INFO-I561
Human Computer Interaction 2
Indiana University School of Informatics – IUPUI

Spring XXXX

Course Info:  OnCourse URL and section info
Instructor:  Instructor’s info
Pre-requisite:  Human-Computer Interaction 1 (I541)

COURSE SYNOPSIS
As a continuation of HCI-1 (I541), students will learn principles, methodologies and techniques for two types of core activities in human-computer interaction design: a) requirements analysis, contextual inquiry and ethnography as applied to the design of interactive systems in the social context, both for desktop and mobile user experiences; b) conceptual design for the modeling of the interactive structure of web, hypermedia and software applications. Weekly readings from course books will be integrated with academic and professional articles and online media. As a graduate class, the rhythm of the concepts covered and the project deliverables follows a quick pace, and relies on basic knowledge of human-computer interaction acquired in HCI-1. Students are strongly encouraged to take HCI-1 before enrolling in this class.

REQUIRED COURSE BOOKS
Title:  Contextual Design
Author:  Beyer, Holtzblatt
Copyright:  1998
Publisher:  Morgan Kaufmann

Title:  Rapid Contextual Design: A How-to Guide to Key Techniques for User-Centered Design
Author:  Holtzblatt, Wendell, Wood
Copyright:  2004
Publisher:  Morgan Kaufmann
Full content for Rapid Contextual Design is available online via the IUPUI Library website.

REQUIRED PAPERS AND ARTICLES
Academic articles, published papers, professional reports and media resources to be studied are made available on Oncourse or via links from this syllabus.
COURSE OBJECTIVES AND LEARNING OUTCOMES

The course enables students to learn and apply with considerable depth methods and principles for:

1) Ethnographic investigation and contextual design for interactive systems. The goal is to provide the elements to gain qualitative insights into the social context of the users and to conceive interactive systems around the needs of all relevant stakeholders. Each student will be able to acquire knowledge and practice skills related to:
   - use of contextual inquiry techniques, field investigations, work practice observations
   - observational data gathering and modeling
   - requirements elicitation and analysis
   - sampling techniques for mobile computing scenarios
   - using data to drive the exploration of innovative human-centered designs

2) Systematic design of the interactive structure of web, hypermedia and mobile applications. The goal is to provide students with a broad cultural understanding of the origins and developments of our modern conception of user experience design, and illustrate key modeling abstractions useful to master the design of complex interactive applications and ensure usability throughout the design process. Each student will be able to acquire knowledge and practice skills related to:
   - requirements-driven design and conceptual modeling of the user experience
   - information architecture design for usable and valuable human-centered systems
   - navigation and page design

By covering these areas, the course will equip the students with a solid and principled methodological knowledge and skills both to model existing interactive systems, and to create new user experiences.

SOFTWARE

No programming knowledge is required in this course. However, basic knowledge and proficiency with professional authorware/software (e.g. Dreamweaver, Flash, Fireworks), as well as Photoshop or graphics editors is strongly encouraged and will be useful for developing high-quality, professional prototypes, drawing models, design schemas.
## GRADING

### COURSE GRADE BREAKDOWN

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Class Participation</td>
<td>20%</td>
</tr>
<tr>
<td>Midterm Project Deliverables</td>
<td>35%</td>
</tr>
<tr>
<td>Midterm Presentation</td>
<td>5%</td>
</tr>
<tr>
<td>Final Project Deliverables</td>
<td>35%</td>
</tr>
<tr>
<td>Final Presentation</td>
<td>5%</td>
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</tbody>
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### GRADE SCALE

<table>
<thead>
<tr>
<th>Grade</th>
<th>Range</th>
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<tbody>
<tr>
<td>A+</td>
<td>97-100</td>
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<tr>
<td>A</td>
<td>93-96.99</td>
</tr>
<tr>
<td>A-</td>
<td>90-92.99</td>
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<tr>
<td>B+</td>
<td>87-89.99</td>
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<tr>
<td>B</td>
<td>83-86.99</td>
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<tr>
<td>B-</td>
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<td>C+</td>
<td>77-79.99</td>
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<td>73-76.99</td>
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</tbody>
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Each grade component is evaluated as follows:

### CLASS PARTICIPATION (individual grade)

The participation grade is based on the evaluation of the performance of the following activities:

- Weekly discussion points posted to Oncourse (see below)
- Participation in class discussions
- Participation in weekly team meetings
- Questions posed during midterm and final project presentations

**Weekly Discussion Points**

Each week, each student needs to complete the reading assignments for the week and post on Oncourse **one insightful discussion point (one or two paragraphs)** for each weekly reading assigned (either a book chapter, paper or report). The discussion points should demonstrate that you have studied the entire content of the reading and can describe a relevant example of a practical application, a connection with an HCI topic or event of particular relevance, a reference (with explanation) to a related resource found, a supportive argument or a counter-argument to the topics discussed in the readings.

Discussion points must be salient and demonstrate an articulate and mature perspective on the topic. Comments may come from a student’s professional/personal experience, curiosity/interest or lack of clarity regarding some theory or practice. They may also challenge the class with a problem derived from the theory and/or best practice that would force the class to reflect on the application of the theory. Each discussion point must include the page number(s) in the reading with information directly related to the discussion point.

**Discussion points must be posted on OnCourse/Messages by 4:00pm on the day of class.** Please use a subject of each posted message that indicates your name, the week, and the title of the reading assignment (e.g., Smith_WK3_Paper-Title).

Each week, **each student is expected to come prepared to engage in discussion of the reading assignments.**
MIDTERM AND FINAL PROJECTS (individual and group grades)

Weekly contribution to group project (individual grade). When working on the project deliverable and with your team, consider that each team is expected to come prepared to class with a high-quality weekly project deliverable (see Project Instructions document). It is each student’s responsibility to study the project instructions week by week, understand what is expected every week, and ask the instructor for clarification when necessary. In each weekly team activity, each student is expected to give his/her substantial contribution, which is individually graded. This individual grade is based on the evaluation of the following tasks:

- Each week, during a project meeting with the instructor, each student is expected to explain and show to the instructor an individual contribution to the team project deliverable. Lack of evidence of substantial, individual contribution to the weekly team work will result in a lower individual grade.
- Individual contributions must fit well in a coordinated effort among team members to share responsibility for the project task assigned. In the weekly project meeting with the instructor, one person from the group should provide a summary of overall status of the project.

Team project report and overall project quality (group grade). See Project Instructions document on Oncourse/Syllabus section for details on project DELIVERABLES DUE week by week and evaluation criteria.

Weekly project deliverables must be submitted on Oncourse in the respective Team Folder by class time (6:00 PM).

FINAL AND MIDTERM PRESENTATIONS (individual and group grade). This grade is based on the evaluation of:

- Individual participation in the team presentation of the midterm project. Evaluation criteria: organization/structure of the individual contribution, clarity, delivery.
- Quality of the team presentation as a whole. Evaluation criteria: overall organization/structure of the presentation, timing, cohesiveness.

General note on individual and group grading:

The instructor reserves the right to give distinct, individual grades to any group activity in the absence of evidence of an individual’s substantial contribution to the group activity.
SUGGESTED SUCCESS STRATEGIES (based on evidence from past years)

- Every week, the team meets at least once (preferably twice) prior to the due date to work together and to share/coordinate individual contributions.
- For every project meeting with the instructor in class, the team brings evidence of the weekly deliverable produced.
- Each student is responsible to share responsibility fairly among the group and to resolve internal conflicts.
- If major conflicts within the group arise, and students are not able to solve these conflicts, the whole group must meet the instructor to devise a working strategy.
- Reflect, apply and think how to integrate the course theory and lectures into your project ideas and strategies.
- Keep looking and studying external resources, including websites, magazine, newsletters, academic papers (see HCI Resources at the end of the Syllabus), as well as research and market trends in HCI, interactive technologies and computing. Maturely and critically integrate this input in your project ideas and strategies.
- Know and be familiar with the work of each individual student in your team. Show a mature and professional attitude in sharing responsibility.
- Pay attention to details, without losing the big picture, in your project deliverables. Balance rigor, craft, saliency and professional communication in your documentation, interface design and technological implementation.

OTHER POINTS TO NOTE FOR SUCCESS

1. **Rigor:** This course will move along at a quick pace, being organized around a collection of weekly chapter readings and design exercises related to HCI theory and application.

2. **Integration of New Concepts:** This course covers aspects that are conceptually more advanced than those covered in HCI-1. This course therefore requires that students acquire terminology and conceptual tools that are less intuitive than elementary HCI practice and apply these in detail in the project work.

3. **Creativity:** This course demands not only a weekly response to assignments, but also some degree of creativity in product design and concept development. This is actually one of the more exciting and dynamic aspects of the course, because students have a chance to develop products for which they can apply much of the theory gained during the weekly assignments.

4. **Accountability:** Assignments and projects are not merely for learning but also a test of your character whereby diligence and accountability are required.

5. **Cooperation and Communication:** Cooperation with the instructor is vital for maintaining a high degree of productivity and harmony in weekly assignments and during class time. Oral and written communication is an important part of this course. We will have weekly open discussion sessions and project reports provide a way to explain in detail the theoretical and practical aspects of the project.
POLICIES FOR ATTENDANCE & ASSIGNMENT/PROJECT DEADLINES

1. **Missing class WILL impact your grade.** All in-class students are allowed two (excused or unexcused) absences before their grade will be affected. In other words, whether you are sick or have personal problems or issues for missing class, it will amount to the same. Missing class means you are not present for the whole or majority of the session. The grade reduction policy works in this way.
   - On the third missed class, your final grade will drop 10 points (regardless of the reason), and 10 additional points thereafter for each additional class missed.
   - Being absent during class presentations will also negatively affect the individual presentation grade.
   - Missing a weekly in-class project meeting with the instructor will be considered an absence.

2. **Responsibility for due dates and related materials:** All weekly assignments are the student’s responsibility. If class is missed, the student is still responsible for the assignment, as well as to find out what was covered in class, including any new assignments or variations to an existing assignment. Assignment deadlines are outlined in this syllabus or syllabus supplemental documents provided on Oncourse. Also, weekly assignment deadlines should be met. For the purpose of maintaining an equal and fair evaluation of each student’s work, no student will receive special treatment. The following rules will apply to this course:
   - All assignments must be submitted through Oncourse at the designated time as stated on the project description document or as communicated via email.
   - **Grades on all project assignments handed in late will be reduced 10 points for every day late** (24 hours from the due date and time). For example, if the assignment is due at 6:00 PM on the due date and it is post-marked 6:01PM, it will be reduced automatically by 10 points.
   - **For Discussion Points, the grade policy for late deliveries is as follows:**
     - Reduction of 5 points if Discussion Point is posted within 24 hours of the due date and time.
     - Reduction of 10 points if Discussion Point is not posted within 24 hours of the due date and time.
   - Incompletes will NOT be issued except under very extreme personal conditions that have been reviewed by the instructor and in some cases in consultation with the Dean’s Office.

UNIVERSITY POLICIES

1. **University Attendance Policy:** Attendance is required. The University regulations state: “Students are expected to be present for every meeting of the classes in which they are enrolled.” IUPUI faculty are required to submit to the office of the Register a record of student attendance through the semester, on which they will take action if the record conveys a trend of absenteeism. As a result, **ATTENDANCE WILL BE TAKEN IN ALL CLASSES.** An Attendance sheet will be passed out in class for each student to sign their name. If you do not sign your name while in class you will be marked absent. The instructor is not expected to remember who attended when, so signing the sheet while in class is important. Signing the attendance sheet for another student is absolutely prohibited. Any student found doing so will be in violation of university policies on ethics and/or conduct.

2. **Bringing your children to class:** University Policy states that: “Children are not permitted to attend class with parents, guardians, or childcare providers. This conduct has the effect of unreasonably interfering with a student’s work or academic performance creating an offensive learning environment.” “A student must not violate course rules as contained in a course syllabus, which are rationally related to the content of the course or to the enhancement of the learning process in the course.” [Code of Student Rights, Responsibilities, and Conduct, page 29]

3. **Academic Dishonesty / Integrity / Plagiarism:** Using another student’s work on a project or assignment, cheating on a test, or any other form of dishonesty or plagiarism will result in a grade of zero on that assignment and possibly an "F" in the course, and will be referred to the Dean of Students. All students should aspire to high standards of academic honesty. This class encourages cooperation and the exchange of ideas. For further reference, students may see: [http://www.iupui.edu/code/](http://www.iupui.edu/code/).
4. **Values and ethics:** Profanity or derogatory comments about or towards the instructor or any member of the class will NOT be tolerated. Violating this rule will result in a warning and if the offense continues, administrative action will be taken.

5. **Code of Student Rights, Responsibilities and Conduct:** All students are responsible for reading, understanding, and applying the Code of Student Rights, Responsibilities and Conduct of IUPUI. (students can access www.iupui.edu/code for further information regarding the above points)

6. **Disabilities Policy:** In compliance with the Americans with Disabilities Act (ADA), all qualified students enrolled in this course are entitled to "reasonable accommodations." Please notify the instructor during the first week of class of any accommodations needed for the course. Students with learning disabilities must provide written verification for this policy to be recognized.

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**MISSION & STATEMENT OF VALUES**

The Mission of IUPUI is to provide for its constituents excellence in Teaching and Learning, Research, Scholarship, and Creative Activity, and Civic Engagement. With each of these core activities characterized by: 1) collaboration within and across disciplines and with the community, 2) a commitment to ensuring diversity, and 3) pursuit of best practices. IUPUI’s mission is derived from and aligned with the principal components – Communities of Learning, Responsibilities of Excellence, Accountability and Best Practices – of Indiana University’s Strategic Directions Charter.

IUPUI values the commitment of students to learning; of faculty to the highest standards of teaching, scholarship, and service; and of staff to the highest standards of service. IUPUI recognizes students as partners in learning. IUPUI values the opportunities afforded by its location in Indiana’s capital city and is committed to serving the needs of its community. Thus, IUPUI students, faculty, and staff are involved in the community; both to provide educational programs and patient care and to apply learning to community needs through service. As a leader in fostering collaborative relationships, IUPUI values collegiality, cooperation, creativity, innovation, and entrepreneurship, as well as honesty, integrity, and support for open inquiry and dissemination of findings. IUPUI is committed to the personal and professional development of its students, faculty, and staff and to continuous improvement of its programs and services.
BIBLIOGRAPHY AND ADDITIONAL RESOURCES

A good starting point for additional references on the topics covered in the class is the References section of the assigned academic papers and of the required textbook. For an extensive HCI bibliography repository, see:

- [hcibib.org](http://hcibib.org)
- ACM Digital Library
- IEEE Digital Library

CONTEXTUAL DESIGN RESOURCES


THE PROFESSIONALS' PERSPECTIVE

Selected web, interaction design, and usability-related newsletters, blogs, and sites are listed below. Students may elect to subscribe to the newsletters and periodically checking other resources to follow trends in the field of HCI.

- Jakob Nielsen’s website: [http://www.useit.com](http://www.useit.com)
- User Interface Engineering and Jared Spool: [http://www.uie.com](http://www.uie.com)
- Online Marketing and Design: [http://blog.clickz.com](http://blog.clickz.com)
- Interaction Design at Cooper: [http://www.cooper.com/journal](http://www.cooper.com/journal)
- Usability Professionals’ Association: [http://www.upassoc.org](http://www.upassoc.org)

ACADEMIC CONFERENCES AND JOURNALS

- *Interactions* magazine: Full papers are available from the ACM Digital Library, which can be accessed via the IUPUI library site. Magazine website: [http://interactions.acm.org](http://interactions.acm.org)
- CHI Proceedings Series: The proceedings of the premiere annual conference in Human-Computer Interaction are available from the ACM Digital Library that can be accessed via the IUPUI library site.
<table>
<thead>
<tr>
<th>Date</th>
<th>Reading Assignments Due</th>
<th>Class Activity</th>
<th>Project Deliverables Due</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Week 1</strong> January 9</td>
<td>None.</td>
<td>Introductory lecture. Team assignments.</td>
<td>None.</td>
</tr>
<tr>
<td><strong>Week 2</strong> January 16</td>
<td><strong>Contextual Design</strong>: Chapters 1 and 2 &lt;br&gt;<strong>Paper</strong>: Customer-centered design for mobile applications (OnCourse/Resources/Papers) &lt;br&gt;<strong>Paper</strong>: Stakeholders Selection (OnCourse/Resources/Papers)</td>
<td><strong>NO CLASS</strong> &lt;br&gt;(Martin Luther King Jr. Holiday)</td>
<td>None.</td>
</tr>
<tr>
<td><strong>Week 3</strong> January 23</td>
<td><strong>Contextual Design</strong>: Chapters 3 and 4 &lt;br&gt;<strong>Rapid CD</strong>: Chapter 4</td>
<td>Lecture and reading discussion. Project advising.</td>
<td>Preliminary project goals, stakeholders and definition of the field work setting.</td>
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<tr>
<td><strong>Week 4</strong> January 30</td>
<td><strong>Contextual Design</strong>: Chapters 5 and 6 &lt;br&gt;<strong>Paper</strong>: Using video to re-present the user (OnCourse/Resources/Papers)</td>
<td>Lecture and reading discussion. Project advising.</td>
<td>Fieldwork – Data Collection results I</td>
</tr>
<tr>
<td><strong>Week 5</strong> February 6</td>
<td><strong>Contextual Design</strong>: Chapters 7, 8 and 9 &lt;br&gt;<strong>Rapid CD</strong>: Chapter 8</td>
<td>Lecture and reading discussion. Project advising.</td>
<td>Fieldwork – Data Collection results II</td>
</tr>
<tr>
<td><strong>Week 6</strong> February 13</td>
<td><strong>Contextual Design</strong>: Chapters 11 and 12 &lt;br&gt;<strong>Paper</strong>: Interactive dialogue model: A design technique for multichannel applications (OnCourse/Resources/Papers)</td>
<td>Lecture and reading discussion. Project advising.</td>
<td>Data Analysis and Requirements Modeling</td>
</tr>
<tr>
<td><strong>Week 7</strong> February 20</td>
<td><strong>Contextual Design</strong>: Chapter 13 and 14 &lt;br&gt;<strong>Paper</strong>: As we may think (OnCourse/Resources/Papers)</td>
<td>Lecture and reading discussion. Project advising.</td>
<td>Conceptual Design</td>
</tr>
<tr>
<td><strong>Week 8</strong> February 27</td>
<td><strong>Paper</strong>: Ethnography in the field of design (OnCourse/Resources/Papers)</td>
<td>Reading discussion. Project advising.</td>
<td>Internal Evaluation and Interactive Prototype</td>
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<tr>
<td><strong>Week 9</strong> March 5</td>
<td>None.</td>
<td><strong>Midterm Project Presentations</strong> (including user’s feedback)</td>
<td></td>
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<tr>
<td><strong>Week 10</strong> March 12</td>
<td><strong>SPRING BREAK (NO CLASS)</strong></td>
<td><em><strong>Midterm Project Report Due</strong></em> (see delivery instructions in Project Instructions document)</td>
<td></td>
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<tr>
<td><strong>Week 11</strong> March 19</td>
<td><strong>Paper</strong>: Diary study of mobile information needs (OnCourse/Resources/Papers) &lt;br&gt;<strong>Paper</strong>: Voice-mail diary study (OnCourse/Resources/Papers)</td>
<td>Reading discussion. Final Project discussion</td>
<td>None</td>
</tr>
<tr>
<td><strong>Week 12</strong> March 26</td>
<td><strong>Paper</strong>: Mobile probes (OnCourse/Resources/Papers)</td>
<td>Reading discussion. Project advising.</td>
<td>Fieldwork results I</td>
</tr>
<tr>
<td><strong>Week 13</strong> April 2</td>
<td><strong>Audio Podcast</strong>: Designing for the Paradox of Choice: An Interview with B. Schwartz (transcript available here). &lt;br&gt;<strong>Online article</strong>: The search for seducible moments</td>
<td>Reading discussion. Project advising.</td>
<td>Fieldwork results II</td>
</tr>
<tr>
<td><strong>Week 14</strong> April 9</td>
<td><strong>Paper</strong>: Branding and “infosuasive” design (OnCourse/Resources/Papers)</td>
<td>Reading discussion. Project advising.</td>
<td>Data Analysis, Requirements and Conceptual Design</td>
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<tr>
<td><strong>Week 15</strong> April 16</td>
<td><strong>Bill Buxton’s Video Talk – Sketching User Experiences</strong></td>
<td>Video discussion. Project advising.</td>
<td>Conceptual Design (continued)</td>
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<tr>
<td><strong>Week 16</strong> April 23</td>
<td>None.</td>
<td>Final Project Presentations</td>
<td></td>
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<tr>
<td><strong>Week 17</strong> April 30</td>
<td>None.</td>
<td>Final Report Q&amp;A meetings, team by team</td>
<td>Team discussion and feedback on the project report as it is being finalized.</td>
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<td><strong>May 4</strong></td>
<td></td>
<td><strong>Final Project Report</strong></td>
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May 11: Grades available on OneStart