Instructor: Luz Marina Quiroga

Class meetings: Wednesday, 9:30 a.m. - 12:10 pm
Bilger 319

Office hours: TBA

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web site DisCourse: ICS691-05
Topics on software: Information Architecture

Course Description

Information Architecture is a field dealing with the human centered design of web sites. As architects and engineers prepare blueprints of the building they construct, information architects build a sketch of a website based on users requirements and combine functionality, aesthetic, and usability elements.

Although there is no consensus about the scope and boundary of the information architect's job, it is considered that the information architect "clarifies the mission and vision of the site, balancing the needs of its sponsoring organization and the needs of its audience; determines what content and functionality the site will contain; specifies how users will find information in the site by defining its organization, navigation, labeling, and searching systems; maps out how the site
will accommodate change and growth over time". (Rosenfeld Loius & Peter Morville, IA for the WWW) http://www.oreilly.com/catalog/infotecture2/

Information architects work in interdisciplinary groups whose members have a background in areas such as information organization, web development, interactive interfaces, design of searching and browsing systems, indexing and abstracting, development of taxonomies and classification schemes, system analysis, marketing, editorial and technical writing, and graphical design. The different skills of these team members are combined for the production of effective websites.

In this course you will learn about the main job of an information architect, the contributions and roles of different disciplines and professionals in web site development, the skills and techniques they have to develop in order to create organizational and navigational structures that help people to find pertinent information in a timely manner.

Course objectives

At the end of the course you will be able to:

1. Discuss some of the most important issues on web design, e.g. user needs and behaviors, navigation, searching, labeling, usability
2. Propose organization schemes and structures, taxonomies for web sites
3. Evaluate and propose design features to enhance usability of websites
4. Understand the basic of project planning and management as it applies to web information systems
5. Collaborate in a web site group team

Teaching philosophy

I believe in collaborative learning, where we all learn from each other. I also believe that students will benefit from exposure to real life situations, as it will foster their critical thinking. Working in a group helps students to improve their
communication skills, which is something highly appreciated by most organizations. I also believe that it is everyone’s social responsibility to contribute in developing solutions to some of the problems in our community. As a result, this is project-driven course -- rather than lecture-driven --, where students work as a group in real life community-oriented projects

**Course structure & activities**

This is a course where your participation and commitment will determine the success of your learning. During each class a group of students will leader the session. Activities for each class will be the responsibility of the leaders in agreement with the instructor. Leaders and instructor can provide any modification to the reading list, two weeks in advance.

Sessions will be divided in the following activities, combining theory and practice:

1. Lecture and discussion moderated by the instructor and the leader; all students should have made the assigned readings, bringing questions and comments to the class.
2. Demo, evaluation, illustration of website design issues
3. Class exercises: overview of tools for the Information Architect

**Special Topics Research**

There are many IA topics not covered in the regular schedule but that might be of interest to the class. Students will choose an advanced topic and will work in teams to analyze a selected special topic and present the analysis results to the class, including software tool demonstrations, as applicable. Students will negotiate with the instructor the theme and the schedule of presentations in order to find the time that will better complement the class matters. Instructor will make some suggestions of possible topics. The results of the special topic will be presented orally to the class during the semester, and a short paper (2-3 pages) should summarize the work done.
**Usability assignment**

Students will design a usability test. A proposal for the test and its protocol will be submitted to the instructor for approval. The proposal will include description of the subjects (type and number), elements to be tested, how they will be tested, session length, etc.

**Term Project**

Students will work in a team for the course project during the whole semester and the final product will be a documented web site prototype. Students will identify a "client" who needs to create or redesign a website. Students will meet the client in order to gather information to define the problem, identify specifications, analyze data, and come up with a website recommendation. Analysis of user needs and user-based design will be emphasized, what means that the technical solution will have to be adjusted to the client specification - requirements. Each team has to be ready to spend at least 4 hours per week working in the project. The "client" will have to be willing to meet the students frequently, facilitating their data collection and discussing their ongoing, updated, proposal. Hopefully the client will be actively involved as part of the design team. The final project report should be similar to one which would actually be submitted to a client. It should include a strategy report (Executive summary, Audience, mission and vision for the site, Research methods and results), a Project plan and diagrams of the conceptual design (blueprints, Wireframes, Content mapping and modeling) as well as metadata and controlled vocabularies to be used. The appropriateness of the solution and its justification will be the primary factors in grading. Clarity of expression (including proper use of English, aptness of illustrations, logical organization, etc.) will also be of major concern, and appearance (layout, font selection, paper, print quality, binding, etc.) will also be taken into account. Projects will be presented during the last day of the class. Examples of projects developed in other database classes will be made available. The project work can be the basis for a presentation in professional conferences. This has been the case in several previous projects where students have presented
their work in SLA, HLA and ASIST meetings; this a very valuable component of students portfolios.

**Project progress reports**
To make the task more manageable, the final project report has been broken down into three project reports (PR), written by the team. Each report will help the group to build the final project report part by part. With every project report due, students must also provide a project documentation. A project documentation refers to information collected while working on the project, such as field notes, comments, etc. After submission of each progress report each team should schedule a meeting with the instructor to discuss progress and next steps. Meetings can be held face to face, online or the team can request a conference bridge, a free service provided by UH Tel-communications; up to ten people in different locations / phones can join the bridge conference.

**Project Journals**
With each project progress report, students will turn in an INDIVIDUAL project journal. The project journals are used to evaluate the student's progress and how well each student is doing. A journal is due at the same time the project progress report is due. Since project journals are individual work, they should not be read by other team members. Therefore, each student MUST turn in his/her own journal.

**Project Poster**
The group should provide a Power Point file that will contain a single slide that summarizes your project. It can be created from the slides of your project presentation Power Point file. Creativity will be needed to make it appealing, yet still informative.

**Communication**
Communication between students, instructor and the clients will be done mostly via Discourse [http://discourse.ics.hawaii.edu/](http://discourse.ics.hawaii.edu/)

- Email: For personal e-mails use lquiroga@hawaii.edu. Please start the message subject with "IA:
● Class discussion: for each class session, a forum will be created for questions and discussions.
● Group Project discussions: each group will have a group project forum, which will be used to discuss ideas with your other group members and the client
● Special Topic discussion: each group will have a topic forum to discuss ideas and progress
● Client's Guest Account: The clients can have account on Discourse so that they can communicate with the students and provide feedback on the group projects.

Conference bridge, a free service provided by UH Tel-communications can be requested for distant group meetings; people in up to ten different locations / phones can join the bridge conference. Send your request to the instructor at least one week in advance. Other services such as skipe.com are useful.

Face to face meetings can be set by appointment.

**Grading summary:**

<table>
<thead>
<tr>
<th>Course Component</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Class participation</td>
<td>15%</td>
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<tr>
<td>Leading a class</td>
<td>15%</td>
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<td>1. Sign up for the specific session (during the first two weeks of class)</td>
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<td>2. Discuss with the instructor the format and content of each class you will be leading (at least two weeks in advance)</td>
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<td>3. Update the reading list &amp; make copies available to the class students (at least one week in advance)</td>
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<td>4. Lead the seminar: introduce the topic, bring issues, questions, comments to foster class discussion. Complement with practical work: exercise, demos, lab time, etc.</td>
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<tr>
<td>Special topic presentation</td>
<td>15%</td>
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<tr>
<td>1. Presentation</td>
<td>10%</td>
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<tr>
<td>2. Paper</td>
<td>5%</td>
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Usability assignment

1. Designing the test ........................................... DUE: Nov. 17 ..........5%
2. Testing .......................................................... DUE: Dec. 1 ..........10%

Term project: designing a web site

1. Progress report 1 / Project outline ..................... DUE: Sep. 22 ..........2%
   1. Title of the project
   2. Group members
   3. Client / Contact person
   4. Purpose of the website
   5. Audience of the website
   1. Executive summary
   2. Audience, mission and vision for the site
   3. Research methods and results
   4. Project plan
3. Progress report 3 / Conceptual design ..............DUE: Nov. 24 ..........8%
   1. Blueprints
   2. Wireframes
   3. Content mapping and modeling
   4. Controlled vocabularies / metadata
4. Individual journals (3) (due with each Progress report) .................3%
5. Final report / Prototype ..................................... DUE: Dec. 8 ..........10%
6. Presentation, poster ........................................... DUE: Dec. 8 ..........5%
7. Intrateam and client evaluations.........................DUE: Dec.8
.........5%

**Grading Scale**

| 100-98 A+ | 97-94 A  | 93-90 A- |
| 89 - 87 B+ | 86-83 B  | 82-80 B- |
| 79 - 77 C+ | 76-73 C  | 72-70 C- |
| 69 - 67 D+ | 66-63 D  | 62-60 D- |

**Late assignments:**

- With no valid excuse: the grade for the assignment will be reduced by 20% per each late day
- With a valid excuse: a fair deadline will be negotiated

**Class and participation, discussion leadership**

Full credit will be awarded only to students who have near-perfect attendance, participate meaningfully (and non-obstructively) in class and online discussions, and create an atmosphere of collegial participation when leading a discussion.

**Students with special needs**

If you are a student with a special need as defined by the Americans with Disability Act, please feel free to discuss this with me at your earliest convenience.

**Readings:**


**Recommended books:**

Garret, Jesse James (2002). The elements of users experience. New Riders Publishing; AIGA (American Institute of Graphic Arts)


Preece, Jennifer; Rogers, Yvonne; Sharp, Helen (2002). Interaction design. Beyond human-computer interaction. Wiley


**Additional readings**
Check Discourse for additional readings suggested by the instructor and / or the leaders of each session

**Course calendar. Tentative outline of topics**

**Session 1. Course logistic. Introducing Information Architecture - Aug. 24**

1. History & definition of the field.
3. Education
4. Resources

**Session 2. Introducing Information Architecture (continuation) - Aug. 31**

1. Defining Information Architecture
2. Practicing Information Architecture

**Reading**

1. Polar Bear: chapters 1, 2


**Session 3. Information use and users. User centered design - Sep. 7**

1. User information needs
2. Information seeking behavior
4. Affective behavior.
5. Designing affective interfaces.
6. User satisfaction, frustration
Reading

1. Polar Bear: chapter 3
2. The Elements of User Experience by Jesse James Garrett.
   http://jjg.net/ia/elements.pdf
3. Design of Browsing & Berrypicking Techniques by Marcia Bates.
   http://www.gseis.ucla.edu/faculty/bates/berrypicking.html
   1. Understanding users (chapter 3)
   2. Understanding how interfaces affect users (chapter 5)
   1. Don't make me think! (chapter 1)
   2. How we really use the web: scanning, satisficing, and muddling through (chapter 2)

Session 4a. Information Architecture Systems - Sep. 14

1. Anatomy of an Information Architecture
2. Organization systems

Reading

1. Polar Bear: chapters 4, 5
2. Unified Theory of Design by Nathan Shedroff
1. Designing the home page (Chapter 7)

Session 4b. Creating Information architectures - methodology - Step 1: Research - Sep. 14

1. The process of IA development: **research**, strategy, design, implementation, administration

2. Step 1: Research (system analysis)
   1. Goal: To understand Users, Content, Context
      1. Users: audience, task, needs, information seeking behavior, experience, vocabularies
      2. Content: Documents/data types, objects, metadada, volume, existing structure
      3. Context: Business goals, funding, politics, culture, technology, human resources

2. Research methods
   1. Content analysis
   2. Heuristic evaluation
   3. Benchmarking
   4. Usage statistics
   5. Search log analysis
   6. customer support data
   7. surveys
   8. Contextual inquiry (observation)
   9. Focus groups
   10. Interviews
   11. User testing

Reading

1. Polar Bear: chapter 10
2. **Don’t Listen to Users** by Jakob Nielsen.
   http://www.useit.com/alertbox/20010805.html
Session 5. Labeling systems - Sept. 21

1. Labels as contextual links
2. Labels as headings
3. Labels within navigation systems
4. Labels as index terms
5. Iconic labels

Reading

1. Polar Bear: chapter 6

   1. Mindless, unambiguous choices (Chapter 4)
   2. Omit needless words (Chapter 5)

Session 6. Navigation systems - Sept. 28

1. Embedded navigation systems: Global, local and contextual navigation
2. Supplemental navigation systems: sitemaps, site index, guides
3. Personalization and customization

Reading

1. Polar Bear: chapter 7
   1. Streets signs and breadcrumbs (chapter 6)

Session 7. Navigation systems (cont.) - Oct. 5
1. A holistic approach to navigation based on the user experience
   1. Creating profiles
   2. Thinking in scenarios
2. Qualities of successful navigation

Reading

   1. Moving in space (chapter 1)
   2. Ten qualities of successful navigation (chapter 2)
   3. Choose one of the chapters 7-12: Examples of designing navigation that works (shopping sites, community sites, entertainment sites, identity sites, learning sites, information sites)


1. The process of IA development: research, strategy, design, implementation, administration
2. Step 2: Developing the information architecture strategy.
   1. Building the bridge between research and design
   2. Writing the strategy report and the project plan
   3. Strategy report (Analysis)
      1. Executive summary
      2. Audience, mission and vision for the site
      3. Research methods and results
      4. Project plan

Reading

1. Polar Bear: chapter 11

Session 9. Search systems - Oct 19
1. search zones: audience and topical
2. indexing for audiences, by subject, recent content
3. algorithms
4. Query builders
5. Displaying results (sorting, ranking)
6. The search interface

Reading

Polar Bear: chapter 8

Session 10. Thesauri, controlled vocabularies, and metadata / Taxonomies, ontologies- Oct. 26

1. Metadata
2. Controlled Vocabularies
3. Authority files
4. Classification schemes
5. Thesauri
6. Searching thesaurus
7. Faceted Classification

Reading

1. Polar Bear: chapters 9
   http://www.sciam.com/article.cfm?articleID=00048144-10D2-1C70-84A9809EC588EF21
3. Innovation in Classification by Peter Merholz.
6. Classification discussion lists for information architect (tba)

**NOTE: November 2: No class meeting. ASIST Annual Conference**

**Session 11. Usability testing - Nov 9**

1. The subjects (type and number)
2. Where to test
3. What to test
4. Who does the testing
5. Preparation: the test protocol
6. Cost
7. Report

**Reading**


1. Keeping testing simple (chapter 9)
2. A sample test session (chapter 10)


**Session 12. Creating Information architectures - methodology - Step 3-4: Conceptual design, prototyping - Nov. 16**

1. The process of IA development: research, strategy, **design**, **implementation**, administration
2. Content Mapping and Inventory
3. Diagramming an Information Architecture
   1. Blueprints and Wireframes
   2. Content mapping and modeling
4. Controlled vocabularies / metadata
5. Prototyping

**Reading**

1. Polar Bear: chapter 12
2. *Taking a Content Inventory* by Janice Crotty Fraser.  
3. *Sample Deliverables* from Adaptive Path.  
   http://adaptivepath.com/workshops/complete/

**Session 13. Information Architecture in Practice – Nov. 23**

1. Education & Ethics
2. Building an Information Architecture Team
3. Tools & Software

**Reading**

1. Polar Bear: chapters 13, 14, 15, 16

**Session 14. Synthesis - Term project presentations - Evaluations**

**Nov. 31**

1. Case Studies
2. Stories
3. Examples

**Reading**

1. Polar Bear: chapters 20, 21