CS 4803: AI for Everyone: A Responsible Computing Approach

Spring 2027 Syllabus (as of 10/27/2026)
Tuesday/Thursday 12:30 p.m. – 1:45 p.m.
Room 101, Scheller College

Course Professor: Mark Riedl (COC) and Deven Desai (COB)
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Office Hours: By appointment.

COURSE DESCRIPTION

AI for Everyone (the "**Course**") is an introduction to the fundamentals of computer science needed to understand artificial intelligence that are then connected to legal, ethical, social, and business issues arising from artificial intelligence development and use.

Course Motivation: Technologists and non-technologists often talk past each other, because they don't understand each other. Technologists lack understanding about the legal/social/ethical implications of their work. Non-technologists lack knowledge to interrogate and assess AI technologies. These gaps make responsible computing quite difficult. AI for Everyone: A Responsible Computing Approach (AIE), will fill these knowledge gaps and bring future leaders from both areas into the same classroom.

Who is this course designed for?

A. Non-computing students in any year of their degree program who wish to understand how AI and ML algorithms work without deep dives into mathematics.
B. Computing students who
    a. Are in their 1st or 2nd year and wish to be exposed to AI and ethical implications of AI and ML before deciding whether to dive into technical course work on AI and ML (CS 3600, CS 4641, etc.)
    b. Are in their 1st or 2nd year and are unlikely, due to threads, to take further AI or ML courses

c. Are in their 3rd or 4th year and, due to threads, have not taken an AI or ML course and want to understand AI and ML without deep dives into the mathematics.

Note: just because the course is not going to go deeply into the mathematics does not mean this is an "easy" course. The depth shifts to critical thinking about societal, legal, and ethical implications of AI and ML algorithm design.

Current Expected Topics:

Module Number	TOPIC	SOCIAL LEGAL
1	Background, Terms, History of AI	What does it mean to solve AI?
2	Reasoning With Uncertainty	How to use Bayes' Theorem well and where it might fail. What is fairness?
3	Machine Learning and Decision Trees; NNs and RL background	Good uses of ML such as image recognition and yet what about resume screening and technical accountability?
4	Neural Networks	What about bias, facial recognition, self-driving cars, weapons, and other downsides?
5	NLP & LLMs	What is the difference between a general-purpose tool and something like one for health care?
6	Agents (Map Search, Markov Decision Processes, Reinforcement Learning)	What is surveillance capitalism? What are limits from exploring vs. exploiting knowledge and model stability?
7	Presentations, Debates, White Papers	A range of things based on the course discussions.

COURSE MODE and DESIGN NOTE

This syllabus assumes we meet in person. **The class is not online**. The course as set up should, however, allow a shift in class meeting formats if needed. In addition, as education—undergraduate, graduate, professional, and executive—continues to move to online or asynchronous (as in not face-to-face or real time) lessons and learning, there may be classes where we will watch/use online materials and submit responses to the materials instead of meeting in the classroom or watch lectures and materials to setup flipped classroom learning with in class exercises. As each class is unique, the instructor may alter assigned materials and subject coverage to address current events and issues as

fits the class's interests. In short, the instructor may change delivery of instruction, assignments, and/or materials in his sole discretion.

COURSE OBJECTIVES

On successful completion of the Course, students should be able to or have received the below experiences.

•In general, understand the contours of law and ethics as they relate to computer science and artificial intelligence.

•Understand artificial intelligence and related legal terminology and concepts.

•Understand the case method and be able to discuss the following key case points – relevant facts, design and business decisions, and outcomes; possible legal and ethical issues.

•Understand the general legal and ethical responsibilities of computer scientists and management.

•Understand the general framework for doing certain transactions which content includes the ethics involved with transactions.

•Understand the way the law operates and lawyers and judges think so that business managers can ask better questions about their objectives and use the law to help business and ethics outcomes, rather than the law being an obstacle or later stage problem.

•Exposure to situation analysis and making judgment decisions and providing recommendations (in light of legal and ethical decision making), through individual, participant-centered learning, and group work.

COURSE MATERIALS[1]

• **Required Textbook**: QUEST FOR ARTIFICIAL INTELLIGENCE BY NILS NILSSON. **ISBN:** 9780521122931 Available here on Amazon (usually $35-$50 new). B&N at the GA Tech bookstore should have it as well in the textbook order room.

NOTE: The text is usually available as a courtesy from Stanford, Auburn, and the Internet Archive. You may use the text but it is a PDF and you should download it if possible so you have access all term long.

• **Required Textbook**: ARTIFICIAL INTELLIGENCE: A GUIDE FOR THINKING HUMANS BY MELANIE MITCHELL
ISBN: 9781250404855 Edition 25 Available on Amazon about $15 new.

NOTE: Computers and phone use may be banned in the classroom at times to facilitate learning and engagement. So I strongly recommend using the hard copy of the textbook. Why?

1. **The texts are not expensive by textbook standards ($65ish new; legal textbooks are above $300).**
2. This idea is based on studies showing that **none of us** learn well and engage if we have electronic devices nearby.
3. Reading hard copies and marking them is an excellent way to improve your learning.
4. These books cover core ideas that don't change and will be a reference for you going forward.
5. A goal of the class is to sharpen your ability to learn on your own AND THEN TAKE IT TO THE NEXT LEVEL. In class you will need to be prepared and ready to talk about things from memory. That is what happens in business.

•**Name Tent**. To be provided at the commencement of the Course. Each student is required to display his or her name tent in each Class session for the Course. **AT ALL TIMES DURING THE CLASS SESSION, THE STUDENT'S NAME TENT MUST BE DISPLAYED, AND IF NOT, THE COURSE PROFESSOR WILL NOT RECOGNIZE THE STUDENT FOR CLASS PARTICIPATION.**

[1]The Course Materials are in addition to the applicable Cases, Articles and Supplemental Readings listed throughout the Syllabus.

• **Computer or Tablet**: Despite the possible no tech during class rule, given the class may have an online component, you must have a way to log into the class sessions and participate in class discussions if need be.

PREREQUISITES

There are no prerequisites for the Course.

GRADING

Identified below are the grade scale and the percentage allocation for assignments that apply to the Course **for now. The Course may shift to quizzes or projects to increase our engagement with materials. For example, if we have more quizzes there could be a reduction in the number of exams or a change in weights for exams. As another example, we may have individual and/or team assignments that could reduce the number of exams and so might be worth 10-30% of the grade.**

Above – 89.50	A
89.49 – 79.50	B
79.49 – 69.50	C
69.49 – 59.50	D
59.49 and below	F

Class Participation	20%
Examination 1	20%
Examination 2	20%
Examination 3	20%
Final Examination	20%
	100%

Examples: $(100 * 20\%) + (100 * 20\%) + (100 * 20\%) + (100 * 20\%) + (100 * 20\%)) = 100$
$(50 * 20\%) + (50 * 20\%) + (50* 20\%) + (50* 20\%) + (50* 20\%)) = 50$

****THE COURSE PROFESSOR DOES NOT GIVE EXTRA CREDIT AND STRICTLY FOLLOWS THE GRADING METHOD SET FORTH HEREIN. THUS, DO NOT ASK FOR ADJUSTMENTS. THE COURSE PROFESSOR WILL NOT RESPOND TO ANY REQUESTS. NOTWITHSTANDING THE**

FOREGOING, THE COURSE PROFESSOR MAY ALTER THE NUMBER OF EXAMS, FOR EXAMPLE FROM A TOTAL OF 4 TO A TOTAL OF 3 EXAMINATIONS IN HIS DISCRETION. IF THAT HAPPENS THE WEIGHTING WOULD CHANGE SO THAT EXAMINATIONS 1 AND 2 WOULD STILL BE WORTH 20% EACH BUT THE FINAL WOULD BE WORTH 40%.

Class Attendance:

BEFORE COVID, attendance was a part of this course's grade. During Covid, however, we all need to take responsibility for our personal health and the health of our community. I wish to enable us to be responsible. As such attendance will not be taken. NONETHELESS, as a matter of professionalism, I expect everyone to attend class unless there is a good reason not to attend.

AND we are smaller class that needs discussion. SO attendance may become part of the grade if needed to ensure we have proper engagement with the material.

So, what is a good reason?

For this term please do not come to class if you are feeling ill. I want us all to be safe and healthy. When ill for any reason, rest is a major factor in recovery. DO NOT WORRY about what you miss. I will work with you to keep you up to speed. I have done that in bad flu seasons, and we can do that in COVID.

O.K. How do I know what are good reasons? The list of absences that make sense are**:** (1) illness; (2) death or illness in the family; (3) jury duty; (4) military obligation; (5) documented obligations to attend Institute sponsored events (such as described in a GTAA travel letter); or (6) religious holiday. Other than these reasons, you ought to come to class.

Note however that your absence does not change your deliverable and the examination dates and other obligations. *If you are ill on an exam day, we will reschedule.* Please contact the Course Professor as soon as possible to discuss any issues that may affect your ability to attend Class and successfully complete the requisite coursework.

Again, unless you are ill or have a serious conflict like items 1-6 above, I encourage each student to attend each Class session. Class attendance and participation are lively and critical to the learning experience.

SPECIAL NOTE ON ATTENDANCE, CLASS SESSIONS, AND GRADING:

As more and more education at the undergraduate, graduate, professional, and executive levels moves to online or asynchronous (as in not face-to-face or real time) lessons and learning, there may be classes where you will watch/use online materials and submit responses to the materials instead of meeting in the classroom. FAILURE TO watch or use the material as required for the assignment may result in **LOSS OF A POINT OR POINTS FROM THE OVERALL COURSE GRADE**.

Class Participation (20%):

As one goal is to learn how to work cases, assignments for case briefing including but not limited to turning in briefs or other written work will be part of participation. Other engagement with cases such as possibly discussing/presenting a case or related arguments about at case in class are part of participation (see SPECIAL NOTE BELOW).

In addition, this class is NOT lecture based; it is discussion based. As such participation is vital. *Participation does not mean you have to have the correct answer at all times. But you should be prepared and engage with the material, each other, and me so that we all improve our mastery of the material.* The classroom should be a place where we all try ideas, arguments, and skills; as such it will be a place where hard work that results in failure is OK. We learn by trying, failing, and trying again. Our classroom is our test bed. To make it work, however, prior preparation must be in place.

At the commencement of the Course, each student will receive a name tent. To participate in the Class discussion and meet your Class participation requirement, please display the name tent at each Class session and throughout the Class period. **At all times during the Class session, the student's name tent must be displayed, and if not, the Course Professor will not recognize the student for Class Participation. Also, at the Course Professor's sole discretion, he may deduct points from your Class Participation grade for your failure to display your name tent at all times during the Class period.** As communication, listening and respect are all key elements to effective business environments, each student should feel free to express his/her points and **MUST** be respectful of others and their points. An effective contributor is one who is prepared for Class, enhances, builds on, respectfully challenges, or provides contrasting points to existing comments, and makes insightful points. Please note however that no question is

a "stupid" question. **Also, understand that the Course Professor may randomly call on students during Class**.

The professor will determine the nature of participation and how many classes where a student participates are required depending on the enrollment in the class and will explain how that decision will work during the first weeks of class.

For example, the number of classes for each person may be set at 5. If so, each student will have to speak in 5 separate classes to receive full participation credit. For example, under a 5 participation point system, if Student A has an aggregate of 5 points for the Course, their Class Participation grade is 5/5 = 100, and if Student B has an aggregate of 2 points for the Course, their Class Participation grade is 2/5 = 40. There is no extra credit for exceeding the set points; however, the Course Professor encourages you to continue to participate in Class as that is how you comprehend and learn the material. **AGAIN, depending on final class size, the number of times for and the manner of participation expected per student for full credit may change and this decision in the sole discretion of the Professor**.

SPECIAL NOTE: Participation may include individual and/or team-based deliverables such as briefing of cases and presentations in class. If such assignments happen, participation grading would change to include that work and possibly increase in total wright for the class.

TO BE CLEAR the class will run based on everyone engaging and being ready to talk. The example above could end up being a system where much more than 5 classes is required to earn participation points. For example, 5 different classes of speaking PLUS the written participation assignment could be the total work needed to get full participation.

EXAMS ASSUMING THEY ARE NOT SHIFTED TO ACCOMMODATE QUIZZES OR OTHER GRADED ASSIGNMENTS

Examination 1 (20%):

Examination 1 will cover the assigned reading and Class discussions covered on the Syllabus prior to the date of Examination 1. The exam might include extra credit questions/points at the sole discretion of the instructor. The format will include multiple-choice questions and may include other forms of questions, such as true/false or short

answer. Examination 1 will be individual, closed books and notes. Students who must miss Examination 1 due to personal illness or injury, death or illness in the family, jury duty, or religious holidays must contact the Course Professor prior to Examination 1, or as soon as reasonably possible (but no later than one week after Examination 1), to make alternate arrangements. Students seeking postponement due to personal illness or injury, death or illness in the family, or jury duty must provide written evidence of the underlying reason for the requested postponement. Student athletes and Georgia Institute of Technology academic representatives should contact the Course Professor as soon as possible to discuss their ability to sit for Examination 1 on the day set forth in the Syllabus. Students will not be permitted to sit for Examination 1 after its scheduled date set forth in the Syllabus without the Course Professor's approval. Such approval is within the sole discretion of the Course Professor. If the Course Professor grants you make-up Examination 1 approval, the make-up Examination 1 will occur on such date as determined by the Course Professor in her sole and absolute discretion. Your grade on Examination 1 will be posted on Canvas. If a student desires to discuss his/her Examination 1 grade, he/she must make an appointment with the Course Professor to meet with the Course Professor as soon as possible as the Course Professor will not return Examination 1. **Any student failing to abide by these policies will receive a zero for Examination 1.**

Examination 2 (20%):

Examination 2 will cover the assigned reading and Class discussions covered on the Syllabus after Examination 1 and prior to the date of Examination 2. The exam might include extra credit questions/points at the sole discretion of the instructor. The format will include multiple-choice questions and may include other forms of questions, such as true/false or short answer. Examination 2 will be individual, closed books and notes. Students who must miss Examination 2 due to personal illness or injury, death or illness in the family, jury duty, or religious holidays must contact the Course Professor prior to Examination 2, or as soon as reasonably possible (but no later than one week after Examination 2), to make alternate arrangements. Students seeking postponement due to personal illness or injury, death or illness in the family, or jury duty must provide written evidence of the underlying reason for the requested postponement. Student athletes and Georgia Institute of Technology academic representatives should contact the Course Professor as soon as possible to discuss their ability to sit for Examination 2 on the day set forth in the Syllabus. Students will not be permitted to sit for Examination 2 after its scheduled date set forth in the Syllabus without the Course Professor's approval. Such approval is within the sole discretion of the Course Professor. If the Course Professor grants you make-up Examination 2 approval, the make-up Examination 2 will occur on such date as determined by the Course Professor in her sole and absolute discretion. Your

grade on Examination 2 will be posted on Canvas. If a student desires to discuss his/her Examination 2 grade, he/she must make an appointment with the Course Professor to meet with the Course Professor as soon as possible as the Course Professor will not return Examination 2. **Any student failing to abide by these policies will receive a zero for Examination 2.**

Examination 3 (20%):

Examination 3 will cover the assigned reading and Class discussions covered on the Syllabus after Examination 2 and prior to the date of Examination 3. The exam might include extra credit questions/points at the sole discretion of the instructor. The format will include multiple-choice questions and may include other forms of questions, such as true/false or short answer. Examination 3 will be individual, closed books and notes. Students who must miss Examination 3 due to personal illness or injury, death or illness in the family, jury duty, or religious holidays must contact the Course Professor prior to Examination 3, or as soon as reasonably possible (but no later than one week after Examination 3), to make alternate arrangements. Students seeking postponement due to personal illness or injury, death or illness in the family, or jury duty must provide written evidence of the underlying reason for the requested postponement. Student athletes and Georgia Institute of Technology academic representatives should contact the Course Professor as soon as possible to discuss their ability to sit for Examination 3 on the day set forth in the Syllabus. Students will not be permitted to sit for Examination 3 after its scheduled date set forth in the Syllabus without the Course Professor's approval. Such approval is within the sole discretion of the Course Professor. If the Course Professor grants you make-up Examination 3 approval, the make-up Examination 3 will occur on such date as determined by the Course Professor in her sole and absolute discretion. Your grade on Examination 3 will be posted on Canvas. If a student desires to discuss his/her Examination 3 grade, he/she must make an appointment with the Course Professor to meet with the Course Professor as soon as possible as the Course Professor will not return Examination 3. **Any student failing to abide by these policies will receive a zero for Examination 3.**

Final Examination (20%):

The final examination will test primarily the subject areas covered since Examination 4; however, a few questions (no more than 20% of the total questions) may be drawn from material covered earlier in the course. **The exam might include extra credit questions/points at the sole discretion of the instructor.** The format will include multiple-choice questions and may include other forms of questions, such as true/false or short answer. The Final Examination will be individual, closed books and notes. Students who must miss the Final Examination due to personal illness or injury, death or illness in

the family, jury duty, or religious holidays must contact the Course Professor prior to the Final Examination, or as soon as reasonably possible (but no later than one week after the Final Examination), to make alternate arrangements. Students seeking postponement due to personal illness or injury, death or illness in the family, or jury duty must provide written evidence of the underlying reason for the requested postponement. Student athletes and Georgia Institute of Technology academic representatives should contact the Course Professor as soon as possible to discuss their ability to sit for the Final Examination on the day set forth in the Syllabus. Students will not be permitted to sit for the Final Examination after its scheduled date set forth in the Syllabus without the Course Professor's approval. Such approval is within the sole discretion of the Course Professor. If the Course Professor grants you make-up Final Examination approval, the make-up Final Examination will occur during Georgia Institute of Technology's official make-up examination period on such date as determined by Georgia Institute of Technology or the Course Professor in her sole and absolute discretion. Your grade on the Final Examination will be posted on Canvas. If a student desires to discuss his/her Final Examination grade, he/she must make an appointment with the Course Professor to meet with the Course Professor as soon as possible as the Course Professor will not return the Final Examination. **Any student failing to abide by these policies will receive a zero for the Final Examination.**

General:

•**All emails sent** to the Course Professor's attention should be sent to the email address set forth on page 1 of the Syllabus. **Please include in the subject 4803 AI for Everyone or AIE, so that the professor can be sure to spot your email promptly**.

•**FULLY CHECK CANVAS DAILY TO MAKE SURE THAT YOU OBTAIN ALL POSTED INFORMATION.**

•**Please read the Syllabus and related Readings and Assignments in its entirety and refer back to it and Canvas often as the Course Professor will not provide reminders of due dates.**

POLICIES AND PROCEDURES

Student Honor Code and Code of Ethics:

Students shall be aware of and abide by the Georgia Institute of Technology's Academic Honor Code with respect to all aspects of their participation in the Course. See http://www.honor.gatech.edu/plugins/content/index.php?id=9. Compliance with the Academic Honor Code also includes all aspects of the Honor Agreement signed by students as a condition of their enrollment in the College of Business. Any student suspected of engaging in behavior in violation of the Academic Honor Code or the Honor Agreement shall be referred to the Office of the Dean of Students for appropriate action.

Specifically, all assignments submitted must be your own or your team's individual thought and words, unless properly cited.

Disability Accommodation:

The Georgia Institute of Technology has policies regarding disability accommodation, which are administered through Access Disabled Assistance Program for Tech Students (ADAPTS). See http://www.adapts.gatech.edu/. For students with disabilities, please contact the ADAPTS Office, located in the Office of the Dean of Students, to request classroom accommodations.

Legal and Financial Disclaimer:

Any and all opinions, statements, discussions, or recommendations as to legal and/or financial matters made herein are for academic purposes only and are not intended and should not be construed as providing legal or financial advice or creating any attorney-client relationship or advisor-client relationship. This disclaimer includes all discussions during, within, and in connection with the Course and related activities including but not limited to office discussions.

Electronics:

ABSOLUTELY NO ELECTRONICS ARE ALLOWED IN THE CLASS EXCEPT TO USE THE E-TEXTBOOK AND WHEN SPECIFICALLY INDICATED BY THE PROFESSOR TO CONDUCT IN CLASS EXERCISES AND COURSE EVALUATIONS.

SOME RECOMMENDED READINGS and PODCASTS

Listed below are suggestions from the Course Professor's list of readings, publications, and media programs that may be of interest and assistance to you in your academic studies and career.

PODCASTS
TBD

BOOK
THE INFORMATION BY GLEICK

NEWSPAPERS
The Economist

The New York Times