on canvas before the subsequent exam. Final Exam grades will be posted before Dec 14th 2026. Assignment scores will be posted to the students ASAP after submission (Unless the TA or Instructor is unable to get the code to run. In that case, the grade will be posted after student gets a chance to conduct a live demo of executing the submitted code). All assignment scores will be posted before Dec 14th 2026.

Grade Grievance Policy

Any appeal of a grade in this course must follow the procedures and deadlines for grade-related grievances as published in the current [University Catalog: Grades and Grading Policies](#).

Course & University Policies

Attendance Policy

Students should review the University Class Attendance Policies on the [Class Attendance Policies page](#). The following attendance policy will be applied in this course.

Students are expected to attend the Lectures in person. Attendance will be taken through the aplus attendance system on Canvas and is part of your final grade. While the lectures are recorded and posted online through Echo360 system, these are only provided for review purposes and not as a substitute for attending the lectures. If the student misses any of the lectures, it is the student's responsibility to look over the slides/videos/recordings to catch up with the rest of the class and clarify any questions they may have with the instructor.

Generative AI Use in This Course

The use of Generative AI (GenAI) in course assignments and assessments must align with the guidelines established by the instructor. Unauthorized use of GenAI could result in breaches of academic integrity. Instructors are responsible for clearly delineating the permissible uses of GenAI in their courses, underscoring the importance of responsible and ethical application of these tools.

[Community Standards](#) within the [Office of the Dean of Students](#) articulate the university's stance on [academic integrity and scholastic dishonesty](#). These standards extend to the use of GenAI. Unauthorized or unapproved use of GenAI in academic work falls within the scope of these policies and will be subject to the same disciplinary procedures.

As the instructor for this course, I have adopted the following policy on student use of GenAI.

Use of Generative AI tools is restricted for this course. Students are allowed to use GenAI tools to summarize slides or handouts provided by the instructor. Students cannot use GenAI to generate code for programming assignments. Any notes they bring to their Final have to be handwritten notes prepared by them and not by GenAI

Institutional Policies

UTA students should review the [University Catalog](#) and the [Syllabus Institutional Policies](#) page for institutional policies and contact the specific office with any questions. The institutional information includes the following policies, among others:

- Drop Policy
- Disability Accommodations
- Academic Integrity
- Electronic Communication

UTA Honor Code and Academic Dishonesty Policy

UTA students are expected to adhere to and observe standards of conduct compatible with the University's functions as an educational institution and live by the [University of Texas at Arlington's Honor Code](#). It is the policy of The University of Texas at Arlington to uphold and support standards of personal honesty and integrity for all students consistent with the goals of a community of scholars and students seeking knowledge and responsibility.

All work you do for this course (Assignments, Exams or Final Exam) is individual work. If you are caught colluding or copying in the assignment, exams, or the final the following consequences will be applied.

For the nth offence in the current semester:

- You will be given a score of 0 points for that assignment, exam, or final.
- Your final grade will be reduced by n letter grades (Down to a minimum of F)
- An academic integrity violation form will be filed.
 - If you agree to sign the form
 - You will be placed on disciplinary probation for 1 year and a 7-year reportable disciplinary record being created.
 - Additional violations may result in increasing sanctions up to and including suspension or expulsion.
 - If you do not agree to sign the form
 - You will be temporarily given a grade of Incomplete (I)
 - The Office of Academic Integrity will conduct a formal investigation based on evidence provided.
 - Based on decision, Either the grade will be calculated with the penalty and with the consequences discussed above or grade will be calculated without penalties and no forms being filed.

This policy is not up for discussion/negotiation under any circumstances

Student Support Services

Academic Success Center

The Academic Success Center (ASC) offers a range of resources and services designed to help you maximize your learning and achieve academic success as a student at the University of Texas at Arlington. ASC services include supplemental instruction, peer-led team learning, tutoring, mentoring, and TRIO SSS. Academic Success Center services are provided at no additional cost to UTA students. For additional information, visit the [ASC](#) website or submit a [tutoring request form](#).

The English Writing Center (411LIBR)

The Writing Center offers FREE tutoring in 15-, 30-, 45-, and 60-minute face-to-face and online sessions to all UTA students on any phase of their UTA coursework. Register and make appointments online at the [Writing Center](#). Classroom visits, workshops, and specialized services for graduate students and faculty are also available. Please see [Writing Center: OWL](#) for detailed information on all our programs and services.

Academic Plaza

The Library's 2nd floor [Academic Plaza](#) offers students a central hub of support services, including IDEAS Center, University Advising Services, Transfer UTA, and various college/school advising hours. Services are available during the [library's hours](#) of operation.

UTA Health and Wellbeing Resources

UT Arlington is committed to the safety, success, and well-being of our students. To support our community, UTA has established a Community Advocacy, Response, and Engagement (CARE) Team, a dedicated group of campus professionals responsible for helping students who could benefit from academic, emotional, or psychological support, as well as those presenting risks to the health or safety of the

community. If you know of someone experiencing challenges, appearing distressed, needing resources, or causing a significant disruption to the UTA community, please submit a [CARE Referral](#) by visiting the [CARE Team](#) page. You may also submit a referral for yourself if you would like additional support.

UTA students also have access to virtual, on-demand emotional support, appointment-based counseling, advanced psychiatric care, and more. For more information, visit [TimelyCare](#).

NOTE: If a person's behavior poses an immediate threat to you or someone else, contact UTA Police at 817-272-3003 or dial 911. If you or someone you know needs to speak with a crisis counselor, please reach out to the [MAVS TALK 24-hour Crisis Line](#) at 817-272-8255 or the [National Suicide and Crisis Lifeline](#) at 988.

Student Services Page

The [Student Services page](#) provides links to many resources available to UTA students, including:

- Academic Success
- Counseling and Psychological Services (CAPS)
- Health Services
- Students with Disabilities
- Veteran Services

Students are also encouraged to check out [Career Center](#) resources to enhance their career-readiness, find student employment, search for internships, and more. We encourage [Major Exploration](#) and the use of [Experiential Major Maps](#) to keep students on track for graduation. Refer to the [Graduation Help Desk](#) for more details.

Accessibility of Course Materials

Some course materials, such as PDFs of musical scores, technical drawings, graphs, blueprints, design plans, or artworks (common in fields like drawing, painting, or construction drafting), may not fully comply with all [Web Content Accessibility Guidelines \(WCAG\)](#) requirements.

The University of Texas at Arlington is dedicated to ensuring all students have equal access to information. If you experience any accessibility barriers with course materials, please know that accommodations are available. You can get assistance through the [Student Access and Resource \(SAR\)](#) Center or by contacting your instructor directly. Please don't hesitate to reach out if you need help.

Online Academic Success Guide

Visit the [Online Academic Success Guide](#) to explore a list of helpful tips and resources to help you succeed in your online journey.

Librarian to Contact

Each academic unit has access to [Librarians by Academic Subject](#) who can assist students with research projects, tutorials on plagiarism, citation references, as well as support with databases and course reserves.

Safety Information and Resources

MavAlert System

The MavAlert system sends information to cell phones or email accounts of subscribed users in case of an emergency. Anyone can subscribe to MavAlerts at [Emergency Communication System](#).

Emergency Phone Numbers

In case of an on-campus emergency, call the UT Arlington Police Department at **817-272-3003** (non-campus phone) or **2-3003** (campus phone). You may also dial 911. The non-emergency number is 817-272-3381.

Tentative Course Schedule – Monday/Wednesday Sections

Week	Date	Lec.	Topic
1	8/17/2026	1	Course Details, Overview
	8/19/2026	2	Agents, Solving Problems with search
2	8/24/2026	3	Uninformed Search, Informed Search
	8/26/2026	4	Informed Search (Contd.)
3	8/31/2026	5	Game Playing
	9/2/2026		EXAM 1
4	9/7/2026		Labor Day - NO CLASS
	9/9/2026	6	Game Playing (Contd.)
5	9/14/2026	7	Constraint Satisfaction Problems
	9/16/2026	8	Constraint Satisfaction Problems (Contd.)
6	9/21/2026	9	Knowledge and Logic Reasoning
	9/23/2026	10	Inference in Propositional Logic
7	9/28/2026	11	First Order Logic
	9/30/2026		EXAM 2
8	10/5/2026	12	Inference in FOL
	10/7/2026	13	Planning
9	10/12/2026	14	Planning (Contd.)
	10/14/2026	15	Contingency Planning, Online Replanning
10	10/19/2026	16	Probability
	10/21/2026	17	Prior and Posterior Probabilities
11	10/26/2026	18	Bayesian Networks
	10/28/2026		EXAM 3
12	11/2/2026	19	Learning
	11/4/2026	20	Decision Trees
13	11/9/2026	21	Real World Decision Trees, Bayesian Classifiers
	11/11/2026	22	Bayesian Classifiers (contd.), Probability Estimations
14	11/16/2026	23	Prob. Estimation (Contd.), Nearest Neighbor Classifiers
	11/18/2026	24	Intro to Neural Networks, Backpropagation learning
15	11/23/2026		EXAM 4
	11/25/2026		Thanksgiving Holiday - NO CLASS
16	11/30/2026		Final Exam Review Session
	12/2/2026		Student Study Day - NO CLASS
	12/3/2026		FINALS WEEK - Check Calendar for exact Date & Time
	12/4/2026		FINALS WEEK - Check Calendar for exact Date & Time
	12/5/2026		FINALS WEEK - Check Calendar for exact Date & Time
17	12/7/2026		FINALS WEEK - Check Calendar for exact Date & Time
	12/8/2026		FINALS WEEK - Check Calendar for exact Date & Time
	12/9/2026		FINALS WEEK - Check Calendar for exact Date & Time

Tentative Course Schedule – Tuesday/Thursday Sections

Week	Date	Lec.	Topic
1	8/18/2026	1	Course Details, Overview
	8/20/2026	2	Agents, Solving Problems with search
2	8/25/2026	3	Uninformed Search, Informed Search
	8/27/2026	4	Informed Search (Contd.)
3	9/1/2026	5	Game Playing
	9/3/2026		EXAM 1
4	9/8/2026	6	Game Playing (Contd.)
	9/10/2026	7	Constraint Satisfaction Problems
5	9/15/2026	8	Constraint Satisfaction Problems (Contd.)
	9/17/2026	9	Knowledge and Logic Reasoning
6	9/22/2026	10	Inference in Propositional Logic
	9/24/2026	11	First Order Logic
7	9/29/2026		EXAM 2
	10/1/2026	12	Inference in FOL
8	10/6/2026	13	Planning
	10/8/2026	14	Planning (Contd.)
9	10/13/2026	15	Contingency Planning, Online Replanning
	10/15/2026	16	Probability
10	10/20/2026	17	Prior and Posterior Probabilities
	10/22/2026	18	Bayesian Networks
11	10/27/2026		EXAM 3
	10/29/2026	19	Learning
12	11/3/2026	20	Decision Trees
	11/5/2026	21	Real World Decision Trees, Bayesian Classifiers
13	11/10/2026	22	Bayesian Classifiers (contd.), Probability Estimations
	11/12/2026	23	Probability Estimation (contd.)
14	11/17/2026	24	Nearest Neighbor Classifiers
	11/19/2026	25	Intro to Neural Networks, Backpropagation learning
15	11/24/2026		EXAM 4
	11/26/2026		Thanksgiving Holiday - NO CLASS
16	12/1/2026		Final Exam Review Session
	12/3/2026		FINAL WEEK - Check Calendar for exact Date & Time
	12/4/2026		FINAL WEEK - Check Calendar for exact Date & Time
	12/5/2026		FINAL WEEK - Check Calendar for exact Date & Time
17	12/7/2026		FINAL WEEK - Check Calendar for exact Date & Time
	12/8/2026		FINAL WEEK - Check Calendar for exact Date & Time
	12/9/2026		FINAL WEEK - Check Calendar for exact Date & Time