Craig M. MacDonald, Ph.D.
Pratt Institute, School of Information & Library Science
144 West 14th Street, Room 604c
New York, NY 10011–7301
cmacdona@pratt.edu
http://www.craigmacdonald.com

# LIS-644
# Usability Theory and Practice
## Fall 2014

Wednesday 3:30-5:50p • Pratt Manhattan Center, Room 609

**Credits:** 3
**Pre-requisites:** none

**Office Hours:** Thursdays 3-6p and by appointment

## Bulletin Description

This course provides the theoretical and practical foundations for evaluating digital interfaces from a user-centered perspective. Through lectures, in-class activities, readings and individual and group assignments, students will learn and apply usability principles and gain hands-on experience with several common usability evaluation methods, including traditional user testing plus inspection- and field-based methods. Because the goal of evaluation is always to improve the underlying usability of an interface, the course will focus on effectively communicating evaluation results. At the conclusion of this course, students will possess the knowledge and skills necessary for successfully planning, conducting, and leading usability evaluations across a diverse array of organizations and industries.

## Course Goals & Objectives

The goals of this course are to:

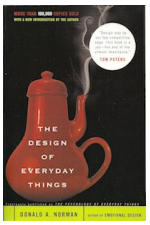
- Gain a theoretical understanding of usability and its relation to the user-centered design process.
- Provide practical experience with contemporary usability evaluation methods.
- Improve individual and collaborative skills in problem solving, communication, and creative thinking.

Upon successful completion of this course, a student will be able to:

- **Define** and **explain** the concept of usability using appropriate terminology.
- **Choose** and **employ** appropriate usability evaluation methods based on technical, practical and organizational contexts.
- **Develop** strategies for implementing a usability evaluation in accordance with industry standards.
- **Create** high-quality work products that effectively communicate evaluation results and are consistent with professional practice.

## Required Readings

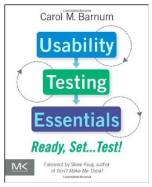
There are **two required texts** for this course. Additional readings will be available via the LMS.




Norman, D. (2002). *The Design of Everyday Things*. New York, NY: Basic Books. ISBN: 0465067107

Amazon: http://www.amazon.com/Design-Everyday-Things-Donald-Norman/dp/0465067107

*[Note: This the 2002 edition of the book, not the revised edition published in 2013]*




Barnum, C. M. (2011). *Usability testing essentials: Ready, set...test!* Burlington, MA: Morgan Kaufmann. ISBN: 012375092X

Amazon: http://www.amazon.com/Usability-Testing-Essentials-Ready-Test/dp/012375092X/

## Assessment and Grading

The overall course grade will be based on a total of 200 points, weighted as follows:

- **10%** Norman Blog: Blog Entry on Good & Bad Design
- **20%** E1: Cognitive Walkthrough Report (I)
- **20%** E2: Heuristic Evaluation Report (I)
- **20%** E3: Diary Study Report (G) ***e-Portfolio eligible (Research, User-Centered Focus)***
- **20%** E4: User Test Report (G) ***e-Portfolio eligible (Research, User-Centered Focus)***
- **10%** Final Paper: Usability in the Real World

Detailed descriptions of each assignment will be distributed in class and posted to the LMS.

Grades will be awarded for points accumulated based on Pratt's grading scale:

| | | | | | | |
|---|---|---|---|---|---|---|
| Excellent | A | 4.0 (93-100) | A- | 3.7 (90-92.99) | | |
| Above Average | B+ | 3.3 (87-89.99) | B | 3.0 (83-86.99) | B- | 2.7 (80-82.99) |
| Acceptable | C+ | 2.3 (77-79.99) | C | 2.0 (73-76.99) | | |
| Failure | F | 0.0 (00-72.99) | | | | |

## Course Schedule

| Date | Topic | Due |
|---|---|---|
| **1**<br>Aug 27 | **Welcome + Introduction to Evaluation**<br>▪ MacDonald, C. M., & Atwood, M. E. (2013). Changing Perspectives on Evaluation in HCI: Past, Present, and Future. In *CHI '13 Extended Abstracts on Human Factors in Computing Systems (CHI EA '13)*. New York, NY: ACM. 1969-1978.<br>▪ Kujala, S., & Miron-Shatz, T. (2013). Emotions, Experiences and Usability in Real-Life Mobile Phone Use. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (CHI '13)*. New York, NY: ACM. 1061-1070. | |
| **2**<br>Sep 3 | **Writing Evaluation Reports**<br>▪ Brown, D. (2011). Usability reports. In *Communicating Design: Developing Web Site Documentation for Design and Planning* (2nd Ed.) (pp. 274-288). Berkeley, CA: New Riders.<br>▪ Rogers, Y., Sharp, H., & Preece, J. (2011). Introducing Evaluation. In *Interaction Design: Beyond Human-Computer Interaction* (3rd Ed.) (pp. 433-451). Chichester: John Wiley & Sons, Inc.<br>▪ DOET: Ch. 1, 2, 3 | |
| **3**<br>Sep 10 | **The Design of Everyday Things + Intro to Cognitive Walkthrough**<br>▪ DOET: Ch. 4, 5, 7 | **Norman Blog** |
| **4**<br>Sep 17 | **LAB: Cognitive Walkthrough**<br>▪ Wharton, C., Rieman, J., Lewis, C., & Polson, P. (1994). The Cognitive Walkthrough Method: A Practitioner's Guide. In J. Nielsen, & R. Mack (Eds.), *Usability inspection methods* (pp. 105-140). New York, NY: John Wiley & Sons, Inc.<br>▪ John, B. E., & Packer, H. Learning and Using the Cognitive Walkthrough Method: A Case Study Approach. In *Proceedings of the 1995 SIGCHI Conference on Human Factors in Computing Systems (CHI '95)*. New York, NY: ACM. 429-436. | *CW Inputs* |
| **5**<br>Sep 24 | **Intro to Heuristic Evaluation**<br>▪ Nielsen, J. (n.d.). How to conduct a heuristic evaluation. Retrieved from: http://www.nngroup.com/articles/how-to-conduct-a-heuristic-evaluation/<br>▪ Nielsen, J. (n.d.). Ten usability heuristics. Retrieved from: http://www.nngroup.com/articles/ten-usability-heuristics/<br>▪ Nielsen, J. (n.d.) Severity ratings for usability problems. Retrieved from: http://www.nngroup.com/articles/how-to-rate-the-severity-of-usability-problems/ | **E1** |
| **6**<br>Oct 1 | **LAB: Heuristic Evaluation**<br>▪ Sauro, J. (2012). The Value of Multiple Evaluators in Heuristic Evaluations. Retrieved from: http://www.measuringusability.com/blog/he-multiple.php<br>▪ Kientz, et al. (2010). Heuristic Evaluation of Persuasive Health Technologies. In *Proceedings of the 1st ACM International Health Informatics Symposium (IHI '10)*. New York, NY: ACM. 555-564. | *HE Inputs* |

| | | |
|---|---|---|
| **7**<br>Oct 8 | **Heuristic Evaluation Analysis + LAB**<br>▪ *No readings this week* | *HE Problems* |
| **8**<br>Oct 15 | **Intro to Diary Studies + LAB**<br>▪ Rieman, J. (1993). The Diary Study: A Workplace-oriented Research Tool to Guide Laboratory Efforts. In *Proceedings of the INTERACT '93 and CHI '93 conference on Human factors in computing systems (CHI '93)*. New York, NY: ACM. 321-326.<br>▪ Bruun, A., Gull, P., Hofmeister, L, & Stage, J. (2009) Let Your Users Do the Testing: A Comparison of Three Remote Asynchronous Usability Testing Methods. In *Proceedings of the 2009 Conference on Human Factors in Computing Systems (CHI '09)*. New York, NY: ACM. 1619-1628. | **E2**<br>*Diary Forms*<br>*(by end of class)* |
| **9**<br>Oct 22 | **Recruiting Participants**<br>▪ UTE, Ch. 2 | *Diary Entries (individual)* |
| **10**<br>Oct 29 | **User Testing I: Prepare**<br>▪ UTE, Ch. 6 | **E3** |
| **11**<br>Nov 5 | **LAB: User Testing Preparation**<br>▪ *No readings this week* | |
| **12**<br>Nov 12 | **User Testing II: Collect Data**<br>▪ UTE, Ch. 7<br>▪ Nørgaard, M. & Hornbæk, K. (2006). What Do Usability Evaluators Do In Practice? An Explorative Study of Think-Aloud Testing. In *Proceedings of the 6th Conference on Designing Interactive Systems* (DIS '06). New York, NY: ACM. 209-218. | |
| **13**<br>Nov 19 | **User Testing III: Analyze & Report**<br>▪ UTE, Ch. 8<br>▪ Følstad, A, Law, E., & Hornbæk, K. (2012). Analysis in Practical Usability Evaluation: A Survey Study. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (CHI '12)*. New York, NY: ACM. 2127-2136. | |
| **14**<br>Nov 26 | ***NO CLASS – Thanksgiving Break*** | |
| **15**<br>Dec 3 | **LAB: User Testing Analysis & Reporting**<br>▪ *No readings this week* | |
| **16**<br>Dec 10 | ***NO CLASS – Studio Days*** | |
| **17**<br>Dec 17 | **Course Wrap-up & Emerging Trends**<br><br>*Final Papers due to the LMS by 11:59pm on Friday, December 19* | **E4** |

## Policies

### *Assignments*

Because of the project-based nature of this course, all graded assignments must be uploaded to the LMS before class on the due date (unless otherwise noted) with no exceptions. **Late assignments will be graded at 50% and assignments more than 24 hours late will not be graded**.

### *Attendance & Participation*

Although it is ungraded, active participation in class is essential to successful learning in this course. The course format may vary each week, but typical class sessions will consist of short lectures and small group activities that directly inform individual and group project deliverables.

Attendance is therefore expected and required. Students with 3 absences (for any reason, including documented medical reasons) cannot expect to receive an A in the course and, in accordance with Pratt Institute policy, may be asked to drop the class. **Please notify me ASAP if you know you will be absent.** You will be expected to make up any missed material for classes that you miss.

Additionally, there will be several activities throughout the term that must be completed before coming to class. These activities will not be graded but are essential to fulfilling course requirements, especially those that require group collaboration. Failure to complete these activities in a timely fashion will not only let down your classmates, it will have a negative impact on your overall learning experience.

### *Academic Honesty*

Instances of cheating, plagiarism, and improper use of intellectual property will not be tolerated. Do not plagiarize or copy from anywhere, including articles, websites, class handouts, class slides, other students' work, web design templates, work you have submitted to another course, etc. Unless specifically indicated otherwise, all assignments submitted for this course must be **your own work**, with sources properly cited.

Any assignment that includes copied material will be given an automatic *zero* – this includes cases where only a portion of the assignment is copied. Depending on the nature of the offense, this may also result in failure of the course. **No excuses will be accepted**. More information about Pratt's academic integrity code can be found at: http://www.prattsenate.org/learning/02-academic.htm

### *Communication*

The best way to contact me is by email (cmacdona@pratt.edu). I check e-mail regularly and you can expect an email response within 24 hours. Should that change, you will be notified in advance.

### *Disabilities*

Students who require special accommodations for disabilities must obtain clearance from the Office of Disability Services at the beginning of the semester. For further information, contact the Coordinator of Disability Services at 718.636.3711.

*Incompletes*

Incompletes will not be awarded except for documented medical reasons.

*Institute-Wide Policies*

All Institute-wide policies are listed in the Bulletin under “Community Standards” available online at http://www.pratt.edu/student_life/student_affairs/student_policies/ and which include policies on attendance, academic integrity, plagiarism, computer, and network use.

*Laptops & Cell phones*

Please turn your cell phone off during class. Laptops are permitted for coursework purposes only.

*Research Participation*

As part of this course, students may be asked to participate in research studies conducted by SILS faculty.

*Revisions to the Syllabus*

While this syllabus provides a reliable framework for the course, it is it is possible that assigned readings will be added or deleted or that events (guest lectures, extreme weather, etc.) may require changes to the schedule. Any changes will be announced in class or via e-mail.

## SILS e-portfolio

Starting Fall 2012, all students entering the MSLIS degree program are required to complete an e-portfolio that must be approved by their advisor before they will be permitted to graduate. The e-portfolio provides students with an opportunity to showcase their best work from the courses they have taken at SILS, and an opportunity to demonstrate they have met the learning objectives of a Master of Information and Library Science.

Work completed for this course may be included in the e-portfolio to satisfy one or more of the following learning outcomes (outcomes with a primary focus in this course are **in bold**):

1. **Research: Students carry-out and apply research.**
2. Communication: Students demonstrate excellent communication skills and create and convey content.
3. Technology: Students use information technology and digital tools effectively.
4. **User-Centered Focus: Students apply concepts related to use and users of information and user needs and perspectives.**
5. LIS Practice: Students perform within the framework of professional practice.

Detailed information on the learning outcomes, requirements and how to create your e-portfolio is available from: https://www.pratt.edu/academics/information-and-library-sciences/sils-eportfolio/