

**INFO 5328 Human-Computer Interaction Research Seminar**  
**Cornell University, Cornell Tech**  
**9:30 am – 10:45 am Tuesdays and Thursdays**  
**Bloomberg Center 161**  
**Spring 2019**

Instructor: Raymond Lutzky ([ral359@cornell.edu](mailto:ral359@cornell.edu))  
Office Hours: By appointment only (email is best)

Teaching Assistant: Rama Adithya Varanasi ([rv288@cornell.edu](mailto:rv288@cornell.edu))  
For class support and assignment questions, [please use the Slack channel](#).

### **Course Overview**

In this research seminar we will examine theoretical and empirical issues within the interdisciplinary area of human-computer interaction (HCI). The aim of the course is to discover and review common ground among the many fields that make up HCI and explore issues of common concern, as we become familiar with the ways in which HCI produces new knowledge. Our source material will include a primary handbook and may stretch out to a wide range of materials that cover other topics as a result of the inherently interdisciplinary investigations and their connections to professional practice. We will explore the connections between theoretical developments, empirical methods and findings, and the implementations of these in industry, government, and academia. Through discussions, your presentations, and projects, we will also consider possibilities for applying theoretical perspectives and research findings to our own work.

### **Course Objectives**

1. To introduce students to a variety of theoretical foundations for research and design in human-computer interaction so that students can actively participate in current developments and guide future research and design directions.
2. To show exemplars of how researchers and professionals build new knowledge with the goal of participating in knowledge production as future researchers and practicing professionals in the fields that make up HCI.
3. To present how theory and the results of empirical research can shape practice so that students learn how to apply specific theoretical approaches and research results to their own work.
4. To examine the areas of convergence in human-computer interaction, focusing specifically on the shared objects and methods of inquiry amongst the many disciplines.
5. To foster reflective practice by increasing awareness of reflective and value-sensitive methodologies and to lay a foundation for a research-based career.
6. To have fun while accomplishing the previous objectives.

### **Instructional Objectives**

**Objective:** To become familiar with the major concepts and schools of thought that drive develops within the field of human-computer interaction.

**Demonstrated by:** Reading a wide range of articles that explain underlying concepts and current research findings within the profession.

**Objective:** To learn to analyze theoretical discussions and synthesize new material into a coherent, overall framework.

**Demonstrated by:** Participation in class discussions and by producing written response papers.

**Objective:** To learn to present findings, opinions, and conclusions to a peer group.

**Demonstrated by:** Active participation in class discussions, production of a final paper, and presentation at a class symposium.

**Objective:** To develop a sense of belonging to a professional and engaging in collegial activities.

**Demonstrated by:** Working together to plan, produce, and participate in a professional-quality symposium focused on original work and synthesis of current thinking.

### **Course Themes**

Our readings and activities will be organized according to a number of important themes designed to incorporate human-computer interaction (HCI) sources.

- Common ground and history amongst the many fields of HCI
- Models, methods, and the role of users and audiences in the design process
- Models and methods for the evaluation of technology
- Current cutting-edge and future areas of study and design in HCI

### **Required Course Texts**

Jacko, J. (2012). *Human Computer Interaction Handbook: Fundamentals, Evolving Technologies, and Emerging Applications, Third Edition*. CRC. (ISBN: 9781439829431)

Sharp, H., Rogers, Y., & Preece, J. (2007). *Interaction Design: Beyond Human-Computer Interaction, 2nd Edition*. NY: Wiley. (this is available online via Cornell: <https://arl.human.cornell.edu/879Readings/Interaction%20Design%20-%20Beyond%20Human-Computer%20Interaction.pdf>)

In addition, readings from various sources may be assigned.

### **Course Grading**

#### ***Participation***

Your class participation grade reflects the quality and regularity of your involvement in discussion in class and online in the discussion board. You are expected to read and participate in class discussion on a regular basis. Ask questions of your peers and answer their questions in kind. This course will focus heavily on conducting deep readings - and reviewing those readings in class. Always to field questions or participate in substantive discussion about the readings.

**Show up and Participate - Percent of Final Grade: 15%**

#### ***Discussion Leader***

Each of you will be required to lead a class discussion centered on the topic for the given class session. We will establish a schedule for discussion leaders early in the semester. Be prepared with questions and a deep understanding of the reading to facilitate dialog and field questions as they arise.

**Lead one Discussion from Reading - Percent of Final Grade: 20% (Due When Assigned)**

#### ***Short Response Essay***

You will be responsible for writing 1 short (1,000-1,500 word) response essays to the topics taken up in the course and should select one based on the readings list. Your short response essay cannot be on the same topic as the topic for which you are a discussion leader. These essays are meant to be read by the class prior to the discussion.

**One Short Response Essay - Percent of Final Grade: 15% (Due 2/28/2019)**

### **Short Historical Perspective Essay**

For this 2,000-2,500-word essay, you will describe and reflect upon one individual, group, or event that had a fundamental impact on the progression of theory, research, and/or implementation in the fields that make up HCI based on your experience and our discussions/readings in class.

**One Historical Perspective Essay - Percent of Final Grade: 20% (Due 4/18/2019)**

### **Symposium Paper/Presentation**

In this project, you'll participate in the knowledge building of Human-Computer Interaction. You must select a venue as a target for the publication of your paper. You will not be required to submit your paper for publication, but selecting a venue provides you with an audience and editorial constraints that will help to structure the work. Options include a conference (e.g., CHI), journal (e.g., *International Journal of Human-Computer Studies*), trade publication (e.g., *InterComm*, *SIGCHI Bulletin*), dissertation prospectus, a research proposal or grant application, a dissertation or thesis chapter, etc. These papers should be a length that is appropriate for the venue selected. Alternatively, this can be submitted as a presentation that should be a polished and professional review of your term paper topic suitable for an academic conference.

**Percent of Final Grade: 30% (Due 5/7/2019)**

### **Course Policies**

- Students may be excused from up to 2 class meetings for any reason without impact to their grade, but are responsible for making up any missed work/reading. Please email the instructor at least 24 hours prior to your absence, if practicable, to let me know. Additional absences require instructor approval and will be reviewed on a case-by-case basis.
- All course work is due by the time and date indicated on the schedule. Late work is generally not accepted. A limited number of extenuating circumstances can justify late submission. Please inform me of such circumstances ahead of time if possible.
- Each assignment is worth a percentage of your grade as indicated on the syllabus. You will receive a letter grade on each assignment as well as one for participation at the end of the semester. Your grade for the course will be the weighted sum of the grades.
- All assignments must be completed in order to receive a passing grade in the course.
- All assigned grades may be appealed by writing a short 250-word position statement that provides reasoned arguments for why the grade should be changed. Submit your position statement by email. You may also elect to meet with me to discuss the appeal - but a written statement is required. Submission of an appeal does not guarantee a grade change.
- Violations of academic integrity as discussed below will result in a failing grade on the assignment after the first occurrence and a failing grade for the course after the second occurrence.

### **Academic Integrity**

Cornell University requires all students to abide by its Code of Academic Integrity. To avoid any confusion or misunderstanding of how that applies to this course, specifics for this course are spelled out below. If you have any questions about this policy, please ask.

- The course symposium paper and presentation provide a chance for you to apply the material you are learning in this course to a problem of interest to you (or your group). You will be using a variety of resources to understand your particular problem and propose a solution. Be sure to document sources you use as you develop your project. That will make it much easier to properly cite resources and references in your final report. All material that is not specifically from your textbook or course notes and that isn't general knowledge should be cited. For the purposes of this course, general knowledge is considered to be information that can be found from multiple distinct sources, or that a student would have been expected to know/learn from previous or current courses.

- All members of your group are considered co-authors of the group's work. Thus you do not have to cite discussions between group members. You must cite contributions by those outside your group.
- The Cornell code of Academic Integrity is "grounded on the concept of honesty with respect to the intellectual efforts of oneself and others". In group work this means allowing all group members an opportunity to contribute to and learn from the group's efforts.
- Any violation of the academic integrity policy for this course on an assignment will result in no credit for that assignment. On exams and depending on the nature of the infraction, penalties will vary from no credit on the specific problem, overall grade reduction on the exam, or a zero on the entire exam.
- Cornell Code of Academic Integrity can be found here: <https://cuinfo.cornell.edu/aic.cfm>

**Course Schedule** (*subject to change*)

<b>Date</b>	<b>Lecture Topic</b>	<b>Readings</b>	<b>Discussion Leaders</b>
Tues. 1/22	Getting Organized	Class syllabus and administrative material	N/A
Thurs. 1/24	Human-Computer Interaction: Who is in charge here!?	Handbook Chapter 2. Human Information Processing	
Tues. 1/29	Computer-Human Interaction: Give humans "reasons," it helps them feel special.	Interaction Design Chapter 3: Understanding Users  Interaction Design 2: Understanding and conceptualizing interaction	
Thurs. 1/31	Inconceivable! (or, I don't think that means what you think that means)	Handbook Chapter 3. Mental Models in HCI	
Tues. 2/5	Stupid Users: Mistakes Under Pressure	Handbook Chapter 4. Task Loading and Stress	
Thurs. 2/7	To Interface or Not to Interface: I'm Afraid of Drop Down Menus	Interaction Design Chapter 5: Understanding how interfaces affect users  Handbook Chapter 6. Input Technologies	
Tues. 2/12	Wearables: Does this computer make me look fat?	Handbook Chapter 12. Wearable Computers	

Thurs. 2/14	<b>NO CLASS</b>	<b>NO CLASS</b>	
Tues. 2/19	Multitasking Interfaces: I can do all these things at once and...wow...I suck at all of them.	Handbook Chapter 17. Multimedia User Interface Design  Handbook Chapter 18. Multimodal Interfaces	
Thurs. 2/21	"The Web of Lies:" HCI in the Era of Clickbait & Fake News	Handbook Chapter 25.HCI and the Web	
<b>Tues. 2/26</b>	<b>NO CLASS</b>	<b>FEBRUARY BREAK</b>	N/A
Thurs. 2/28	Users and Use Cases: Knowing your Audience(s)	Interaction Design Chapter 12: Observing users  Handbook Chapter 30. HCI in Health Care	<b>Short Response Essay Due</b>
Tues. 3/5	Gamification: My Misspent Youth with Sierra On-Line	Handbook Chapter 34. User-Centered Design in Games	
Thurs. 3/7	Help! I can't remember what I was doing.	Chapter 37. IT for Communication and Cognitive Support	
Tues. 3/12	<b>Guest Lecture: Dr. Laquana Cooke, West Chester University</b>	HCI and Learning in Games	N/A
Thurs. 3/14	Red Means Stop, Unless it Doesn't	Handbook Chapter 38. Perceptual Impairments	
Tues. 3/19	Technology and Learning: Uplifting Society	Handbook Chapter 39. Universal Usability and Low-Literacy Populations	
Thurs. 3/21	The Futurists: How Humans View Technology in the Future	Handbook Chapter 44. Grounded Theory Method	

Tues. 3/26	Dramatis Personae: Personas versus Characters	Handbook Chapter 46. Putting Personas to Work	
Thurs. 3/28	<b>Guest Lecture: Andrew Lutzky, SVP/Head of Consumer Tech at Edelman</b>	Consumer Technology of the Future	
Tues. 4/2	Spring Break	<b>NO READINGS</b>	N/A
Thurs. 4/4	Spring Break	<b>NO READINGS</b>	N/A
Tues. 4/9	<b>NO CLASS</b>	<b>NO READINGS</b>	N/A
Thurs. 4/11	<b>NO CLASS</b>	<b>NO READINGS</b>	N/A
Tues. 4/16	Culturally Situated Design	Handbook Chapter 47. Prototyping Tools and Techniques  Lutzky "African Fractals and Culturally Situated Design Tools: Mathematics Education through Self-Empowering Technology"	
Thurs. 4/18	Persuasive Technology and the Ethics of Advocacy	Interaction Design Chapter 14: Testing and modeling users  Handbook Chapter 51. Usability + Persuasiveness + Graphic Design = eCommerce User Experience	<b>Short Historical Perspective Essay Due Date</b>
Tues. 4/23	Affordances and Semiotic Engineering	Handbook Chapter 52. HCI and Software Engineering for User Interface Plasticity	
Thurs. 4/25	Testing, Testing, want to?	Handbook Chapter 53. Usability Testing	

Tues. 4/30	Phone a Friend: Perspectives from Luminaries	Interaction Design Chapter 13: Asking users and experts	
Thurs. 5/2	How Social is Social?	Handbook Chapter 59: Technology Transfer  Handbook Chapter 61: Social Networks and Social Media	
Tues. 5/7	<b>Last Day of Class</b>	<b>NO READINGS</b>	<b>Symposium Paper/Presentation Due</b>

### About Your Instructor

Dr. Ray Lutzky is a lecturer at Cornell Tech where he also serves as senior director of enrollment and admissions. He was previously an adjunct professor in the Department of Computer Science at NYU Tandon School of Engineering where he developed and taught graduate-level human-computer interaction courses. He earned his bachelor's degree in electronic media, arts, and communication and his Ph.D. in communication and rhetoric, both from [Rensselaer Polytechnic Institute](#), and holds a master's in public relations from [Syracuse University](#). He has presented his research at meetings of the Society for Technical Communication, the International Society for the Scientific Study of Subjectivity, and the Eastern Communications Association, as well as the Teacher's College Educational Technology Conference at Columbia University. Ray is a native New Yorker and lives in Manhattan – he enjoys cooking, skiing, art, literature, travel, and prefers gaming in various styles – some of my favorites: [The Secret of Monkey Island](#) (1990), [Super Metroid](#) (1994), [Chrono Trigger](#) (1995), [Star Wars: X-Wing Versus Tie Fighter](#) (1997), [Star Trek: Starfleet Academy](#) (1997), [World of Goo](#) (2008), [Assassin's Creed IV: Black Flag](#) (2013), [Axiom Verge](#) (2015), and [Legend of Zelda: Breath of the Wild](#) (2017).

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\*Instructor reserves the right to make changes to this syllabus at any time with reasonable notice to students provided.