Course Syllabus for CSCE 3201 – Applied Artificial Intelligence
Department of Computer Science and Computer Engineering
University of North Texas

This course covers: Core concepts and terminology in artificial intelligence will be introduced to understand the taxonomy of AI applications - the relationships between the tools and frameworks available for intelligent, data-driven decision making. This will include a demo-driven introduction to machine learning, with general principles of powerful predictive models discussed and the role of unsupervised and semi-supervised learning techniques in powering many state-of-the-art decision systems.

Term: Spring 2026 (January 12, 2026, to May 8, 2026)

Credit hours: 3

Pre-requisite: CSCE 3550 - Foundations of Cybersecurity

Meeting times: Section 1 - We 5:30PM - 8:20PM in NTDP K110

Instructor & Contact Information

- **Instructor:** Dr. Lotfi ben Othmane
- **Email:** lotfi.benothmane@unt.edu
- **Office Hours:**
  - Tue: 1:00–2:00 PM
  - Wed: 10:00–11:00 AM
  - Thu: 2:00–3:00 PM
  - Reserve 15 minutes timeslot via Calendly
- **Teaching Assistants:**
  Vineeth Sai Paladugu <SaiVineeth.Paladugu@unt.edu>

Note: The information in this syllabus is subject to change in extenuating circumstances. Any changes will be announced via course-wide communications.

Course Goals and Learning Objectives: The course aims to provide students with the knowledge and first-hand experience they need to design and develop Machine Learning models. The students will get familiar with the foundations of AI, and use Python for developing machine learning models from data.

At the end of the course, the students will be able to:

1. Identify what artificial intelligence and machine learning are
2. Determine the most common artificial intelligence use cases and applications
3. Understand how to use Python programming for artificial intelligence applications
4. Identify how to build a machine learning pipeline
5. Identify the differences between supervised and unsupervised learning
6. Describe the most recent advances and tools offered for AI development in the cloud
7. Understand the ethical issues and impacts of artificial intelligence

Course Materials

[Artificial Intelligence with Python: Your complete guide to building intelligent apps using Python 3.](#)

. Second Edition, by Alberto, Prateek Joshi, Packt Publishing, 2020, ISBN: 9781839219535 (This text is also available as an accessible PDF.)

Students also are encouraged to consult the following online sources which will be referenced throughout the course.

- [The Python 3 tutorial documentation](#)
- [The scikit-learn documentation](#)

Other references and resources will be provided on each module individually to cope with most of the topics covered in this class.

Course Format

The course will be delivered onsite. Students can join the lecture sessions on Teams using the following link as observer.

[Join the meeting now](#)
Meeting ID: 240 773 485 474 01
Passcode: F8BL7vQ3

Note: We will have practice exercises during class. The instructor will review submissions from onsite students and provide feedback on a randomly selected portion of these. Submissions from students attending online via Teams will not be reviewed. Also students attending class sessions on Teams will, unfortunately, not be able to see the board, which will be used occasionally for in-class activities.

Learning Activities and Assessments

Learning Activities

To successfully complete this course, students will do the following:

- Attend the lectures or watch the recorded lectures.
- Participate in discussion topics.
- Complete quizzes and exams.
- Complete the project.

Assessments

In-class exercises- There will be frequent in-class practice exercises and online participation activities. The students will submit their attempts to get grades and the answers will be discussed in-class. The activity counts for 10% of the grade. (The grades are given based on attempts and not correct answers.)

Quizzes - There will be a set of quizzes that have equal weights, almost one quiz for each module. The score of the quizzes count 30% of the final grades. The dates of the quizzes will be announced as we progress in the semester. The quizzes will include questions from the papers presentations.

Assignments - There will be four practice assignments that have equal weights. The assignments count for 30% of the final grade.

Project - Each group of students (the group size is limited to five students) should practice their knowledge of open-source software or work on a research topic related to the course topic and submit a report at the end of the semester. The project counts for 30% of the final grade.

On certain occasions, students will be invited to come up to the board, solve problems, and they will be rewarded with quiz bonus points.

Assignments and projects work must be submitted before due date through Canvas. Email submissions will be ignored.

Canvas assumes when computing the final grades that the scores of the activities within each assessment group are cumulative. Given that we will use equal weight assessment activities, Canvas grade will be an approximate of the final grade. The rules above will be applied when computing the final grades at the end of the semester.

Grading Policies
    A: 90%-100%
    B: 80%-89.99%
    C: 70%-79.99%
    D: 60%-69.99%
    F: Below 60%

Grade Appeal Process:

- Students have seven days to contest grades after they are returned.

Course Policies

Feedback

All graded assessments will be returned with feedback within 10 days of the due date, when possible. Personalized feedback will be provided for each assignment and reflection. In addition, responses to common questions and unclear content will be posted at the conclusion of each module. Comments will be posted at the conclusion of each discussion.

Missed and late coursework

It is important to keep up with the pace of this course, therefore late submissions will be reduced by a penalty of 5% for each late day up to 5 days. Make sure to keep careful track of submission deadlines for all of your work in this class.

Integrity and Student Conduct

All department policies on Academic Integrity and Student Conduct apply for this course – these are available at the following link: http://cse.unt.edu/resources/cse_integrity_policy.html. Any exceptions to this policy are noted explicitly in the syllabus

Academic Integrity & Generative AI

- Generative AI tools (e.g., ChatGPT, Copilot) may be used only for clarification, writing improvement, or additional study support.

- **Prohibited:** Submitting AI-generated solutions to labs, assignments, quizzes, or projects.
- **Examples:**
  - ✅ Acceptable: Using AI to check grammar in reports.
  - ❌ Unacceptable: Using AI to solve an assignment or generate code for labs.

Attendance

Attendance is not required.

Expectations

- Each student should have laptop that they could use for the in-class activities.
- Students are expected to focus on the lecture during the course sessions.

Communication Channels

You can contact your instructor via the following channels:

- **Send your emails through Canvas.** A TA is assigned to answer your emails within 1 business days. You may also email ma at lotfi.benothmane@unt.edu) on time and I will try to answer you within 2 business days. Begin the title of your message with "CSCE4565" or "CSCE5565" if you email me directly. Send me a reminder if I do not answer on time.
- General announcements will be in the Announcements section of this Canvas course | sent via email | sent using the Canvas Inbox.

Netiquette

- All communication within the course should adhere to university standards. Specifically, communication should be scholarly, respectful, professional, and polite.
- You are encouraged to disagree with other students, but such disagreements need to be based upon facts and documentation. It is my goal to promote an atmosphere of mutual respect in our interactions. Please contact me if you have suggestions for improving the interactions in this course.
- Professional and respectful tone and civility are used in communicating with fellow learners and the instructor, whether the communication is by electronic means or by phone or face-to-face.
- Video interactions reflect a respectful tone in verbal communications and body language.
- Use correct spelling and grammar

Group Communication

In this course, you will work with peers in small groups. You may need to schedule synchronous calls, participate in group discussions or other learning activities. The same group communication guidelines apply:

- Engage, follow-through, contribute and ask questions.
- Be on time and make sure that tall of your technology works before you start.
- Before you contact the instructor with any group-related issues, talk through them first with your group members. If you are getting no positive reaction, make arrangements to discuss the issues with your instructor.

Technology Requirements

For optimized learning experience in this course, please ensure you have access to the following technology:

- Student-provided personal computer.
- Reliable Internet access. A wired Ethernet connection to the internet is very strongly suggested. Wireless and cellphone data connections may experience connection problems. Android and iOS operating systems are not fully supported at this time.
- While tablets, smartphones and other mobile devices may allow for some completion of coursework, they are not guaranteed to work in all areas. It is recommended that you have access to a Windows or Mac-based computer to complete coursework in the event your selected mobile device does not meet the needs of the course.

Students who need assistive technologies might have different computer and technology requirements. Please check with Student Accessibility Services to determine the requirements for the specific technologies needed to support you in your online classes.

Course Technologies

This course will use several technologies. Check out the technology descriptions, accessibility and privacy security statements and technology-specific guides in the links provided below.

1. This course uses Canvas as the learning management system.
2. This course will use Teams for synchronous online interactions.

Course Topics

Course Calendar

- Introduction to Artificial Intelligence
- Fundamental Use Cases for Artificial Intelligence
- Introduction of Python Programming for Artificial Intelligence
- Machine Learning Pipelines
- Classification and Regression Using Supervised Learning
- Detecting Patterns with Unsupervised Learning
- Artificial Intelligence on the Cloud
- Artificial Intelligence and Society