

COLLEGE OF ENGINEERING, UIC
CS 194, AI and Computing Literacy for All Disciplines, 3 credit hours

I. Instructor & Course Details

Co-Instructor Name: Baoxin Li, Ph.D.

Email address: baoxinli@uic.edu

Drop-In Office Hours: Monday 4-5pm

Drop-In Hours location: CDRLC 3425

Co-Instructor Name: Jonathan Liu, Ph.D.

Email address: jonliu@uic.edu

Drop-In Office Hours: Wednesday 10:30-11:30am

Drop-In Hours location: CDRLC 3446

Canvas Course Site

Students are expected to log into the course site regularly to learn about any announcements, developments related to the course, upload assignments, and communicate with classmates.

For all technical questions about Canvas, email the Learning Technology Solutions team at LTS@uic.edu.

Course Modality and Schedule

This course is taught ON CAMPUS: Tuesdays & Thursdays 2:00–3:15 PM (Central), LCF F006.

II. Course Information

Catalog Course Description and Prerequisite/corequisite Statement

This course introduces the fundamentals of computing, data, and artificial intelligence for students across all fields. Topics include how AI systems work, their applications in everyday life, and their social and ethical implications.

Prerequisite(s): None

Recommended Background: Undergraduate or graduate students from any discipline; no prior programming required.

Course Goals and Learning Outcomes

Course Learning Outcomes:

Upon successful completion of this course, students will be able to:

1. Define and explain foundational concepts in computing, data, and artificial intelligence, and critically evaluate how these concepts are used in real-world AI systems.
2. Explain how AI systems operate, including basic ideas about data, algorithms, and model performance, and interpret AI outputs using scientific and computational reasoning.
3. Apply the scientific method to analyze an AI application by formulating a hypothesis, gathering evidence, analyzing results, and drawing evidence-based conclusions.
4. Analyze AI systems for limitations and bias using empirical evidence and structured evaluation methods.
5. Critically assess contemporary ethical and societal issues related to artificial intelligence, including fairness, accountability, and social impact.

General Education Learning Outcomes:

1. Understand and critically evaluate information and concepts in the natural and mathematical sciences.
2. Use and understand scientific methods to analyze ideas and obtain knowledge.
3. Think critically about contemporary issues in science and technology.

Type of Course:

Elective

General Education credit approval pending

List of topics to be covered:

- Fundamentals of computing, data, and algorithms
- Core concepts of artificial intelligence and machine learning
- AI applications and human-AI interaction
- Ethical, societal, and responsible use of AI
- Emerging AI technologies and future directions

Required and Recommended Course Materials

This course does not rely on a single required textbook. Instead, instructional materials are drawn from a curated set of publicly available, reputable, and up-to-date resources that support scientific understanding, applied analysis, and critical discussion of artificial intelligence. Materials are selected and updated by the instructor to reflect developments in a rapidly evolving field.

Required Technology

- UIC's Canvas course learning management system.
- Google Gemini (available to UIC students at no cost; Opt-in required).
- Smartphone or laptop/tablet with Internet access (for logging attendance).

Respect for Copyright

Please protect the copyright integrity of all course materials and content. Please do not upload course materials not created by you onto third-party websites or share content with anyone not enrolled in our course.

III. COURSE POLICIES & CLASSROOM EXPECTATIONS

Grading Policy and Point Breakdown

The following grading scale will be used: (90–100% = A, 80–89% = B, 70–79% = C, 60–69% = D, and below 60% = F).

Assignments: 20%

Project: 30%

In-Class Activities: 15%

Exams: 35% (2 Midterms, 1 Final)

Policy for Missed or Late Work

If you need more time on an **assignment**, here is what to do based on the amount of time you need:

- One day: Just send us an email! This will be granted, no questions asked.
- Up to four days: Send us an email describing the situation and how many days you need. This will also be granted - we just want to make sure you have a plan for when you can finish the work.
- More than four days: Send us an email describing the situation. We will arrange a meeting to discuss how to make sure you don't fall too far behind in the course.

Project deadlines are more strict. The projects are more important, more time-sensitive, and more work overall. We'd encourage prioritizing it over other assignments for this class. If you

have a serious situation, please send us an email as early as possible (hopefully **at least one day before the due date**) and we will meet to consider it.

Attendance / Participation Policy

Policy: Attendance is required. Active participation in in-class activities will be used to measure attendance. Please email us if you face an unexpected situation that may impede your attendance or participation in required class and exam sessions.

Other Course Policies

Academic Integrity

As a student and member of the UIC community, you are expected to adhere to the Community Standards of [academic integrity](#), accountability, and respect. Please review the [UIC Student Disciplinary Policy](#) for additional information.

Email Expectations

Students are responsible for all information communicated through their UIC email and Canvas announcements. You should monitor both regularly to ensure you do not miss important messages.

IV. COURSE SCHEDULE

Tentative Schedule of Class Topics

1. Introduction to Computing and Artificial Intelligence (1 week).
2. AI in Everyday Life (2 weeks).
3. Data Fundamentals (2 weeks).
4. Basic Concepts of Machine Learning (2 weeks).
5. Human–AI Interaction (1.5 weeks).
6. Algorithms and Computational Thinking (2 weeks).
7. Ethics and Responsible AI (1.5 weeks).
8. Modern Computing Platforms for AI (1.5 weeks).
9. AI and Society (1 week).
10. Emerging Trends and Future Directions in AI (1 week).

Disclaimer

This syllabus is intended to give the student guidance on what may be covered during the semester and will be followed as closely as possible. However, as the instructor, we reserve the right to modify, supplement, and make changes as course needs arise. We will communicate such changes in advance through in-class announcements and in writing via Blackboard Announcements.

V. ACCOMMODATIONS

Disability Accommodation Procedures

UIC is committed to full inclusion and participation of people with disabilities in all aspects of university life. If you face or anticipate disability-related barriers while at UIC, please connect with the Disability Resource Center (DRC) at drc.uic.edu, via email at drc@uic.edu, or call (312) 413-2183 to create a plan for reasonable accommodations. To receive accommodations, you will need to disclose the disability to the DRC, complete an interactive registration process with the DRC, and provide me with a Letter of Accommodation (LOA). Upon receipt of an LOA, I will gladly work with you and the DRC to implement approved accommodations.

Religious Accommodations

Following [campus policy](#), if you wish to observe religious holidays, you must notify me by the tenth day of the semester. If the religious holiday is observed on or before the tenth day of the semester, you must notify me at least five days before you will be absent. Please submit [this form](#) by email with the subject heading: “**YOUR NAME: Requesting Religious Accommodation.**”

VI. CLASSROOM ENVIRONMENT

Inclusive Community

UIC values diversity and inclusion. Regardless of age, disability, ethnicity, race, gender, gender identity, sexual orientation, socioeconomic status, geographic background, religion, political ideology, language, or culture, we expect all members of this class to contribute to a respectful, welcoming, and inclusive environment for every other member of our class. If aspects of this course result in barriers to your inclusion, engagement, accurate assessment, or achievement, please notify me as soon as possible.

Name and Pronoun Use

If your name does not match the name on my class roster, please let me know as soon as possible. My pronouns are [\[she/her; he/him; they/them\]](#). I welcome your pronouns if you would like to share them with me. For more information about pronouns, see this page: <https://www.mypronouns.org/what-and-why>.

Community Agreement/Classroom Conduct Policy

- Be present by turning off cell phones and removing yourself from other distractions.
- Be respectful of the learning space and community. For example, no side conversations or unnecessary disruptions.
- Use preferred names and gender pronouns.
- Assume goodwill in all interactions, even in disagreement.
- Facilitate dialogue and value the free and safe exchange of ideas.

- Try not to make assumptions, have an open mind, seek to understand, and not judge.
- Approach discussion, challenges, and different perspectives as an opportunity to “think out loud,” learn something new, and understand the concepts or experiences that guide other people’s thinking.
- Debate the concepts, not the person.
- Be gracious and open to change when your ideas, arguments, or positions do not work or are proven wrong.
- Be willing to work together and share helpful study strategies.
- Be mindful of one another’s privacy, and do not invite outsiders into our classroom.

Content Notices and Trigger Warnings

Our classroom provides an open space for a critical and civil exchange of ideas, inclusive of a variety of perspectives and positions. Some readings and other content may expose you to ideas, subjects, or views that may challenge you, cause you discomfort, or recall past negative experiences or traumas. I intend to discuss all subjects with dignity and humanity, as well as with rigor and respect for scholarly inquiry. If you would like me to be aware of a specific topic of concern, please email or visit my Student Drop-In Hours.

VII. RESOURCES: Academic Success, Wellness, and Safety

We all need the help and the support of our UIC community. Please visit my **drop-in hours** for course consultation and other academic or research topics. For additional assistance, please contact your assigned college advisor and visit the support services available to all UIC students.

Academic Success

- UIC Tutoring Resources
- College of Engineering [tutoring program](#)
- [Equity and Inclusion in Engineering Program](#)
- UIC Library and UIC Library Research Guides.
- [Offices](#) supporting the UIC Undergraduate Experience and Academic Programs.
- Student Guide for Information Technology
- [First-at-LAS](#) Academic Success Program, focusing on LAS first-generation students.

Wellness

- **Counseling Services:** You may seek free and confidential services from the Counseling Center at <https://counseling.uic.edu/>.
- Access [U&I Care Program](#) for assistance with personal hardships.
- **Campus Advocacy Network:** Under Title IX, you have the right to an education that is free from any form of gender-based violence or discrimination. To make a report, email TitleIX@uic.edu. For more information or confidential victim services and advocacy, visit UIC’s Campus Advocacy Network at <http://can.uic.edu/>.

Safety

- [UIC Safe App](#)—PLEASE DOWNLOAD FOR YOUR SAFETY!
- [UIC Safety Tips and Resources](#)
- [Night Ride](#)
- [Emergency Communications](#): By dialing 5-5555 from a campus phone, you can summon the Police or Fire for any on-campus emergency. You may also set up the complete number, (312) 355-5555, on speed dial on your cell phone.