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| Learning OutcomesThis course is an introduction to human-computer interaction for HCIM students. Upon completion of the course, students will be able to:1. Apply HCI fundamentals such as theories and frameworks, human cognition, user models and user diversity, user-centered design, and information-seeking behavior and interaction modes, to both HCI research and UX practice2. Identify strengths and weaknesses of various methods for user-based evaluation, expert-based evaluation, and automated evaluations, and identify inherent challenges and trade-offs in HCI3.Design and implement basic usability testing and perform accessibility inspections of web sites4. Identify and critically engage with the research literature in human-computer interaction 5. Approach HCI issues through an equity, inclusion, and social justice lens, and identify which laws, regulations, and policies address HCI-related workRequired textbooks (note: all are available as e-books, free of charge, through the UMD libraries via the Course Reserves Link on ELMS)Rogers, Y., Sharp, H., and Preece, J. (2019). Interaction design: beyond human-computer interaction (5th edition). John Wiley and Sons.Lazar, J., Feng, J. H., & Hochheiser, H. (2017). Research methods in human-computer interaction (2nd edition). Elsevier/Morgan Kaufmann Publishers. Lazar, J., Goldstein, D., & Taylor, A. (2015). Ensuring digital accessibility through process and policy. Elsevier/Morgan Kaufmann Publishers.  |  | **Dr. Jonathan Lazar**jlazar@umd.edu **Class:**Class lectures will be posted online to watch asynchronously.We will meet synchronously online via Zoom, for discussion on Tuesday nights from 6-715 PM. **Office Hours**Via Zoom: Tuesdays 730-830 PM (right after the discussion section)**Prerequisites**INST 630 must be completed before or taken concurrently with INST 631. **Course Communication**I will send time-sensitive information to students via ELMS announcements. Students may contact me via email to discuss questions, absences, or accommodations. Here is a link with helpful guidance on writing professional emails ([ter.ps/email](http://ter.ps/email)). |

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| Book cover for Ensuring Digital Accessibility Through Process and Policy | Book cover for Interaction Design: Beyond Human-Computer Interaction | Book cover for Research Methods in Human-Computer Interaction |

# General Course-Related Policies for Graduate Students

It is our shared responsibility to know and abide by the University of Maryland’s policies related to all graduate courses, including:

* Academic integrity
* Student and instructor conduct
* Accessibility and accommodations
* Attendance and excused absences
* Grades and appeals
* Copyright and intellectual property

Please visit <https://academiccatalog.umd.edu/graduate/policies/> for a list of policies for graduate students.

# Course-Specific Policies and Expectations for Students

Course structure: All core lectures will be recorded and posted so that you can watch them whenever your schedule best allows. The class discussions will take place between 6-730 PM on Tuesday nights. You are expected to watch the lecture and read any assigned material (e.g. book chapters) or watch other assigned video material before the Tuesday night discussion period. However, the weekly reading quizzes must be taken anytime up until Monday night at 1159 PM EDT. You are responsible for setting your own reading/viewing pace in preparation for the class discussions.

Attendance: I will check online attendance during the Tuesday 6-730 PM discussion period. If you need to miss a discussion due to an illness or similar reason, please contact me before the class begins and provide an explanation.

The course will be designed for flexibility: I understand that during this period of uncertainty, with additional responsibilities and limitations on everyone, flexibility can help make things easier. All of the core lectures will be recorded and posted so that you can watch them whenever your schedule best allows. The discussions will take place between 6-730 PM EDT on Tuesday nights. You are expected to watch the video lecture and read any material before the Tuesday night discussion period. During the discussion period on Tuesday nights from 6-730 PM EDT, I expect that your camera will be on and you will be visible and participating. If you prefer to put on a virtual background, I encourage you to do so. However, I need to be able to see YOU!

Academic Integrity:

To provide the most flexibility for all students, this introductory course will only include individual work. While group work is included in many graduate-level courses, there will not be any group work in this class. It is important that, as a foundational course, each student must master the skills individually. Please note that all work submitted by the individual student must be their own work product. Please consult the University of Maryland policy on academic integrity (the following section is verbatim from the University of Maryland policy on academic integrity).

*Any of the following acts, when committed by a student, shall constitute academic dishonesty:*

 *Cheating: fraud, deceit, or dishonesty in any academic course or exercise in an attempt to gain an unfair advantage and/or using or attempting to use unauthorized materials, information, or study aids in any academic course or exercise.*

 *Fabrication: unauthorized falsification or invention of any information or citation in any academic course or exercise.*

 *Facilitating Academic Dishonesty: knowingly helping or attempting to help another to violate any provision of this Code.*

 *Plagiarism: representing the words or ideas of another as one's own in any academic course or exercise.*

 *Self-Plagiarism: the reuse of substantial identical or nearly identical portions of one's own work in multiple courses without prior permission from the current instructor or from each of the instructors if the work is being submitted for multiple courses in the same semester.*

*Students who are found to have falsified, fabricated, or plagiarized in any context, such as course work, laboratory research, archival research, or thesis / dissertation writing--will be referred to the Office of Student Conduct.*

There will be no exams in this class. There will be four assignments during the semester:

1. Reading quizzes (due every week): every week during the semester, there will be a reading quiz. This is designed to ensure that you are doing the assigned reading. These multiple choice format reading quizzes take the place of traditional exams. In general, the reading quizzes must be completed online in ELMS by 1159 PM EDT Monday night, the day before the Tuesday discussion section. The reading quizzes will typically be 10-20 multiple choice questions. You have up to 60 minutes to complete the reading quiz once you start, and you can use the textbooks or any other paper or digital resources that you want. However, you may not collaborate with other students or share questions or answers with any other individuals. Discussing the reading quizzes with any other students will be considered a violation of academic integrity. The first reading quiz must be completed by Monday night, September 7th by 1159 pm EDT. We expect to have 13 reading quizzes in total.
2. CHI paper review: students are expected to choose two full-length (10+ pages) research papers from the CHI 2020 or CHI 2019 conference. The two papers should be on a similar topic (e.g., do not choose one paper on olfactory devices and another paper on visualization). You should read the two papers, and write up a three-page comparison of the papers in terms of: 1) methodology, 2) results, and 3) writing style of the authors. You should also write about 4) your perceptions of the topic, and 5) what you think the next steps in future research on this topic should be (your opinion, not the opinions of the paper authors). This assignment is due by 5 PM on Tuesday, September 22nd. A template for the assignment is available on ELMS. You can access CHI papers through the ACM Digital Library (<https://dl.acm.org/>). UMD has a full license to use the ACM digital library, so if you are not on a campus IP address, you would just need to login first at <https://www.lib.umd.edu/>. As the first assignment of the semester, I will grade this assignment more leniently than the others. If you need assistance with writing skills, I suggest contacting the writing center at <http://ter.ps/writing> to schedule an appointment.
3. Accessibility testing: You will be asked to do two forms of accessibility evaluation: 1) doing a manual (expert) inspection of a web page utilizing the Web Content Accessibility Guidelines (WCAG, which we will discuss in class), and 2) inspecting the same web page using an automated accessibility testing tool. We will provide access to the automated accessibility testing tool, free of charge. You will need to report on results of each. Then, you will compare and contrast your findings, and describe what you learned from the experience (three page minimum). A template for the assignment is available on ELMS.
4. Usability Evaluation: You will be asked to do two forms of usability evaluation: 1) doing a usability test involving 5 users (any 5 users) attempting tasks remotely using the UserZoom software, and 2) an expert review on the same interface utilizing a set of heuristics (e.g. Shneiderman’s 8 Golden Rules of Interface Design). You will need to report on results of each, and then write a minimum of three pages comparing and contrasting your findings and describing what you learned from the experience. A template for the assignment is available on ELMS.

Overall workload expectations: sometimes students wonder how much work, how many hours are expected of them each week outside of “the classroom” (even though we don’t have a classroom this semester). A graduate program involves much more time than an undergraduate program, and I would expect, at minimum, the following preparation time per week:

3-4 hours doing the assigned reading

2-3 hours watching the lecture video and any additional video

1-1.5 hours taking part in weekly synchronous discussions

1 hour on the reading quiz

2-5 hours on assignments (will be more time closer to assignment deadlines)

Late Assignments: All assignments must be submitted on ELMS. While the reading quizzes must be completed by 1159 PM EDT on Monday night, the other assignments must be turned in by 5 PM EDT on Tuesday right before the class discussion. The general policy in this class is that late assignments (both individual and team assignments) will be deducted by 15% of its possible points between 5-1159 PM EDT, and an additional 15% of its points each day afterwards. Late assignments will be accepted according to this policy up to three days after the assignment due date (so, 3 days late=a maximum potential score of 55%). Assignments more than three days late will not be accepted. It is at the instructor’s discretion to accept late work and assign late point deduction.

No Extra Credit Work: Students sometimes ask for some extra credit work in an attempt to raise their final grades. However, extra credit work will not be given on an individual basis.

**Name identity: I prefer that you call me Dr. Lazar or Professor Lazar. Please let me know how you prefer to be called, and which pronouns you prefer.**

Contacting me: **I prefer that you email me at** **jlazar@umd.edu** **and** put “[INST 631-Fundamentals of HCI]” at the beginning of the subject line of your email. I will make every effort to answer your email in a timely fashion. Please note that I generally do not respond to emails between the hours of 10 PM and 8 AM during the week. In addition, I may not be able to respond to email on the weekends. While I will try to respond to emails very quickly, you should not necessarily expect to get an immediate reply (e.g., when it is only a few hours before an assignment is due). Around times of deadline, please make sure to leave sufficient time to get a response.

# Get Some Help!



You are expected to take personal responsibility for your own learning. This includes acknowledging when your performance does not match your goals and doing something about it. Everyone can benefit from some expert guidance on time management, note taking, and exam preparation. I encourage you to consider visiting <http://ter.ps/learn> to schedule an appointment with an academic coach. Sharpen your communication skills (and improve your grade) by visiting <http://ter.ps/writing> and schedule an appointment with the campus Writing Center. Finally, if ever you need someone to talk to, visit [http://www.counseling.umd.edu](http://www.counseling.umd.edu/) to speak with a counselor.

All of these services are free because you have already paid for it, and **everyone needs help**… just ask!

# Grades

Grades are not given, but earned. Your grade is determined by your performance on the learning assessments in the course and is assigned individually (and is not “curved”). If earning a particular grade is important to you, please speak with me at the beginning of the semester so that I can offer some helpful suggestions for achieving your goal.

All assessment scores will be posted on the course ELMS page. If you would like to review any of your grades (including the exams), or have questions about how something was scored, please email me to schedule a time for us to meet on Zoom.

I am happy to discuss any of your grades with you, and if I have made a mistake I will immediately correct it. Any formal grade disputes must be submitted in writing and within one week of receiving the grade.

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|  |  | **Points** | **Category** | **Category** |
| **Assessments** | **#** | **Each** | **Total** | **Weight** |
| **Reading quizzes** | 13 | 10 |  | 25% |
| **CHI paper review** | 1 |  |  | 10% |
| **Usability Project** | 1 | 100 |  | 30% |
| **Accessibility Project**  | 1 | 100 | 100 | 30% |
| **Participation** |  |  |  | 5% |
| **Total Points:** |  | **100%** |

Final letter grades are assigned based on the percentage of total assessment points earned. To be fair to everyone, I establish clear standards and apply them consistently. Please understand that being close to a cutoff is not the same this as making the cut (89.99 ≠ 90.00). It would be unethical and inequitable to make exceptions for some and not others.

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| **Final Grade Cutoffs** |
| + | 97 - 100% | + | 87 – 89.99% | + | 77 – 79.99% | + | 67 – 69.99% |  |  |
| A | 93 – 96.99% | B | 83 – 86.99% | C | 73 – 76.99% | D | 63 – 66.99% | F | <60.0% |
| - | 90 - 92.99% | - | 80 – 82.99% | - | 70 – 72.99% | - | 60 – 62.99% |  |  |

# Course Schedule

**ID**=Interaction Design; **RMHCI**= Research Methods in Human-Computer Interaction

**EDA**=Ensuring Digital Accessibility

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| **Reading Before Class** | **During our Class Meeting** | **Due on Tuesday night before Class (by 5PM)** |
| **Part 1: Foundations** |
|  1 Tues | 9/1 | **No reading** | **Introduction-**Course Expectations/History of HCI |  |
| 2 Tues  | 9/8 | **RMHCI 1, ID 1, ID 13** | Differences between HCI Research and Practice; Overall framework for HCI |  |
| 3 Tues | 9/15 | **ID 2** | Foundations of Interaction Design and User-Centered Design |  |
| 4 Tues | 9/22 | **ID 3** | Theories, Models, and Frameworks (including Information Seeking Behavior) |  |
| 5 Tues | 9/29 | **ID 4, 5** | Cognition and Social interaction | **CHI paper review due by 5 PM on Sept 29** |
| 6 Tues | 10/6 | **ID 7,10** | Interface Design and Data Visualization |  |
| **Part 2: Usability evaluations** |
| 7 Tues | 10/13 | **ID 16** | Expert-based evaluations |  |
| 8 Tues | 10/20 | **ID 14, 15****RMHCI 10** | User-based evaluation/usability testing  |  |
| 9 Tues | 10/27 | **ID 14, 15** **RMHCI 10** | User-based evaluation/usability testing (including hands-on practice) |  |
| **Part 3: Accessibility** |
| 10 Tues | 11/3 | **EDA 1,2,3** | Foundations of Accessibility**NOTE THAT THIS IS ELECTION DAY** |  |
| 11 Tues | 11/10 | **EDA 4, 8** | Technical guidelines and evaluation methods for Accessibility | **Usability evaluation report due by 5 PM on Nov 10** |
| 12 Tues | 11/17 | **RMHCI 16** | Methods and logistics for involving people with disabilities in research and design  |  |
| **Part 4: Special topics** |
| 13 Tues  | 11/24 | **Readings on ELMS** | Law, Policy, and HCI  |  |
| 14 Tues | 12/1 | **Readings on ELMS** | HCI in Developing Areas, Vulnerable Populations, and Social Justice  |  |
| 15 Tues | 12/8 |  | Summary and wrap-up, synthesis of this course with other courses | **Accessibility testing report due by 5 PM on Dec 8** |

**Note**: This is a tentative schedule, and subject to change as necessary – please monitor the course ELMS page for current deadlines. In the unlikely event of a prolonged university closing, or an extended absence from the university, adjustments to the course schedule, deadlines, and assignments will be made based on the duration of the closing and the specific dates missed.