Syllabus
AI 500.1W Foundations of Artificial Intelligence
East Texas A&M University
Fall 2025

Instructors:

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D. Christian Hempelmann (tel: x-5260, email: c.hempelmann@etamu.edu, office: THL 226)

Office Hours - Dr. El Ariss:

Day	Time
Tuesday, Thursday	11:00 am – 12:30 pm
Wednesday (Zoom)	5:00 pm - 6:00 pm https://tamuc.zoom.us/j/96332228989

Office Hours - Dr. Hempelmann:

Day	Time
Tuesday, Thursday	2-3pm
Zoom	by appointment, email me!

Communication Response Time: 24 hours
(Please send a second email if you did not receive a response after 2 days)

Preferred Form of Communication: face-to-face
There are many ways to reach us. There is no substitute for face-to-face communication which often leads to more refined and focused questions resulting in your improved understanding. We strongly encourage you to take advantage of our office hours. Questions during class or immediately after class are always welcomed. Email is an easy way to ask questions outside of class but is not productive as face-to-face communication.

Meeting Time and Place

Web Based Class. You can either:

- Attended the prerecorded lectures that will be posted every Tuesday and Thursday.
- Attend the live Zoom lectures on TR 3:00 pm - 5:00 pm
    - Zoom Link: https://tamuc.zoom.us/j/98966090469

Prerequisites

- CSCI 513

Recommended Textbooks

- No textbook is required

- All reading materials will be provided by the instructors.

Course Objectives

This course is an all-encompassing introductory course designed to accommodate students with diverse undergraduate majors. It serves as an entry point into the dynamic world of artificial intelligence (AI) by providing a strong foundation in essential computer science principles, including algorithms, data structures, and problem solving. In addition, the course delves into the fascinating domain of natural language processing, forging connections between human language and machine understanding. Throughout this course, students will apply various algorithms using fundamental data structures, such as lists, trees and graphs to solve various AI problems. By the conclusion of this course, students will possess a robust knowledge base, equipping them to engage with AI in various contexts, from research to practical application. Embark on this intellectually stimulating journey to uncover the core principles driving the AI revolution, tailored to the diverse academic backgrounds of graduate students.

Student Learning Outcomes

Upon completion of the course, students should possess the following skills:

- Acquire a comprehensive understanding of computer science principles foundational to AI.
- Understand various algorithms such as graph search algorithms, divide and conquer, dynamic programming, greedy algorithms, and evolutionary algorithms.
- Explore the intricacies of natural language processing and its relevance in AI applications.
- Develop sophisticated problem-solving skills within the context of artificial intelligence.
- Understand how agent based application are designed and implemented.

Assignments

There will be several theoretical and programming assignments. The purpose of the assignment is to reinforce theoretical/computing material that is covered in class. Programming assignments should be done individually. Make sure to start early on the assignments so that you have time to get help if there is a need to.

East Texas A&M University acknowledges that there are legitimate uses of Artificial Intelligence, chatbots, or other software that has the capacity to generate code, and textual answers. Any use of such software is not allowed, and constitutes an instance of academic dishonesty (plagiarism).

Grading

- Assignments: 50% of grade
- Midterm Exam: 20% of grade
- Final Exam: 30% of grade

Letter grades will be determined using a standard percentage of points scale:

Letter Grade	Cut-off Score
A	90%
B	80%

C	70%
D	60%
F	Below 60%

The time and location of each exam will be announced at least one week before the exam. Class attendance, doing all your assignments will help the borderline cases. Check your grades often. Any score may be disputed up to seven (7) days after the score is posted. After 7 days the score remains as-is.

Technology Requirements - LMS

All course sections offered by East Texas A&M University have a corresponding course shell in the myLeo Online Learning Management System (LMS). Below are technical requirements
LMS Requirements:
https://community.brightspace.com/s/article/Brightspace-Platform-Requirements

LMS Browser Support:
https://documentation.brightspace.com/EN/brightspace/requirements/all/browser_support.htm

YouSeeU Virtual Classroom Requirements:
https://support.youseeu.com/hc/en-us/articles/115007031107-Basic-System-Requirements

Access and Navigation

You will need your campus-wide ID (CWID) and password to log into the course. If you do not know your CWID or have forgotten your password, contact the Center for IT Excellence (CITE) at 903.468.6000 or HelpDesk@etamu.edu.

Note: Personal computer and internet connection problems do not excuse the requirement to complete all course work in a timely and satisfactory manner. Each student needs to have a backup method to deal with these inevitable problems. These methods might include the availability of a backup PC at home or work, the temporary use of a computer at a friend's home, the local library, office service companies, Starbucks, a ETAMU campus open computer lab, etc.

Communication and Support

If you have any questions or are having difficulties with the course material, please contact your instructor.

Technical Support

If you are having technical difficulty with any part of Brightspace, please contact Brightspace Technical Support at 1-877-325-7778. Other support options can be found here:
https://community.brightspace.com/support/s/contactsupport

Minimal Technical Skills Needed

Students enrolling in this course should have knowledge of computer essentials including how to interact with a graphical user interface, text editor, web browser and the use of D2L. If the use of a personal computer is preferred over university laboratory computers, it is expected that the student can download, install and configure software. Students should also have a good understanding of programming, preferably in Python.

Methods of Instruction

We will meet 2 times every week, including 2 lectures. Attendance is required for every meeting. The course will consist mainly of lectures, programming exercises, and discussions. Class attendance and good note taking are essential for success. Students are expected to contribute to each class in the form of discussion and questions. Therefore, it is necessary to do any required reading before class.

This syllabus contains an overview of what will be covered in class; for specific information, students are referred to the class web page maintained on D2L course management system. The course web page will contain lectures, assignment information and supporting material. Information on D2L will be updated frequently so it is a good idea to check it regularly. Assignments are posted on D2L and should be submitted through D2L.

Attendance

You are expected to attend every class. If you must miss a class, it is your responsibility to make up for the work that you missed. If you are going to be absent from class, please notify the instructor in advance.

Tips for Success in the Course

1. Watch the recorded lecture video, or attend the live streaming of the lectures on Zoom. Make sure to ask questions if the material is not clear.
2. Read all assigned textbook and supplemental materials.
3. Check D2L at least once a day.
4. Attend, and work on the class exercises.
5. Practice (preferably multiple times) programming the code that we go through during the lectures.
6. Start your assignments early.
7. Practices programming regularly.
8. Do your own work. Please do not copy other's work.
9. Do not rely on AI generated code.
10. If you have any questions, or are having difficulties with the course material then please contact your instructors as soon as possible.

Late Submissions Policy

All work submitted electronically must be submitted by midnight of the due date. Late work will be deducted 10% for each day past the due date. Assignment will not be accepted after three days from the due date.

Make-up Policy

No individual make-up test will be permitted except in the case of a formal institutional excuse. There will be no makeup for project deliverables.

Syllabus Change Policy

The syllabus is a guide. Circumstances and events, such as student progress, may make it necessary for the instructor to modify the syllabus during the semester. Any changes made to the syllabus will be announced in advance.

Student Conduct

All students enrolled at the University shall follow the tenets of common decency and acceptable behavior conducive to a positive learning environment. The Code of Student Conduct is described in detail in the Student Guidebook: Student Guidebook | East Texas A&M University, ETAMU

Students should also consult the Rules of Netiquette for more information regarding how to interact with students in an online forum: https://www.britannica.com/topic/netiquette

Academic Honesty

"All students enrolled at the University shall follow the tenets of common decency and acceptable behavior conducive to a positive learning environment." (See Student's Guide Handbook, Policies and Procedures, Conduct). It is the policy of the University, that no form of plagiarism or cheating will be tolerated. Plagiarism is defined as the deliberate use of another's work and claiming it as one's own. This means ideas as well as text or code, whether paraphrased or presented verbatim (word-for-word). Cheating is defined as obtaining unauthorized assistance on any assignment. Proper citation of sources must always be utilized thoroughly and accurately. If you are caught sharing or using other people's work in this class, you will receive a 0 grade and a warning on the first instance. A subsequent instance will result in receiving an F grade for the course, and possible disciplinary proceedings. If you are unclear about what constitutes academic dishonesty, ask.

For more details and the definition of academic dishonesty see the following procedures:

Undergraduate Academic Dishonesty 13.99.99.R0.03

Special Needs

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you have a disability requiring an accommodation, please contact:

Office of Student Disability Services
East Texas A&M University
Velma K. Waters Library 162
Phone (903) 886-5150
Fax (903) 468-8148
Email: StudentDisabilityServices@etamu.edu
Website: Student Disability Services | East Texas A&M University, ETAMU

East Texas A&M Supports Students' Mental Health

The Counseling Center at East Texas A&M, located in the Halladay Student Services, Room 203, offers counseling services, educational programming, and connection to community resources for students. Students have 24/7 access to the Counseling Center's crisis assessment services by calling 903-886-5145. For more information regarding Counseling Center events and confidential services, please visit Counseling Center | East Texas A&M University, ETAMU

Nondiscrimination Notice

East Texas A&M University will comply in the classroom, and in online courses, with all federal and state laws prohibiting discrimination and related retaliation on the basis of race, color, religion, sex, national origin,

disability, age, genetic information or veteran status. Further, an environment free from discrimination on the basis of sexual orientation, gender identity, or gender expression will be maintained.

Campus Concealed Carry Statement

Texas Senate Bill - 11 (Government Code 411.2031, et al.) authorizes the carrying of a concealed handgun in East Texas A&M University buildings only by persons who have been issued and are in possession of a Texas License to Carry a Handgun. Qualified law enforcement officers or those who are otherwise authorized to carry a concealed handgun in the State of Texas are also permitted to do so. Pursuant to Penal Code (PC) 46.035 and East Texas A&M Rule 34.06.02.R1, license holders may not carry a concealed handgun in restricted locations.

For a list of locations, please refer to the Carrying Concealed Handguns On Campus document and/or consult your event organizer.

Web url:
https://www.etamu.edu/wp-content/uploads/2021/08/882e4456-34.06.02.r1.pdf

Pursuant to PC 46.035, the open carrying of handguns is prohibited on all East Texas A&M campuses. Report violations to the University Police Department at 903-886-5868 or 9-1-1.

Tentative Course Outline

Week	Content
1	History of AI I - Introduction History of AI II - Introduction to LMs
2	History of AI III – RE Data Structures I
3	Data Structures II
4	Algorithms I - divide & conquer, dynamic programming
5	Algorithms II - greedy algorithms, evolutionary algorithms
6	Algorithms III - complexity
7	Search: minimax, A*
8	**Midterm**
9	Cognitive AI
10	Humor & AI
11	Applied LLMs – Hugging Face
12	Graph based
13	Guest Lecturers
14	Agents I
15	Agents II
16	**Final Exam** (comprehensive)

The course outline will adapt to the actual progress of the classes and may not be accurately the same as the table above.