Multimedia and Interface Design
Duquesne University
Department of Journalism & Multimedia Arts

JMA 308-01/545-01, Fall 2017 at 4:30 – 5:45 on TTH in COLH 205

Dr. William J. Gibbs
Office – 544C COLH
Office hours – Tue. and Thurs. 11:00–1:15 and by appointment and by appointment
Phone – 396-1310
E-mail – gibbsw@duq.edu
Class Website – http://www.jma.duq.edu/classes/gibbs/jma308/

Course Description

The overall goal of this course is to explore interface design concepts and to use associated principles to develop interfaces.

In the course we examine major user interface design principles and processes such as information architecture, navigation, prototyping, user-center design, and usability. A primary focus of the course is usability, which encompasses methods to identify what is or is not working on an interface.

The course is centered on "active learning" principles, which means that we will use much of the class time to work on projects, test interfaces, and to discuss design ideas.

Course Objectives

After completing the course, you will be able to:

- Define terms related to interface design.
- Describe and implement major methods and processes of user interface design.
- Design, development and evaluate a website and associated interactions based on interface design principles.
- Discuss general guidelines, principles, and theories related to interface design.
- Identify usability problems.
- Conduct usability studies, including design assessment instruments, operate usability software, collect and analyze user data.

Learning Materials

Recommended (not required) books

- Designing with the mind in mind: 978-0-12-407914-4
- Don't Make Me Think, Revisited: A Common Sense Approach to Web Usability, 3/E: 9780321965516
- Additional readings will be assigned.
Department of Journalism and Multimedia Arts: Perspective and Skills

The Journalism and Multimedia Arts department dynamically bridges the distance between where the user is and where the user wants to be. Through degree programs that are flexible, progressive, and robust with an ever expanding reach into the dynamic world of digital design, Journalism and Multimedia Arts at Duquesne University provides the tools, the knowledge and encouragement you need to build your own bridge into the future.

Through an aggressive curriculum geared toward the challenges of a rapidly changing world, students are prepared for both productive and creative lines of service.

Students are taught to think, write, and speak both clearly and critically. In support of the University's mission to promote education for the mind, heart, and soul, Journalism and Multimedia Arts challenges its students to achieve an intellectual and spiritual awareness that will positively impact future contributions to their families, communities, and professional affiliations.

Course Requirements

Reading Assignments. Reading assignments are listed on the tentative course schedule. You should complete all assigned readings before class, as indicated on the schedule. Reading assignments cover the conceptual aspects of the course. It is very important for you to keep up with the readings so that you obtain a conceptual understand of topics, which may or may not be covered during class time. We will use much of the class periods to create and test interfaces with prototyping tools.

Class Format and Participation. The course will be a mixture of demonstration, discussion, and hands-on experiences. To the extent that it is possible, class periods will be spent developing interfaces and testing them. You will share the results of your efforts with the class through project demonstrations and presentations. Topics from the assigned readings will also be discussed in class. You should actively participate in class discussions.

Learning Activities. Assignments are due throughout the semester as shown on the tentative course schedule. The assignments represent a significant portion of your course grade. Their purpose is to help you integrate conceptual aspects of UI in the interfaces that you create. Several assigned activities require that you have storage media.

- Storage. It is important to keep backup copies of your work on supplementary discs and to backup your work frequently. Discs errors, computer viruses, or accidental erasures can destroy your files. No special considerations will be given if your files are lost and so please take every precaution to protect your work.

- Due Dates. Assignments are due at the end of the day of the class period as
indicated on the tentative course schedule. Assignments may be turned in up to three class periods beyond the due date, after which time they will not be accepted. Assignments turned in pass the due date will receive a 10% per class period penalty up to a maximum of 30%.

- **E-mailing assignments.** There may be times when you need to send an assignment as an e-mail attachment. All e-mail attachments (assignments) must include your name, e-mail address, and the title of the assignment. You should also label the subject of the e-mail message with your name and the assignment title.

**Quizzes/exercises.** Short activities will be given during class throughout the semester. These activities cannot be made up and they must be taken during the assigned class period.

**Evaluation and Grading Policy**

Your performance in the course is measured by the points you accumulate on all learning activities.

<table>
<thead>
<tr>
<th>Activities</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interface design activities - approximately 5 (30 points each)</td>
<td>150</td>
</tr>
<tr>
<td>Usability study (Team)</td>
<td>200</td>
</tr>
<tr>
<td>Final project &amp; documentation</td>
<td>200</td>
</tr>
<tr>
<td>Pilot study (graduate students)</td>
<td>100</td>
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<tr>
<td>Participation</td>
<td>75</td>
</tr>
</tbody>
</table>

Grading scale is A = 90 – 100%, B = 80 – 89%, C = 70 – 79%, D = 60 – 69%.

**Course Policies**

**Attendance.** Students should demonstrate professional behavior by attending class and actively participating in class activities.

**Make up tests.** Makeup tests can only be given if you provide appropriate documentation (e.g., a note from a physician) indicating the reason for your absence.

**I-Grade policy.** Students must complete 80% of the coursework to warrant a grade of incomplete (“I”). The McAnulty College policy states that “I” grades must be removed by the date specified in the Duquesne Calendar.

**Academic integrity.** Students are expected to adhere to the University’s rules and regulations on academic integrity. Students are responsible for reading the University’s academic integrity policy. See: http://www.duq.edu/academics/university-catalogs/2014-2015-graduate/academic-policies/academic-integrity

**E-mail.** Students and instructor will often communicate electronically. Some assignment instructions may be given using e-mail. Check e-mail regularly.

**Students with disabilities.** Students with a documented disability may obtain appropriate academic support through the Office of Special Student Services. Please notify the professor and contact the Office of Special Student Services (412) 396-6657 for additional information.

**Emergency preparedness plan.** Emergency procedures are posted in classrooms. Students and faculty are responsible for acquainting themselves with emergency procedures so that they are prepared if an emergency occurs.
Additional Suggested Readings:

For additional readings you may want to consult the following:

- Customers Included: How to Transform Products, Companies, and the World - With a Single Step by Mark Hurst, Phil Terry, 2013.
- Data-Informed Product Design, Pamela Pavliscak, O'Reilly, 2015
- Designing Web Interfaces, B. Scott and T. Neil, O'Reilly, 2009.
- Designing Multi-Device Experiences, Michal Levin, O'Reilly, 2014
- Designing Interfaces, J. Tidwell, O'Reilly, 2011.
- User-Centered Design, Travis Lowdermilk, O'Reilly, 2014
- The Design of Sites by D. Van Duyne, J. Landay, and J. Hong Addison-Wesley, 2007.
**JMA 308/545 Tentative Class Schedule, fall 2017**

This is a tentative schedule and will likely change based on the needs and interests of the class.

<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Topics</th>
<th>Readings due</th>
<th>Assignments due</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>22-Aug</td>
<td>Course Orientation</td>
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<tr>
<td></td>
<td>24-Aug</td>
<td>Principle of interface design; User interface design process;</td>
<td>Design_1</td>
<td></td>
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<tr>
<td>2</td>
<td>29-Aug</td>
<td>User interface design process; User Research</td>
<td>Design_2, 3 &amp; 4</td>
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<tr>
<td></td>
<td>31-Aug</td>
<td>User–centered design; Activity-Centered Design; Iterative design; Psych Basis of HCI</td>
<td>Ch 1 &amp; 2 (Design with Mind in Mind)</td>
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<tr>
<td>3</td>
<td>05-Sep</td>
<td>User–centered design; Introduction to usability; ; Psych Basis of HCI</td>
<td>Ch 3 (Design with Mind in Mind)</td>
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<td></td>
<td>07-Sep</td>
<td>Planning, Analysis; Goal setting; Analyzing needs, Accessibility</td>
<td>Ch 4 &amp; 5; Usability_1</td>
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<tr>
<td>4</td>
<td>12-Sep</td>
<td>Planning, Analysis; Need analysis; understanding the audience; personas, Accessibility</td>
<td>Ch 6, Usability_2,3,4</td>
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<td></td>
<td>14-Sep</td>
<td>Analysis; Task analysis; understanding tasks and their context, Accessibility</td>
<td>UCD_1, 2 &amp; 3</td>
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<tr>
<td>5</td>
<td>19-Sep</td>
<td>Design; Requirements; IA; Navigation; Interaction styles; navigation models; Organization schemes</td>
<td>UCD_4 &amp; 5; DI_1-11</td>
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<td></td>
<td>21-Sep</td>
<td>Design; Flow diagrams, flow charting; personas &amp; scenarios</td>
<td>Ch 7 &amp; 8</td>
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<tr>
<td>6</td>
<td>26-Sep</td>
<td>Design: sketching and Prototyping</td>
<td>Ch 9 &amp; 10, 11</td>
<td>UID_1a-d-4</td>
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<tr>
<td></td>
<td>28-Sep</td>
<td>Design: information architecture</td>
<td>Ch 12, 13, 14</td>
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<tr>
<td>7</td>
<td>03-Oct</td>
<td>Design; Writing for the Web; Writing for usability</td>
<td>IA 1, 2, &amp; 3</td>
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<td></td>
<td>05-Oct</td>
<td>Design; Visual considerations</td>
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<td>8</td>
<td>10-Oct</td>
<td>Implementation: usability</td>
<td>RD_1</td>
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<td></td>
<td>12-Oct</td>
<td>Implementation: usability</td>
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<td>9</td>
<td>17-Oct</td>
<td>Implementation: usability</td>
<td>Usability_5-12</td>
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<td></td>
<td>19-Oct</td>
<td>Client user tests</td>
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<td>10</td>
<td>24-Oct</td>
<td>Client user tests</td>
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<tr>
<td></td>
<td>26-Oct</td>
<td>Client user tests</td>
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<tr>
<td>11</td>
<td>31-Oct</td>
<td>Design; Navigation, prototypes</td>
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<td></td>
<td>02-Nov</td>
<td>Testing &amp; Revision</td>
<td>IA_1-3 (review)</td>
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<td>12</td>
<td>07-Nov</td>
<td>Testing &amp; Revision</td>
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<td>09-Nov</td>
<td>Client Practice presentation</td>
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<tr>
<td>14-Nov</td>
<td>Client Practice presentation</td>
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<tr>
<td>16-Nov</td>
<td>Project development</td>
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<td>21-Nov</td>
<td>Thanksgiving break</td>
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<td>23-Nov</td>
<td>Thanksgiving break</td>
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<tr>
<td>28-Nov</td>
<td>Project presentation</td>
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<tr>
<td>30-Nov</td>
<td>Project presentation</td>
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<tr>
<td>05-Dec</td>
<td>Classes meet according to Wednesday class schedule</td>
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<tr>
<td>07-Dec</td>
<td>Final Examinations begin</td>
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JMA308/545 Reading Lists
All of the items below that do NOT have a Website listed can be found in Blackboard under Documents.

Design

- Design_1: 10 Principle of Effective web Design
  http://www.smashingmagazine.com/2008/01/31/10-principles-of-effective-web-design/
- Design_2: Initial Planning
  http://webstyleguide.com/wsg3/1-process/4-initial-planning.html
- Design_3: The Site Development Process
  http://webstyleguide.com/wsg3/1-process/7-development-process.html
- Design_4: Develop a Project Plan

Usability

- Usability_1: Brinck, et al. (Introduction)
- Usability_2: McCracken et al. (1)
- Usability_3: Norman, Lessons from DOET & The Psychopathology of everyday things
- Usability_4: Brinck, et al. (1)
- Usability_5: Analyze Current Site
  http://www.usability.gov/how-to-and-tools/methods/content-inventory.html
- Usability_6: Usability testing:
  www.usability.gov/how-to-and-tools/methods/planning-usability-testing.html
- Usability_7: Krug, Ch 09 - Usability testing on 10 cents a day
  http://sensible.com/Downloads/DMMTchapter09_for_personal_use_only.pdf
- Usability_8: Krug, Ch 10 - Usability testing: The movie
  http://sensible.com/downloads/DMMTchapter10_for_personal_use_only.pdf
- Usability_9: Krug, Ch 11 - On throwing the baby out with the dishes.”
- Usability_10: RITE+Krug: Combination of Usability Test Methods for Agile.
  http://www.upassoc.org/upa_publications/jus/2013may/mcginn1.html
- Usability_10a: Eye Tracking in Retrospective Think-Aloud Usability Testing
  http://uxpajournal.org/value-eye-tracking-think-aloud-usability-testing/
- Usability_11: Digital Metrics.
- Usability_12: Digital Metrics.
  www.digitalgov.gov/2014/06/27/you-have-the-data-make-the-most-of-it/

User Centered Design

- UCD_1: Van Duyne et al. (1)
- UCD_2 & 3: Van Duyne et al. (4 & 5)
- UCD_4: Brinck, et al. (2)
• UCD_5: Ch. 2: Getting to Know Users and Their Tasks: http://hcibib.org/tcuid/chap-2.html

**Information architecture**

- IA_1: Nielsen, et al. (6)
- IA_2: Nav Schemes
- IA_3: Organization Schemes

**User interface design**

- UID_1a Beauty Of Imperfection In Interface Design
  https://www.smashingmagazine.com/2017/03/beauty-imperfection-interface-design/
- UID_1b: 12 Useful Techniques For Good User Interface Design
  http://www.smashingmagazine.com/2009/01/19/12-useful-techniques-for-good-user-interface-design-in-web-applications/
- UID_1c: User Interface Design in Modern Web Applications
  https://www.smashingmagazine.com/user-interface-design-in-modern-web-applications/
- UID_1d Use Or Not To Use: Touch Gesture Controls For Mobile Interfaces
  https://www.smashingmagazine.com/2017/02/touch-gesture-controls-mobile-interfaces/
- UID_3: Theory Behind User Interface Design:
  http://www.developer.com/design/article.php/1545991
- UID_4: Principles of Interaction Design:
  http://www.asktog.com/basics/firstPrinciples.html

**Additional Readings: Design Issues**

- DI_1: Krug (2): http://www.sensible.com/chapter.html
- DI_3: First Impressions and Calls to Action: An Evaluation of Oprahstore.com
  http://www.surl.org/usabilitynews/121/oprah_store.asp
- DI_4: This Would Be Its Home Page: http://www.washingtonpost.com/wp-dyn/content/article/2006/05/31/AR2006053102190.html
- DI_5: Provide Access for People With Disabilities (Section 508)
  http://www.digitalgov.gov/2013/06/26/5-myths-about-social-media-accessibility-2/
- DI_6: Eye Movement Analysis of Text-Based Web Page Layouts:
- DI_6a: How do Users View Search Results Presented in a Grid Layout?

- DI_7: Eye Movement Patterns on Single and Dual-Column Web Pages

- DI_8: The Effect of Website Typeface Appropriateness on the Perception of a Company's Ethos.

- DI_9: Exploring iPad Usage by Healthcare Professionals in a Pediatric Hospital.

- DI_10: iPad Usage Patterns On-the-Go and at Work.
  http://surl.org/ipad-usage-patterns-on-the-go-and-at-work/

- DI_11: Dive Into Accessibility
  http://diveintoaccessibility.info/