

**Digital Media Human-Computer Interaction (HCI)**

**DM-GY 9103-B - Spring 2017**

**New York University**

**Tandon School of Engineering**

**Department of Technology, Culture and Society**

**Thursdays 6:30-9:20 p.m.; 2 MetroTech Center, Room 811 (MAGNET Center, 8th Floor)**

**Professor:** Ray Lutzky, Ph.D.

**Office:** Wunsch Hall 209, NYU Brooklyn campus (GPS: 311 Bridge Street, Brooklyn)

**Office Hours:** By appointment (email is best)

**Email:** rlutzky@nyu.edu <- Best way to reach me

**Office Phone:** 646-997-5984

**Course Pre-Requisites**

There are no prerequisites for this course. Experience with creation and/or dissemination of information, production of interactive experiences, or software design will be helpful.

**Course Description**

In this course we will examine various usability aspects of interfaces between humans and computers/technology. Through lectures, discussions, demos, hands-on activities, and projects, we will explore various aspects of interfaces, interaction patterns, and interface design and evaluation in the context and schedules of complex development environments. We also have some excellent guest lectures this semester that will give you a broad perspective on HCI topics.

This course will explore topics critical to understanding and evaluating usability of interfaces and information, and investigate designing interfaces that are truly usable by all of their intended audiences. As such, it will touch briefly on many topics and focus on some of the more important ones. There are many ways to approach the subject of human-computer interaction. My background is in rhetoric and technical communication, so you'll probably see a lot of that coming through. I'm also interested in cognitive psychology, and we will explore how we can best apply some methods of cognitive psychology to our work. Finally, this course will also address some aspects of HCI and usability in contexts such as games and experience design.

**Course Objectives**

- To look at a wide range of possibilities for interaction between people and computers/technology through the interfaces that are provided.
- To gain experience designing and developing interfaces and testing their effectiveness.
- To gain you experience in designing excellent interfaces of your own.
- To understand the importance of interface usability and the consequences of bad design.
- To have fun while accomplishing the above goals.

**Course Structure**

This course combines lecture and discussion with both in-class and out-of-class experience learning and trying out methods. Students will have readings (mostly from the primary text) between classes, and short form assignments as well as a longer final group project.

**Required Readings**

- *Designing the User Interface: Strategies for Effective Human-Computer Interaction, 6<sup>th</sup> Edition* by Ben Shneiderman, Catherine Plaisant, Maxine Cohen, Steven Jacobs, Niklas Elmqvist and Nicholas Diakopoulos (2016)

I've used this text as the main reading for this course at NYU and at other institutions. Ben Shneiderman is Distinguished University Professor of Computer Science at the University of Maryland and is a widely regarded a leading expert in human-computer interaction. There's a lot to be found in the book, so dig in and enjoy.

- *The Design of Everyday Things: Revised and Expanded Edition* by Donald A. Norman (2013) (Limited access via NYU EBrary <http://site.ebrary.com/lib/nyulibrary/detail.action?docID=10778063>)

I hope you also enjoy reading [Design of Everyday Things](#) by design psychologist Donald Norman, in its entirety. This is because it is a great resource and a fun book to read (many students finish reading it before it is due). Norman is an internationally recognized expert on humans and good design and is Professor Emeritus of Cognitive Science at the University of California, San Diego.

- [Persuasive Technology: Using Computers to Change What We Think and Do by B.J. Fogg \(2003\)](#) (Full download available at NYU EBrary - <http://site.ebrary.com/lib/nyulibrary/detail.action?docID=10186233>)

[Persuasive Technology](#) is one of the few academic texts out there about technology and persuasion, which can play a huge role in HCI (thanks to BJ Fogg from Stanford University). This book talks about media and computers as tools for marketing, influencing decisions, and guiding users.

**Additional Readings:** Additional readings on various topics throughout the course are available from the instructor upon request, including recommendations for the Research Summary mentioned below. In particular, I am happy to help doctoral students looking for additional readings for literature review. For further research, NYU Libraries maintains an impressive collection of additional resources and HCI readings in their Digital Media & Technology Collection.

### **Course Requirements**

Students are expected to complete readings before class, participate in class discussion and in-class exercises, and to do a thorough job of the main class project and paper, including mid-term progress check. Students can earn a possible total of 100 points in this class. Here is an overview of the proportion of influence each component of the class will have on your final grade:

- **Class Participation/Attendance – 10 Points.** I do not take formal attendance, but we do a lot of in-class group project work so this is a part of your grade.
- **“Persuasive Technology” Group Presentations – 15 Points:** Students will sign up for 1 of 9 chapters throughout the semester to do presentations on chapters from this book. That way, we can all “read” it together without everyone having to read the whole book.
- **Mid-term Check-in Report – 20 Points:** You will be expected to give a mid-term update on your progress and group design in class presentation and a 2 page executive summary.
- **Final Group Presentation and Report – 40 Points:** You will be working on these projects most of the term and be given ample in-class time (as well as working outside of class). The Final Presentation and Report (3-5 pages) both contribute to this grade.
- **Reflection Pieces – 15 Points:** A 2 page summary of the major points of each of the 3 video lectures highlighting points you agree/disagree with for 15 points credit.

**A Note on Weather:** NYC may have inclement weather this term that impacts travel to campus. Please use good judgement when traveling and note that you are responsible for any classwork missed.

### **Course Schedule (Subject to Change):**

#### **1/26: Introduction**

Your expectations, interests, and experience; course overview, in-class exercise. **Turn in your write-up of today’s exercise** to help me start learning names.

For next time: Read Norman Chapters 1, 2, & 3. [Persuasive Technology](#) sign-ups.

#### **2/2: Design Psychology and Affordances**

Discussion of readings, set-up groups for final group projects, project overview, in-class exercise. Sign up for [Persuasive Technology](#) chapter presentations.

For next time: Read Shneiderman and Plaisant Chapters 1, 2, & 3

#### **2/9: Foundations of Human-Computer Interaction**

Discussion of readings, in-class work time for project proposals.

**Written proposal for final group project due by end of class.**

First [Persuasive Technology](#) presentation: Overview of Captology

For next time: Norman Chapters 4 & 5

#### **2/16: Constraints and Errors**

Discussion of readings, in-class work time for project testing.

[Persuasive Technology](#) presentation #2: The Functional Triad

Persuasive Technology presentation #3: Computers as Persuasive Tools

For next time: Read Shneiderman and Plaisant Chapters 4 & 5

2/23: **Innovation and the Design of Future Things**

Discussion of readings, in-class work time for project testing.

Persuasive Technology presentation #4: Computers as Persuasive Media

Persuasive Technology presentation #5: Computers as Persuasive Social Actors

3/2 **Meet with Project Group for Mid-Term**

Meet with project group during class time for Mid-Term check-in presentations.

For next time: Reflection #1: Norman lecture due. Review Donald Norman on “Living with Complexity” - <https://www.youtube.com/watch?v=Tj96KyC9zdl> (Accessed December 2016)

3/9: **Mid-Term Presentations**

Group project presentations for Mid-Term Check-in

Over break: Read Shneiderman and Plaisant Chapters 6, 7, 8, & 9

3/16: **No Class Meeting – Spring Recess**

3/23: **Designing Games and Game-Based Learning**

**Guest Lecture: Dr. Laquana Cooke, Assistant Professor, West Chester University**

Persuasive Technology presentation #6: Credibility and Computers

Persuasive Technology presentation #7: Credibility and the World Wide Web

For next time: Read Norman 6 & 7

3/30: **Innovation and the Design of Future Things**

Discussion of readings, in-class work time for final group presentations.

For next time: Read Shneiderman and Plaisant Chapters 10 & 11

Persuasive Technology presentation #8: Increasing Persuasion through Mobility

Persuasive Technology presentation #9: The Ethics of Persuasive Technology

4/6: **Meet with Project Group to Review Mid-Term Feedback**

Meet with your project group during class time to review feedback from the mid-term check-in and decide how you will incorporate it into your final presentations.

For next time: Reflection #2: Eglash lecture due. Review Ron Eglash on “Culturally Situated Design” - [https://www.ted.com/talks/ron\\_eglash\\_on\\_african\\_fractals](https://www.ted.com/talks/ron_eglash_on_african_fractals) (Accessed December 2016)

4/13: **User Experience Design**

**Guest Lecture: Mr. Michael McGetrick, Principal, Spark451, Inc.**

Discussion of readings, in-class work time for final group presentations.

Persuasive Technology presentation #10: Captology: Moving Forward

For next time: Read Shneiderman and Plaisant Chapters 12, 13, & 16

#### 4/20: **Meet with Project Group**

Meet with project group during class time for Mid-Term check-in presentations.

For next time: **Reflection #3: Nielsen lecture due.** Review Jakob Nielsen "Mobile Usability Features" - <https://www.youtube.com/watch?v=sELOUAmFHjA&t=736s> (Accessed December 2016).

#### 4/27: **Preparation for Final Presentations**

Meet with project group during class time for Final presentations.

For next time: Final project presentations.

#### 5/4: **Final Presentations**

Presentation of semester group projects, **Group Presentations.**

For 5/8: **NYU Classes submissions due electronically by noon.**

### **About Academic Integrity**

As an NYU student you belong to an interdisciplinary community of artists, engineers, scientists and scholars who value honest and open intellectual inquiry. This relationship depends on mutual respect, responsibility, and integrity. Failure to uphold these values will be subject to severe sanction, which may include dismissal from the University. Students should refer to the NYU Academic Integrity statement for specific examples and policy statements: <https://www.nyu.edu/about/policies-guidelines-compliance/policies-and-guidelines/academic-integrity-forstudents-at-nyu.html>. Students should be familiar with, and adhere to, the NYU Tandon School of Engineering Student Code of Conduct (<http://engineering.nyu.edu/academics/code-of-conduct>). For this course specifically, we are doing a lot of group work and I will keep that in mind. However, upon the first instance of plagiarism or any other form of cheating, a student will be awarded a failing grade for that assignment. The second instance will result in the student will be awarded a failing grade for the course overall and may result in further disciplinary action by NYU.

### **Course Policies**

- **You are here to learn.** I operate under the assumption that you are willing to pay tuition and/or take a class because you want to learn here. I am not going to be policing your activities while in class, but do not expect to see folks spending their time here on social media, gaming, or watching videos unless it's related to your class work (which is entirely possible).
- **Working in groups means working in groups.** While not everyone will contribute the same amount to group work, it is expected that everyone contributes something based on their abilities, skills, and interests. Failure to participate will result in remedial action.
- **Assignments are due on the day listed in the syllabus.** Late assignments will be penalized one letter grade for each week late. I know you have lives outside this class and that emergencies/illnesses occur. If you will be late with an assignment, let me know ahead of time and things will be OK. Communication with the instructor is key.
- **In-class presentations are due on the day you sign up for them.** If you will be missing a presentation, let me know ahead of time and we can reschedule. If you don't show or let me know in advance, it will count as a missed assignment.

### **NYU Moses Center Statement on Disability**

If you are a student with a disability who is requesting accommodations, please contact New York University's Moses Center for Students with Disabilities (CSD) at 212-998-4980 or [mosescsd@nyu.edu](mailto:mosescsd@nyu.edu). You must be registered with CSD to receive accommodations. Information about the Moses Center can be found at [www.nyu.edu/csd](http://www.nyu.edu/csd). The Moses Center is located at 726 Broadway on the 2nd floor.

### **About Your Instructor**

Dr. Ray Lutzky is an adjunct professor at New York University Tandon School of Engineering where he also serves as senior director of graduate enrollment management and admissions. He earned his bachelor's degree in electronic media and his Ph.D. in communication and rhetoric, both from Rensselaer, and he also holds an M.S. from Syracuse University. He has presented 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.