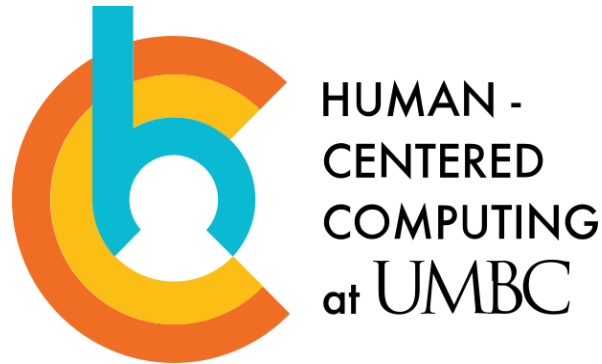
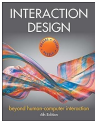




HCC 629 | FUNDAMENTALS OF HUMAN-CENTERED COMPUTING | FALL 2025

- Instructor: Dr. Yasmine Kotturi (*she / her*)
Office: ITE 439
- TA: Golnaz Moharrer
- Contact: Dr. Kotturi - Message on Blackboard (*I return messages within 48-72 hours, excluding breaks and weekends*) - do not email.

Golnaz Moharrer - Email golnazm1@umbc.edu; (*I return messages within 24-48 hours, excluding breaks and weekends*)
- Class Info: Monday 4:30pm – 7pm, Eng 333 (In person)
- Office Hours: Dr. Kotturi - **Wednesdays 9a**; in person ITE 439
Golnaz Moharrer - **Tuesdays 12-1p**; in person ITE 472 (online option available upon request)
- Textbook:  Rogers, Y., Sharp, H., Preece, J., (2023) *Interaction Design: Beyond Human-Computer Interaction*. Chichester, UK: John Wiley & Sons. 6th Edition, ISBN-10: 111990109X
- Dept Info: Department of Information Systems, ITE 404. Phone 410-455-3206.

COURSE DESCRIPTION

This is a graduate course that will serve as an introduction to the field of Human-Centered Computing. Upon completion of the course, students will have gained an understanding of the underlying cognitive/perceptual principles to good user interface design, strategies in designing and choosing input and output technologies, and the design methods utilized in human centered system design.

This course will help students develop the following additional skills: *writing, presentation, and design*. Students will interact with the material through reading relevant literature, listening to and participating in lectures, completing design assignments, and participating in group discussions.

SYLLABUS CHANGES

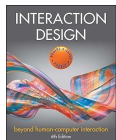
This syllabus may be modified due to class dynamics or other circumstances beyond our control. If changes are made, I will update the syllabus and inform students via Blackboard as soon as possible.

LEARNING OBJECTIVES

- Explain the roles of Interaction Design and Behavioral Science in the design of information systems.
- Describe and use human factors concepts such as affordances, mental models, and mappings to guide good user interface design.
- Explain the constraints on perception, attention, and memory that are critical to a usable technology design.
- Describe the challenges and strategies in technology design areas such as computer-supported collaborative work (CSCW), alternate input/output techniques, universal usability, and affective computing.
- (Re-)Design information systems by applying the learned concepts.
- Understand how emerging technologies, such as generative AI, can both support and hinder design processes

COURSE MATERIALS

This class requires students to read from the textbook and articles as well as watch video lectures or other video-based learning materials. The required textbook is:



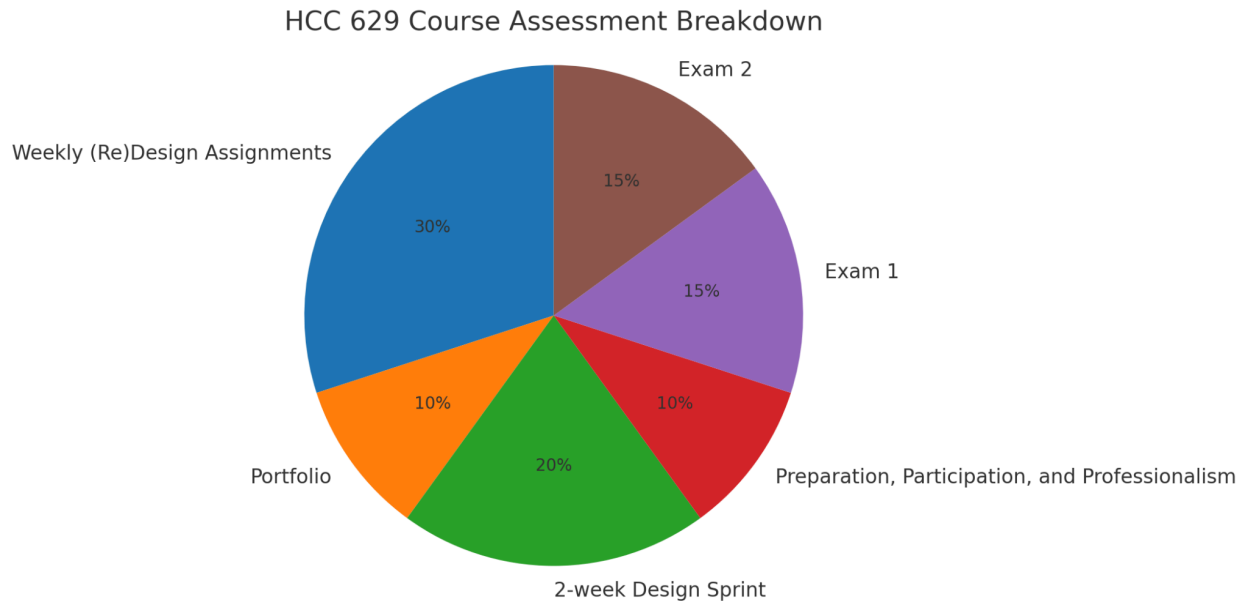
Rogers, Sharp, Preece. *Interaction Design*, **6th Edition (2023)**: ISBN-10: 111990109X



All additional reading and viewing materials for this course will be available electronically through Blackboard.

GRADING

The following weighted components form the basis for the grade you earn in this class:



WEEKLY (RE)DESIGN ASSIGNMENTS (INDIVIDUAL OR PAIR): 30% (8-11 POINTS EACH)

Most weeks you will have assignments that apply concepts from the readings to redesign a user interface using Figma (figma.com). These assignments are to be **uploaded as a PDF to the “Weekly Assignments” link in Blackboard by 11:59pm Sunday nights**. Keep in mind there is a page limit for these assignments – be sure to adhere to this in order to not lose points. You should come to class ready to present your work and solicit verbal feedback from your colleagues. At the beginning of class, one student or pair will be asked to present in front of the class.

For support with using Figma, please attend Golnaz’s office hours.

For the weekly assignments, you have the choice of partnering with another student (or not). In either case, your assignment will be evaluated with the same rubric and criteria. A detailed rubric will be provided in Blackboard for weekly assignments. In general, using the rubric, assessment of each weekly assignment is based on *correctness* and *quality* of work presented:

- **Correctness:** Did you apply the concepts learned correctly through the demonstration of an appropriate DESIGN and description of HOW and WHY that design is good/better using the terminology and guidelines learned in class.
- **Quality:** If we cannot understand what you have done or if it is poorly presented, then we cannot properly assess your understanding of the material.

At the beginning of most lectures, class time will be devoted to design critiques (“crits”). In small groups, you will share your weekly (Re)Design assignment with peers at your table. These sessions are an opportunity to explain your design decisions, receive constructive feedback, and practice giving thoughtful, professional critique to others. Critique is a cornerstone of design practice—it sharpens your ability to communicate design choices, improves your work through iteration, and prepares you for the collaborative environments you will encounter in industry and

research. Your active participation in critiques will be reflected in your Preparation, Participation & Professionalism grade.

PORTFOLIO (INDIVIDUAL): 10% (10 POINTS)

Throughout the semester, you will develop and maintain an online portfolio (hosted website). If you already have a portfolio, you will extend it with new material; if not, you will create one using free hosting tools such as Wix or GitHub Pages, with the option to build from scratch if you have the technical background. You will include a subset of your weekly (Re)Design assignments and your two-week design sprint as core artifacts in your portfolio and should, by the end of the semester, present a curated selection of your best work alongside clear descriptions of your design process. A strong online portfolio is as essential as a résumé—employers, research labs, and collaborators want to see concrete demonstrations of your skills, critical thinking, and communication.

EXAMS – 30% (15% EACH): ~50-60 POINTS PER EXAM

There are two exams in the semester. Exams are not cumulative. Both exams will be taken in person and all students are expected to be physically present. Exams will be closed, meaning use of outside resources during the exam will not be allowed. The exams will be equally weighted (15% each). There will not be a comprehensive final exam. A review session will be held prior to each exam.

TWO-WEEK DESIGN SPRINT: 20% (50 POINTS)

Students will complete a two-week design sprint, either individually or in pairs, following Agile UX and Design Thinking practices. This sprint culminates the design principles learned throughout the semester, applying them to the redesign and prototyping of a real-world website. The project involves identifying usability issues, generating and refining design concepts, building an interactive prototype, and testing it with users. It simulates professional practice under real-world constraints and provides portfolio-ready evidence of your ability to move from problem definition to tested solutions.

PREPARATION, PARTICIPATION & PROFESSIONALISM: 10% (10 POINTS)

Professionalism includes preparation for class, attendance and participation in class, and professional behavior in all course-related activities.

Preparation: There will be a reading assignment and/or video(s) to watch most weeks. All reading and video assignments should be completed *before* the class in which the material is to be discussed. For every 3-credit hour course, you should be devoting at least 9 additional hours *each week* preparing and studying course materials. We encourage making flashcards in [Quizlet](#) or something similar. Instructors will begin each lecture with questions from reading materials, and will call on students to respond. Responses will be graded by the instructor using the following scale: E - exceptional, S - Satisfactory, N - needs improvement.

Participation & Attendance: Regular and punctual attendance is expected of all students and will be recorded at the beginning of each lecture.

Students coming into class late and leaving early interfere with the effectiveness of the learning community. Students are expected to be attentive and actively engage in all course activities in the semester. This includes contributing to the class discussion and providing useful,

constructive critique of others' work, and participating in all in-class activities. We will take attendance and mark tardiness as well.

Professional Behavior: Professionalism is the expectation of professional, polite, and courteous conduct with all aspects of the course. It is expected that students will be respectful of all speakers in the classroom, including guests, peers, and the instructor. This means, for instance, to give undivided attention to those who speaking (whether it's the instructor or your fellow classmates). It is also expected that students exhibit appropriate behavior regarding interacting with technology (e.g., laptops, cell phones, smartwatches) and not use them for off-topic activities. Unauthorized use of technology (mobile or other) or any lack of professionalism may result in a grade reduction which will be at the instructor's sole and final discretion.

The scale below will be used to evaluate preparation, participation and professionalism.

- **10** – Student comes to class prepared and on time; contributes readily to class or small group conversation without dominating it; makes thoughtful contributions based on readings and lecture that advance the discussion; presents work clearly; always responds thoughtfully when called on to discuss reading materials; shows interest in and respect for others' contributions; participates actively in design crit groups.
- **7** – Student comes to class prepared and on time and makes thoughtful comments when called upon; contributes occasionally without prompting; presents work adequately; engages adequately when called on to discuss course readings; participates actively in small groups.
- **5** – Student is late or unprepared; participates in class or small group discussion but in a problematic way (talks too much, rambles, interrupts, or distracts others); does not engage well with presentations or when called on to discuss course readings.
- **3** – Student is late, unprepared, or contributes minimally; limited participation in groups.
- **0** – Student is late, unprepared, does not contribute, or displays disrespectful behavior toward students or faculty.

Extension/Revision Opportunities + Late and Missed Work

Assignment deadlines occur on **Sundays by 11:59pm**. It is important to stay on track with your assignments; not only will this help you feel less stressed, but it is also an important skill you will need in your career. Being able to meet deadlines and juggle many tasks are important life and career skills.

We recognize that personal circumstances may at times make it difficult or impossible to complete an assignment on time. Therefore, we have allotted two flex opportunities that you can use to extend the deadline by 48 hours for two of the weekly design assignments. You can use the flex opportunities for any reason. YOU DO NOT HAVE TO GIVE ME A REASON. Just message us on Blackboard (both the instructor and TA) that you'd like to use it.

Outside of the 2 flex opportunities, late submissions will be docked 5% for each day (24-hour period) they are late. Extensions will be granted *only* for documented, legitimate reasons (significant illness, death in the family, athletic or business travel, religious observations) and need to be requested in advance. Extensions after the fact will only be granted in extraordinary

circumstances, as outlined in the UMBC student handbook (significant illness with a doctor's note, death in the family with documentation).

Guidelines on Use of Generative AI

The policies for using generative AI in this course were developed collaboratively during a student-led zine workshop on AI in the classroom led by my students. These reflect student perspectives in HCC629 on how AI can support learning while ensuring critical use. The following guidelines apply to all coursework:

1. **Hypocrisy in Faculty Use** – If instructors expect students to be transparent about their use of generative AI, instructors will also be transparent about their own use of AI in teaching, grading, or creating assignments.
2. **Divergent Thinking** – When using AI for brainstorming, push yourself to explore alternatives, surprising directions, or ideas that feel more personal and meaningful.
3. **Bias** – Check if AI-generated ideas include stereotypes or biased assumptions by asking what perspectives or voices may be missing.
4. **Feedback** – AI may be used to help better understand and respond to peers' and instructors' feedback, especially when revising your work.
5. **Ownership** – AI should contribute to no more than 50% of any given assignment; the majority of the work must reflect your own ideas and effort.
6. **Job Skills** – Coursework will include opportunities to use AI in ways that reflect real workplace practices. Instructors will stay updated on how AI is used (and regulated) in industry.
7. **Citing AI Use** – Instead of submitting chat logs, include a brief 2–3 sentence summary with each submission explaining how and why you used AI.
8. **Accountability** – Even if an idea originates from AI, you are responsible for understanding it and being able to explain why you chose to use it.
9. **English Learners** – English learners are encouraged to use AI to refine their writing, provided they also request explanations of the refinements to build language proficiency.
10. **Equity** – To ensure fairness, all students will have access to and use the same AI tools or models for each assignment.
11. **Design Process** – Like tea, good design takes time. AI can support the process, but each student should determine which uses of AI align with their personal tastes, learning goals, and boundaries.
12. **Environment** – Consider the environmental impacts of using generative AI, such as the energy required to cool data centers and the pollution they generate in surrounding communities. Stay informed about these costs and reflect on them when deciding how and when to use AI tools.

GRADING STANDARDS

With respect to final letter grades, the University's Undergraduate Catalog states that:

- A:** Indicates superior achievement
- B:** Good performance
- C:** Adequate performance
- D:** Minimal performance
- F:** Failure

There is specifically no mention of any numerical scores associated with these letter grades.

Consequently, there are no pre-defined numerical demarcations that determine final letter grades. These numerical demarcations that determine final letter grades can only be defined at the end of the semester after all numerical grades have been earned. At that point, numerical demarcations for final letter grades can be defined such that final letter grades in this course conform to the University's officially published definitions of the respective letter grades. In accordance with the published University grading policy, it is important to understand that final letter grades reflect academic achievement and not effort. While mistakes in the arithmetic computation of grades and grade recording errors will always be corrected, it is important to understand that in all other situations final letter grades are not negotiable and challenges to final letter grades are not entertained.

QUESTIONS?

When you have questions regarding the course, you are requested to post them to Blackboard in the "Class Questions" discussion forum and they will be answered by instructors or a classmate (students answering questions before we do is looked upon very favorably and counts toward participation). Placing questions in this central location allows all students to benefit from the answer. If one student has the question, it's likely others have the same question. Questions about individual issues should be messaged to me directly on Blackboard.

Most likely times during the day to get a response: I aim to reply to student messages on Blackboard within 72 hours (excluding weekends and breaks). If you have an urgent need and have not heard back within this time, please resend your message with "second try" in the subject line. **Do not email me as I will be checking Blackboard for student messages and can more promptly respond on Blackboard.**

IN-CLASS EXPECTATIONS OF STUDENTS AND INSTRUCTOR¹

As instructors, we will:

- show up for all class sessions, unless we are simply unable to do so,
- come to class on time,
- not waste class time, but use it well to fulfill the objectives of the course
- do our best to answer your questions,
- honestly acknowledge when we do not have an answer or do not know something, and then go out and get an answer by the next class,
- both encourage you, and give you an equal opportunity to participate in class discussions,
- contain you if your enthusiasm for participating in the discussions makes it difficult for others to participate,
- assume that you are prepared for class and that we will not embarrass you if we call on you, even if your hand is not raised,
- respect the views you express and not make fun of you or of them,
- not allow others to ridicule you or your ideas, or you to do the same to them.

As students, you are expected to:

- show up for all class sessions,
- come to class on time and not leave early,
- make good use of class time by being engaged in what is going on,
- ask questions about anything you do not understand, and not just for your own sake but because other students might not realize that they also don't understand,
- participate in the class discussions to contribute your thinking to the shared effort to develop understanding and insight (remember that even something that's clearly wrong can contribute to the discussion by stimulating an idea in another student that they might not otherwise have had),

¹ Adapted from Bill Taylor's "A Letter to My Students," adapted from the first draft of "The Fundamental Values of Academic Integrity," developed by, and available from, the Center for Academic Integrity (<http://www.academicintegrity.org>).

- monitor your own participation to allow for and encourage the participation of others,
 - respect the other students, not holding side-conversations that distract them (and us) from the class discussion.
-

UNIVERSITY POLICIES AND INFORMATION

ACADEMIC INTEGRITY

Academic integrity is an important value at UMBC. 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. Academic misconduct could result in disciplinary action that may include, but is not limited to, suspension or dismissal.

The purposes of higher education are the learning students and faculty undertake, the knowledge and thinking skills developed, and the enhancement of personal qualities that enable students to be strong contributing members of society. In a competitive world, it is essential that all members of the UMBC community uphold a standard that places integrity of each student's honestly earned achievements above higher grades or easier work dishonestly sought.

Resources for students about academic integrity at UMBC are available at

<https://academicconduct.umbc.edu/resources-for-students/>.

Acts of Academic Misconduct are defined as the following:

- **Cheating:** Using or attempting to use unauthorized material, information, or study aids in any academic exercise.
 - **Fabrication:** Falsification or invention of any information or citation in an academic exercise.
 - **Facilitating Academic Dishonesty:** Helping or attempting to help another commit an act of academic dishonesty.
 - **Plagiarism:** Knowingly, or by carelessness or negligence, representing as one's own, in any academic exercise, the intellectual or creative work of someone else.
 - **Dishonesty:** Lack of truthfulness or sincerity when interacting with the faculty member regarding an academic exercise.
-

RESOURCES TO HELP YOU SUCCEED

Many students need additional support to succeed in online courses. Click on the following links for helpful resources:

- [UMBC's Academic Success Center \(ASC\)](#) provides a range of resources to support students as they progress toward degree completion. They will continue to offer all of their services online.
- The ASC has created a specialized set of [Online Learning Resources](#), including videos and guides to help students succeed while learning online.

In addition, check out the following resources:

- [Academic Success Center Resources](#) include: Online tutoring and writing support, supplemental instruction/peer-assisted study sessions ([SI PASS](#)), placement testing, FYI academic alerts, success courses, academic advocacy, academic policy and academic success meetings.
- [Tutoring and Writing Center Appointments](#) will be online; students can make appointments using this [link](#).
- [SI PASS](#): Supplemental Instruction (SI)/ *Peer Assisted Study Sessions* (PASS). The SI PASS program targets traditionally difficult academic courses, providing regularly scheduled, out-of-class review sessions, happening in Blackboard Collaborate inside your existing Blackboard course.
- [Academic Advocates](#): Advocates work one-on-one with students who need support navigating academic and institutional challenges, no matter how complex the concerns (i.e., personal, academic, or financial).
- [Academic Success Meetings](#): Schedule a one-to-one virtual meeting with an Academic Success Center Professional who can help you with time management, study skills, and accessing campus resources.

If you have a question, please contact the ASC at academicsuccess@umbc.edu.

Please note:

Schedule adjustment deadline is **September 10, 2025**.

It's the last day to:

- make changes to your schedule.
- change grade method.
- drop a course without a W grade.

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 for registration information and office procedures.

SDS email: disAbility@umbc.edu

SDS phone: 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 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; 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; 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.

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.

RETRIEVER essentials

Retriever Essentials is a faculty, staff, and student-led partnership that addresses food insecurity in the UMBC community. We offer free groceries, toiletries, baby items, and meal swipes, and have opportunities to engage and get involved. Visit <https://retrieveressentials.umbc.edu/> to learn more about Retriever Essentials services.

Follow [Retriever Essentials on myUMBC](#), [Facebook](#) and [Instagram](#). For further information please email retrieveressentials@umbc.edu.

Revised 09/07/2025