

**Information Systems Department**  
**University of Maryland Baltimore County**  
**Baltimore, Maryland. 21250**

**Departmental Office: Room ITE 404, Phone: 410-455-3206**

**IS 698/800 Ethical and Responsible AI**

**Instructors:** Name: Shimei Pan and James Foulds  
Emails: (shimei, jfoulds)@umbc.edu  
Course Delivery Site: <http://blackboard.umbc.edu>  
Office Hours: Wednesday 3:30-4:30pm  
Office Locations: Dr. Pan: ITE 434  
Dr. Foulds: ITE 447  
(The office hour will be held by the instructor presenting that lecture)

**Meeting Time:** Wednesdays 4:30-7:00 pm

**Meeting Location:** Janet & Walter Sondheim 203

**Poll Everywhere:** Vote on in-class poll questions at  
[PollEv.com/jamesfoulds863](http://PollEv.com/jamesfoulds863) (Dr. Foulds) and  
[PollEv.com/shimeipan431](http://PollEv.com/shimeipan431) (Dr. Pan)

### **Course Description**

In this course, students will explore the concepts of responsible and ethical artificial intelligence. We will discuss the ethical and social concerns surrounding the use of AI technologies as well as strategies that can help manage their risks and mitigate their negative impact. Some of the main topics we will discuss include bias/fairness, privacy and sustainability concerns in various AI systems such as social media applications, ethical issues for NLP systems, especially Large Language Models/ChatGPT, deepfakes and face recognition.

### **Student Learning Outcomes**

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

- **Describe** and **discuss** current ethical issues in AI, their social implications, and the techniques that can be used to address them.

- **Identify** and **assess** ethical issues in AI systems
- **Design** (or re-design) AI systems to be responsible and ethical using appropriate interventions.

### **Prerequisites:**

There are no enforced prerequisites, other than graduate standing. It is strongly recommended that you take another course related to artificial intelligence, machine learning, or data science before this one, e.g. IS 603, IS 707, IS 733, or IS 757. (Failing that, taking such a course concurrently would be better than nothing.)

### **Course Format:**

In each lesson, we'll have a short lecture, with exercises interspersed, graded individual presentations (2-3 slots - 20 minutes presentation, 10 minutes questions/discussion), and further exercises.

### **Assessed Activities**

- **Individual Presentations:**

Each student will give one (1) oral presentation that explains a paper on the topic of that lesson to the class. We will give you a set of papers to choose from, or you can also pick another paper on the same topic and get it approved by us.

Students will send their slides to both instructors by email 24 hours before the class starts (4:30 pm Tuesday).

- **Graded Student-Submitted Questions:**

Each week, all students (except for the presenters) will pick one of the papers that is being presented, and will submit 2 questions 24 hours before the class via a Google form. The questions will then be shared with the presenters. During the Q&A session of each presentation, students in the audience will ask those questions for the presenter to answer.

The grade will be determined by the percentage of the requested questions submitted by the weekly deadlines.

- Out of 13 weeks, submitting the two questions for 12 of them is enough for full points.
- No late question submissions will be accepted.

- **Poll Everywhere Participation:**

In this course, participation means more than just showing up. It also refers to contributing to everyone's learning, through active engagement in peer instruction exercises, in-class discussions, and presentation Q&A.

Participation grades will be assessed as a percentage of Poll Everywhere peer instruction questions answered (correctly or not), with a 90% response rate being sufficient for full points.

- **Essays**

Students will submit two (2) essays, one for each half of the course (10 pages maximum). A rubric will be provided.

Due Dates:

All essays are to be handed in by the due date. If an essay is not submitted on time it may be accepted within one week, per instructors' discretion, with an accompanying reduction of 50% of the earned grade. Due to scheduling issues some late assignments/deliverables may not be accepted at all with a result in a total loss of points.

All requests for extensions must be submitted via email at least 3 days prior to the deadline.

There will not be an exam or final project for the course.

### **Grade Percentages**

- Every week all students submit 2 questions on one of the papers that the students are presenting that week **(20%)**
- In-class presentation **(20%)**
- Poll everywhere (participation) **(20%)**
  - Answering 90% of polls is enough for the full grade
- Essay on part 1 topics **(20%)**
- Essay on part 2 topics **(20%)**

### **Presentation Grade Categories**

Presentations will be graded on the following criteria (equal weight):

- Time management
- Clarity

- Q/A answers
- Slide quality
- Depth of explanation

=====

**IS 698/800 Schedule**

=====

<b>Week #</b>	<b>Class Date</b>	<b>Topic</b>	<b>Due Dates</b>
<b>1</b>	<b>Aug. 30<sup>th</sup></b>	Syllabus, Course overview. AI ethics frameworks and principles - ACM, etc	Presentation sign-up due <b>11:59pm Fri 9/1/2023</b>
<b>2</b>	<b>Sept. 6<sup>th</sup></b>	Social media 1 - Bias in social media data, hate speech, misinformation and disinformation, and social bots	
<b>3</b>	<b>Sept. 13<sup>rd</sup></b>	Social media 2 - People analytics/personality profiling, Cambridge Analytica, and nudging	
<b>4</b>	<b>Sept. 20<sup>th</sup></b>	Moral machines - machines that make moral judgements, self-driving cars and Delfi.	
<b>5</b>	<b>Sept. 27<sup>th</sup></b>	NLP 1 - Ethics of natural language processing (NLP) - bias/Bolukbasi, censorship	
<b>6</b>	<b>Oct. 4<sup>th</sup></b>	NLP 2- Ethics of large language models (e.g., ChatGPT) - bias, misuse and power consumption	
<b>7</b>	<b>Oct. 11<sup>th</sup></b>	Deep Fakes, legal and ethical implications	
<b>8</b>	<b>Oct. 18<sup>th</sup></b>	Value alignment problem (Guest lecture, Aryeh Englander)	
<b>9</b>	<b>Oct. 25<sup>th</sup></b>	Fairness and bias 1 - sources of bias, fairness definitions, AI fairness paradigm and its limitations	Essay 1 due Wed 10/25/23 11:59 pm, topics up to week 7
<b>10</b>	<b>Nov. 1<sup>st</sup></b>	Fairness and bias 2 - debiasing ML algorithms (fairness penalties, GAN debiasing)	
<b>11</b>	<b>Nov. 8<sup>th</sup></b>	Weaponized AI and lethal autonomous weapons (Guest lecture: Dr. Philip Feldman)	

12	Nov. 15 <sup>th</sup>	Privacy 1 - GDPR, data privacy, k-anonymity, hacking, industry incentives for storing data vs user privacy	
13	Nov. 22 <sup>th</sup>	<b>Thanksgiving early break</b>	
14	Nov. 29 <sup>th</sup>	Privacy 2 - differential privacy	
15	Dec. 6 <sup>th</sup>	Surveillance capitalism	
16	Dec 13 <sup>th</sup>	Study day (no class)	
17	Dec 20 <sup>th</sup>	Exam week (no class)	Essay 2 due Wed 12/20/23 11:59 pm, topics from week 8 - week 15

\*\* This course schedule provides a tentative plan for the course. Changes may be necessary as course progresses, but all changes will be discussed in class.

### Grading Standards:

With respect to final letter grades, [UMBC's Catalog](#) states that an A indicates "superior" achievement; B, "good" performance; C, "not satisfactory"; D, "unacceptable"; F, "failure." There is specifically no mention of any numerical scores associated with these letter grades. Below is how grades may be assigned based on your final points, accumulated over the semester. Grades will be assigned using a plus/minus system. It is university policy that A+, D+, and D- are not assigned. We do not grade on a curve, so that everyone in the class has the opportunity to succeed.

Final Grade	Letter Grade	Points when calculating GPA
90 - 100	A	4.0
87.5 - 89.99	A-	3.7
85 - 87.49	B+	3.3
80 - 84.99	B	3.0
77.5 - 79.99	B-	2.7
75 - 77.49	C+	2.3
70 - 74.99	C	2.0

67.5 - 69.99	C-	1.7
60 – 67.49	D	1.0
0 – 59.99	F	0.0

### **Inclement Weather:**

In the event of class cancellation due to inclement weather, electronic submissions will still be due on the original due date. This course does not have any in-person tests, exams, or written assignments.

### **Academic Integrity**

UMBC's policies on academic integrity will be strictly enforced (see the [University System of Maryland's policy document](#), [UMBC's academic integrity overview page](#), and the [UMBC catalog](#)). In particular, all of your work must be your own. Acknowledge and cite source material in your papers or assignments. While you may verbally discuss assignments with your peers, you may not copy or look at anyone else's written assignment work or code, or share your own solutions. Any exceptions will result in a zero on the assessment in question, and may lead to further disciplinary action. Some relevant excerpts from UMBC's policies, as linked to above, are:

- *"By enrolling in this course, each student assumes the responsibilities of an active participant in UMBC's scholarly community in which everyone's academic work and behavior are held to the highest standards of honesty. Cheating, fabrication, plagiarism, and helping others to commit these acts are all forms of academic dishonesty, and they are wrong." (UMBC's academic integrity overview)*
- *"Students shall not submit as their own work any work which has been prepared by others." (USM policy document)*
- *"Students shall refrain from acts of cheating and plagiarism or other acts of academic dishonesty." (USM policy document)*
- *"Plagiarism means knowingly, or by carelessness or negligence, representing as one's own, in any academic exercise, the intellectual or creative work of someone else." (student academic conduct policy)*
- *"Cheating means using or attempting to use unauthorized material, information, study aids, or another person's work in any academic exercise" (student academic conduct policy)*

The use of software tools to obfuscate your work in order to hide plagiarism is wrong, and is strictly prohibited.

### **Policy on ChatGPT and other Large Language Models (LLMs)**

The use of language models such as ChatGPT for assignments will be strictly regulated. Your work must be your own. While language models can be lightly used as a writing aid, their use must be limited to a small part of any solution and they must not contribute to the substance of your answer. Any use of these tools as a writing aid must be declared in your submission, with an explanation of why the work is your own and why the use does not constitute plagiarism. You must also submit a log of all queries used in your submission. If you have any questions, please check with us.

### **Diversity Statement on Respect**

Students in this class are encouraged to speak up and participate during our meetings. Because the class will represent a diversity of individual beliefs, backgrounds, and experiences, every member of this class must show respect for every other member of this class. (Statement from California State University, Chico's Office of Diversity and Inclusion).

### **Accessibility and Disability Accommodations, Guidance and Resources**

Accommodations for students with disabilities are provided for all students with a qualified disability under the Americans with Disabilities Act (ADA & ADAAA) and Section 504 of the Rehabilitation Act who request and are eligible for accommodations. The Office of Student Disability Services (SDS) is the UMBC department designated to coordinate accommodations that creates equal access for students when barriers to participation exist in University courses, programs, or activities.

If you have a documented disability and need to request academic accommodations in your courses, please refer to the SDS website at [sds.umbc.edu](https://sds.umbc.edu) for registration information and office procedures.

SDS email: [disAbility@umbc.edu](mailto:disAbility@umbc.edu)

SDS phone: [410-455-2459](tel:410-455-2459)

If you will be using SDS approved accommodations in this class, please contact the instructor to discuss implementation of the accommodations. During remote instruction requirements due to COVID, communication and flexibility will be essential for success.

### **Sexual Assault, Sexual Harassment, and Gender Based Violence and Discrimination**

[UMBC Policy](#) in addition to federal and state law (to include Title IX) prohibits discrimination and harassment on the basis of sex, sexual orientation, and gender identity in University programs and activities. Any student who is impacted by sexual harassment, sexual assault, domestic violence, dating violence, stalking, sexual exploitation, gender discrimination, pregnancy discrimination, gender-based harassment, or related retaliation should contact the University's Title IX Coordinator to make a report and/or access support and resources. The Title IX Coordinator can be reached at [titleixcoordinator@umbc.edu](mailto:titleixcoordinator@umbc.edu) or 410-455-1717.

You can access support and resources even if you do not want to take any further action. You will not be forced to file a formal complaint or police report. Please be aware that the University may take action on its own if essential to protect the safety of the community.

If you are interested in making a report, please use the [Online Reporting/Referral Form](#). Please note that, if you report anonymously, the University's ability to respond will be limited.

Notice that Faculty and Teaching Assistants are Responsible Employees with Mandatory Reporting Obligations

All faculty members and teaching assistants are considered Responsible Employees, per UMBC's [Policy on Sexual Misconduct, Sexual Harassment, and Gender Discrimination](#). Faculty and teaching assistants therefore required to report all known information regarding alleged conduct that may be a violation of the Policy to the Title IX Coordinator, even if a student discloses an experience that occurred before attending UMBC and/or an incident that only involves people not affiliated with UMBC. Reports are required regardless of the amount of detail provided and even in instances where support has already been offered or received.

While faculty members want to encourage you to share information related to your life experiences through discussion and written work, students should understand that faculty are required to report past and present sexual harassment, sexual assault, domestic and dating violence, stalking, and gender discrimination that is shared with them to the Title IX Coordinator so that the University can inform students of their [rights, resources, and support](#). While you are encouraged to do so, you are not obligated to respond to outreach conducted as a result of a report to the Title IX Coordinator.

If you need to speak with someone in confidence, who does not have an obligation to report to the Title IX Coordinator, UMBC has a number of [Confidential Resources](#) available to support you:

[Retriever Integrated Health](#) (Main Campus): 410-455-2472; Monday – Friday 8:30 a.m. – 5 p.m.; For After-Hours Support, Call 988.

[Center for Counseling and Well-Being](#) (Shady Grove Campus): 301-738-6273; Monday-Thursday 10:00a.m. – 7:00 p.m. and Friday 10:00 a.m. – 2:00 p.m. (virtual) [Online Appointment Request Form](#)



Pastoral Counseling via [The Gathering Space for Spiritual Well-Being](#): 410-455-6795; [i3b@umbc.edu](mailto:i3b@umbc.edu); Monday – Friday 8:00 a.m. – 10:00 p.m.

### **Other Resources**

[Women's Center](#) (open to students of all genders): 410-455-2714; [womenscenter@umbc.edu](mailto:womenscenter@umbc.edu); Monday – Thursday 9:30 a.m. – 5:00 p.m. and Friday 10:00 a.m. – 4 p.m.

[Shady Grove Student Resources](#), [Maryland Resources](#), [National Resources](#).

### **Child Abuse and Neglect**

Please note that Maryland law and [UMBC policy](#) require that faculty report all disclosures or suspicions of child abuse or neglect to the Department of Social Services and/or the police even if the person who experienced the abuse or neglect is now over 18.

### **Pregnant and Parenting Students**

UMBC's [Policy on Sexual Misconduct, Sexual Harassment and Gender Discrimination](#) expressly prohibits all forms of discrimination and harassment on the basis of sex, including pregnancy. Resources for pregnant, parenting and breastfeeding students are available through the University's [Office of Equity and Civil Rights](#). Pregnant and parenting students are encouraged to contact the Title IX Coordinator to discuss plans and ensure ongoing access to their academic program with respect to a leave of absence – returning following leave, or any other accommodation that may be needed related to pregnancy, childbirth, adoption, breastfeeding, and/or the early months of parenting.

In addition, students who are pregnant and have an impairment related to their pregnancy that qualifies as disability under the ADA may be entitled to accommodations through the [Office of Student Disability Services](#).

### **Religious Observances & Accommodations**

UMBC [Policy](#) provides that students should not be penalized because of observances of their religious beliefs, and that students shall be given an opportunity, whenever feasible, to make up within a reasonable time any academic assignment that is missed due to individual participation in religious observances. It is the responsibility of the student to inform the instructor of any intended absences or requested modifications for religious observances in advance, and as early as possible. For questions or guidance regarding religious observances and accommodations, please contact the Office of Equity and Civil Rights at [ecr@umbc.edu](mailto:ecr@umbc.edu).

### **Hate, Bias, Discrimination and Harassment**

UMBC values safety, cultural and ethnic diversity, social responsibility, lifelong learning, equity, and civic engagement.

Consistent with these principles, [UMBC Policy](#) prohibits discrimination and harassment in its educational programs and activities or with respect to employment terms and conditions based on race, creed, color, religion, sex, gender, pregnancy, ancestry, age, gender identity or expression, national origin, veterans status, marital status, sexual orientation, physical or mental disability, or genetic information.

Students (and faculty and staff) who experience discrimination, harassment, hate, or bias based upon a protected status or who have such matters reported to them should use the [online reporting/referral form](#) to report discrimination, hate, or bias incidents. You may report incidents that happen to you anonymously. Please note that, if you report anonymously, the University's ability to respond may be limited.