INFM 605: Users and Use Context Fall 2013

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Office: Hornbake library building, South Wing, 2117H
Office hours: By appointment

Classroom location and meeting time: HBK 1112, Tuesday 6:00 – 8:45pm

Course Website: http://elms.umd.edu (Note: This syllabus is subject to change. Please refer to the course website weekly schedule for the most up to date schedule.)

Course Goals
The goal of this course is to examine emerging trends, issues, and theories in the study and evaluation of users. It will introduce you to the techniques necessary to study and understand user behavior and needs so that you can develop effective solutions to information-related problems. The course will cover user centered research techniques such as interviewing, focus groups, field visits, diary studies, and surveys. The course will also provide you with an overview of analysis techniques for user research and prepare you for disseminating your results effectively. Throughout the course, we will discuss information technologies, however the focus will be on the user rather than the system or technology itself. To effectively learn the user research techniques, students will form groups and complete a user experience research project on a topic of their choosing.

Course Outcomes
Students who complete this course should develop the following skills and capabilities:

• Understand how to identify user needs and preferences
• Articulate how information technology can be designed and managed to meet user needs
• Conduct user experience research by completing an individual project as part of a larger group project
• Work in teams effectively
• Prepare a team work proposal
• Use a variety of research methods to understand users and their work contexts
• Present findings of user studies effectively through writings, visuals, and presentations
• Summarize and apply research findings to real-world problems
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<th>Week</th>
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<td><strong>Course overview and Introduction</strong></td>
<td>Complete Group Formation Survey</td>
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<td>Sept 10</td>
<td><strong>Why Study Users?</strong></td>
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<td>- <em>Observing the User Experience</em>, Preface and Chapters 1&amp;2</td>
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<td><strong>Research Planning and Keeping a Competitive Edge</strong></td>
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<td>Sept 24</td>
<td><strong>Getting Research Off the Ground: Recruitment and Interviewing</strong></td>
<td>Group Project Goals</td>
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<td>- <em>Observing the User Experience</em>, Chapters 5&amp;6</td>
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<td>Oct 1</td>
<td><strong>User Research Techniques: Focus Groups, Contextual Inquiry, Task Analysis and Card Sorting</strong></td>
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<td>User Research Techniques: Field Visits, Diary Studies, and Sketching</td>
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<td>User Research Techniques: Usability Tests and Surveys</td>
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<td>Global Research and Making the Most of Existing Research</td>
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<td>Using Automated Data Gathering and Data Analysis Techniques</td>
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<td>Nov 5</td>
<td>Presenting Your Results in Reports and Presentations</td>
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Evaluation Criteria

The following assignments will be due throughout the semester:

- Group Project Proposal (10%)
- Individual Report (15%)
- Group Project Report (25%)
- Group Project Presentation (15%)
- Peer Evaluation Score from Group Members (10%)
- Individual Exercises (15%)
- Attendance and Participation (10%)

Required Textbook

- This textbook can be purchased online for a reasonable price. See here for Amazon link: http://goo.gl/lsgcl
- Additional readings will be made available online by the instructor via the course website as the course progresses.

SCHEDULE (SUBJECT TO CHANGE)

The following schedule lists the major topics and assignment due dates, which will be subject to change throughout the semester.

Academic Integrity

The University of Maryland, College Park has a nationally recognized Code of Academic Integrity, administered by the Student Honor Council. This Code sets standards for academic integrity at Maryland for all undergraduate and graduate students. As a student you are responsible for upholding these standards for this course. It is very important for you to be aware of the consequences of cheating, fabrication, facilitation of academic dishonest, and plagiarism. For more information on the Code of Academic Integrity or the Student Honor Council, please visit http://www.shc.umd.edu.

Students with Disabilities

Please let the instructor know at the beginning of the semester if you have any kind of physical or learning disability that will affect your coursework. The instructor will then contact the relevant services at the University’s Disability Support Services to work out
appropriate accommodations for you. Please refer to the DSS website for more details: http://www.counseling.umd.edu/DSS/.

Emergency Preparedness:

Please refer to the website: http://www.umd.edu/emergencypreparedness/ for the state of the campus. If campus is closed, information about rescheduling course activities will be provided via email once the campus has re-opened.

Attendance policy

Attendance is extremely important in this course, as much of the learning that will occur is based on in-class activities and discussion. Attendance will be taken at each class and will influence each student’s class participation grade. Allowances can be made for special circumstances such as illness (self or dependent), religious observances, and other compelling circumstances beyond the student’s control (see the University’s attendance policy at http://www.testudo.umd.edu/soc/atedasse.html). Please contact the instructor as soon as you know (or suspect) that you will not be able to attend.

Late Assignments & Grading Procedures

It is important that assignments are turned in on time since we will typically be discussing them as a class once they are submitted. A typed hard copy of the assignment is due at the beginning of class, unless otherwise indicated. If there are extenuating circumstances (e.g., personal illness, death in the family) that make it impossible to turn in an assignment please let the instructor know (i.e., before the assignment is due) so that appropriate accommodations can be made. The general policy is that late work will have 10% of its total grade deducted per calendar day, starting on the same day that it is due. Accepting late work and assigning late penalties is at the instructor’s discretion.

Class Participation

Students are expected to fully participate in all class activities. You should come to class prepared to discuss the assigned readings as well as to provide your perspectives on these readings. You will also be expected to participate in small group discussions and other in-classroom activities. The effectiveness of the course depends on the quality of your participation and willingness to internalize the skills and concepts covered in the course and efforts to apply them to real-world settings.

CourseEvalUM:

Helping to evaluate courses is a part of your responsibility as a member of the University of Maryland community. All feedback you provide is confidential and important and it will help improve teaching and learning at the University as well as the tenure and promotion process. Further, all instructors and academic administrators can only view submitted feedback after grades have been entered. CourseEvalUM will be open for fall semester classes in December at http://www.courseevalum.umd.edu. Students with no “Pending”
evaluations in their Evaluation Dashboard will have access to the aggregate results of other course evaluations online.
Group Project Proposal (Due: October 8 at the start of class)

Scenario:

A cellular network provider (e.g. AT&T, Verizon, T-Mobile etc.) has hired your consulting company to make recommendations on how to improve the user experience around mobile Internet and particularly, to find out how users perceive mobile Internet performance (e.g. speed, data caps, etc.) on their network and what problems they have, if any. You are contracted to conduct user research on what users do online using their mobile networks, how they perceive Internet performance as well as the problems they have, all using appropriate user research techniques. Your group can focus on one aspect of mobile Internet performance, e.g., the use of data or broadband speeds and its effects on the mobile Internet user experience. You are expected to combine your individual portions of user research together to form a coherent picture of how mobile Internet performance affects users on this cellular network. The final deliverable is a comprehensive report of the strengths and weaknesses of this company’s mobile Internet performance and how it affects the user experience of the company’s mobile Internet users. Your report should also include implications of your results such as potential improvements for the company’s mobile Internet performance. This might include design suggestions for tools to help users monitor and control mobile Internet performance, potential improvements to the Internet packages they offer that are more tailored to user needs and the performance they experience, or even conducting more user research into the problems you uncover. You are expected to present your final results to the execute board of the cellular network provider who are mostly interested in the bottom line: how to grow the business by attracting and retaining mobile Internet users.

Requirements:

The first requirement of the project is to form a group of 5 students to complete the group project that has the following deliverables:

- Group project proposal
- Individual reports
- Final group report
- And final group presentation.

For your first assignment, you will meet as a group to determine which cellular provider has hired you and what aspects of mobile Internet performance you will study and to decide who will conduct each user research technique. Each group member should use a different user research technique. You will then work on a project proposal that describes the work that you intend to perform and why it is important (see Goodman et al. Chapter 5 for more information). The project proposal serves two main purposes:
1. Introduce what you are doing to others who are interested in the project (e.g., funding agencies, collaborators, team members etc.)
2. Help you think through your project goals and plan in a systematic way to make the most efficient use of time and resources

Proposal Report:

The project proposal should be written for the cellular network company that hired you and for your own team to use is as a blueprint of the work that is to be conducted throughout the semester. You should use language that is easy to understand and clarify all terms for those not familiar with user studies. The project proposal should be between 6-8 pages single spaced and no more than 10 pages in total.

You should incorporate the following sections into your project proposal although your proposal organization may vary:

1. **Summary of the project.** Provide a one-paragraph abstract that summarizes the entire project [Hint: You may want to write this summary last after you’ve figured out what you’re doing and when] **1 point**

2. **Introduction & Background.** Introduce the project in a broader context. For example, describe the cellular network provider that you are working for, what is important to them, what they do, and who their competitors are. If you are evaluating a particular aspect of mobile Internet performance, describe what that is, why it is important for mobile Internet users i.e. how it affects the user experience and how it can be monitored and managed. Also, describe relevant details to this cellular network providers mobile Internet user such as what Internet packages they offer and how they compare to their competitors, including the strengths and weaknesses of their mobile Internet packages. Remember to cite relevant literature using the American Psychological Association (APA) style of reference (http://www.lib.umd.edu/ues/guides/citing-apa) **2 points**

3. **Project Goals & Questions.** Discuss the goals of your project. What do you aim to learn about mobile Internet users on the cellular network provider you’ve chosen to study? Why will the results be of interest to the cellular network provider who hired you? What
research questions are you intending to answer? [Hint: Chapter 4 in Goodman et al. offers a process by which to map out your research goals and questions] 2 points

4. **Work Plan.** Describe how you plan to achieve your goals and how you will answer your research questions. Detail the research methods you are planning to use, why you have chosen them and what you intend to learn from each stage of user research. Ensure that your work plan fits in with the assignment deadlines and that individual members have their projects coordinated to input into the group deliverables. For each method used, account for time for recruiting users, collecting data, and analyzing the results. 3 points

5. **Schedule and Project Management.** Provide a schedule of which group member will work on each portion of the project, when the different parts of the project will occur including the tasks for each part, the milestones, and deliverables. Describe which team member will perform each task and estimate the number of hours they will take for each task. Balance the schedule so that each team member shares the workload while leveraging each team member’s strengths. Creating a Gantt chart will help to summarize your work plan. Finally, describe how you will coordinate your activities as a group (e.g., what technologies you will use to communicate, how often you will meet etc.).

**Tips and Notes:**

- In total, this assignment is worth **10 points** of your final grade.
- Choose the cellular network provider and which aspect of mobile Internet performance you will focus on wisely. You need to conduct research with mobile Internet users who use this cellular provider who also have experiences with this aspect of mobile Internet performance since you will be “studying” them using the research techniques learnt in class. Therefore, you should choose a cellular network provider where you can gain easy access to users on this network who are willing to talk about their mobile Internet experiences within the course of the semester.
- Each group member should contribute to the overall project equally and you will be asked to do a peer evaluation of your group members at the end of the semester.
- You will receive the same grade as your group members for all group assignments which will form 50% of your overall grade.
Individual Report (Due: November 5 at the start of class)

Purpose: Gain experience in using a particular user experience research method.

Instructions: Each individual group member must choose a different method and study different users (e.g. if one of your users participates in a focus group for one group member, that same user should not be interviewed or studied by another group member using a different research technique). Please select one of the methods outlined below, unless you get special permission from the instructor to use another method discussed in the textbook. You are expected to prepare the materials, conduct the research, and write up the results individually. You are allowed to get feedback on your drafts (e.g. report, interview transcripts etc.) from other group members.

For your individual assignment you need to submit the following things:

1) Your own written answers to the list of questions below. They should be answered in no more than 4 single-spaced pages total (not including the appendices).
   a) Why did you choose this particular research technique and what did you hope to learn? What procedure did you use to conduct your research and why? (1 page)
      i) Include details on the entire procedure used to conduct the research including how you recruited users, collected/recorded the data, analyzed the data, and arrived at your results? (1 page)
      ii) Describe the limitations of your chosen technique.
   b) What were your key findings? What did you learn from your analysis?
      i) Summarize and organize your raw data into a meaningful collection of findings (In the interests of space, choose the most important 2-3 findings) and evidence that supports them. (1 page)
   c) What are the implications of your findings? (1 page)
      i) Discuss your conclusions and the recommendations you will make about the software product you are studying based on your findings.
      ii) Make sure you justify any recommendations you make.
   d) What did you learn about user research by using this research technique? What suggestions do you have for others applying similar methods? (1 page)
      i) Unlike the first 3 pages, this answer should not be written for your client as the audience but for the instructor.
2) **Appendix 1.** Create at least one visual representation of your findings. You can discuss this representation in 1a. (e.g., table, chart, mental model, sequence diagram, photograph etc.)

3) **Appendix 2.** Include any materials you used to prepare for your user research (e.g., interview or focus group questions, user study protocol, diary form, pre-survey questions)

4) **Appendix 3.** Include one sample of the data you captured or the analysis you performed (e.g., one interview transcript or detailed notes, usability notes, contextual inquiry notes and diagrams or photos, focus group notes, usability study notes, summary file with answers to all the survey questions).

**Choose 1 of the Following User Research Methods:**

*For each of these methods, remember to take detailed notes, or record and transcribe the interview/focus group etc. as appropriate. You will need to turn in these notes, transcripts, or aggregated survey data as part of the individual assignment.*

- **Interviews (3):** Develop and interview guide and conduct at least 3 semi-structured interviews that last from 20-30 minutes with 3 different users. These may be conducted in person or telephone/Skype/Google Hangout. You may take detailed notes during the interview but it’s advisable to record the interview and later transcribe the text.

- **Contextual Inquiry Interviews (2):** Conduct at least 2 contextual inquiry sessions with different people who use the target product on a regular basis. These interviews must be conducted in person. Each session should last from 40-60 minutes and consist of observation and interviews. You should take detailed notes on the observations and answers to the interview questions.

- **Usability Tests (2):** Conduct at least 2 usability tests with different users using a task list. These can be done in person and will likely take between 30-40 minutes. For each user, have them follow your task guide and take detailed notes on their performance of the tasks such as time to complete the task, number of mouse clicks etc.

- **Focus Group (1):** Develop a focus group script and conduct one in-person focus group. It will take approximately 1 hour to complete. Ensure that you have at least 4-6 users in your focus group. You may take detailed notes or record and transcribe the focus group.

- **Survey (10):** Develop a survey of at least 10 questions and have at least 10 users complete the survey. If you have more than 10 users complete the survey, that is desirable but 10 is the minimum. The survey may be conducted via the web, email, phone, or paper.
• **Diary Study (2):** Develop and conduct at diary study for at least a 2-week period with at least 2 individuals. Diaries can be filled out on paper, via email, or on the web.

**Evaluation:** The Individual Report will represent **15 points** of your final grade.
Group Project Presentation (Due: December 3 at the start of class)

Purpose:
Effective presentation skills are essential for any user researcher. This project will give you a chance to hone your presentation skills and receive feedback from your instructor and peers. The project will also give you a chance to create a visually appealing handout to accompany the presentation.

Instructions:
Each group will be given 30 minutes to present their project and answer questions. You should imagine that your group is a company of consultants who are presenting their work to an interested party (e.g., a board of directors, a product leader, or some other group relevant to your particular project at the cellular network provider that hired you). Each individual on the team will need to present a substantial part of the time, but it is not necessary to evenly divide up the time. You may use any technology that we have available in the room (e.g., the computer projector, white-board, clickers).

Each presentation should cover the same material that is in your group report in a form that is appropriate for a live presentation. It should include the following details but you are free to organize the presentation in any way you want and there is no need to use these sections as headers:

• Project Goals/Purpose (why you undertook the project)
• Background & literature review
• Methods (what you did)
• Findings (what you discovered)
• Recommendations
• Conclusions

In addition to the presentation, each group should provide a 1-page handout (front and back side is acceptable) to the class. The handout should be persuasive in nature, with the purpose of driving home some of the key findings, as well as summarize your work.

Evaluation: This assignment represents 15 points of your final grade. The entire group will receive the same score on this assignment.
Points on the assignment will be awarded as follows:

- 40% - Creativity of presentation, persuasiveness of arguments, and attentiveness/engagement of audience
- 10% - Visual appeal of presentation as a whole
- 20% - Time management; organization; loud, clear speaking voices;
- 10% - Ability to answer questions effectively
- 20% - Handout (content, as well as visual appeal)
Group Project Report (Due: December 10 at the start of class)

Purpose:
Your final report is the main deliverable that your group will produce. It should describe all the research that you have conducted and any recommendations for the cellular network provider that hired you. The purpose of this assignment is to give you practice in creating a professional business report. (See Goodman et al. Chapter 17 for a general description of user study reports.)

Instructions:
You should write the report for the same audience as you addressed in your proposal (see Group Project Proposal Description) i.e. the cellular network provider that hired you as opposed to the instructor for this course. Your report should be written in an easy to understand and simple language, be visually engaging, and honestly reflect the work that you did along with any suggestions you have related to the project. You are welcome to re-use and modify sections from your proposal in the final report (i.e., introduction & background; goals) There is no page limit on the final report but a reasonably sized report should be approximately 10-15 pages single spaced. Be succinct and to the point. Use appendices to include examples of research instruments such as surveys, interview questions, and so forth.

The following elements must be incorporated into your final report, although the report does not need to follow the same organization as what is listed here:

1. **Executive Summary.** At the beginning of your report, provide a one-page summary of the entire project. Highlight the main findings and conclusions and how they relate to the goals of the project but also mention briefly the methods that you used to produce the findings. This summary should include all the major points you want to make in the report but save the details for the body of the report. 4 points

2. **Introduction & Background.** Introduce the project in a broader context. For example, describe the cellular network provider you are working for, what is important to them, what they do, and who their competitors are. If you are evaluating a particular aspect of mobile Internet performance and its effects on their user experience, describe what that is (e.g. a data cap, broadband speeds, bandwidth etc.) and why it is important for mobile Internet users, how it is tracked and how it affects the user experience, and if relevant, how it compares on other cellular providers networks. Remember to reference published material
on related topics in a brief literature review section, again using the APA reference style. 2 points

3. Project Goals & Questions. Discuss the goals of your project. What do you aim to learn about the cellular network provider that you’ve chosen to study and their mobile Internet users’ user experience? Why will the results be of interest to the company who hired you? What research questions are you intending to answer? 2 points

4. Methods. Describe the user research methods you used, why you chose these methods, and how you implemented them (i.e., how many interviews did you conduct, with what types of people did you interview, how did you recruit them, what protocol did you use, what were the major topics you discussed, how did you analyze the data, etc.). You can put some of the details in an appendix to keep the narrative flowing, but make sure to include all the details somewhere in the report. 3 points

5. Findings. Present the findings from your study. This should include a narrative describing the findings (including direct quotes), as well as visual representations as appropriate (models, graphs, tables, etc.). Make sure your findings are supported by the data and that you explain how you derived them from the data. 6 points (4 for narrative descriptions and 2 for visualizations)

6. Discussion and Recommendations. Describe the implications of your findings and any recommendations. Which findings are most/least important? Are there overarching concerns or promising directions to explore for future research? It is not necessary to have a solution for every problem you identified but you should provide general guidance and principles that others can use when developing specific solutions. 4 points

Other Grading Criteria:
Visual appeal of report: 2 points
Writing clarity, grammar, spelling, etc: 2 points

In total the assignment is worth 25 points of your final grade
Peer Evaluation Score from Team Members (Due: December 3 at the start of class)

Purpose:
Give group members incentives to work well together.

Instructions:

At the end of the semester, each student will have a chance to comment on, and rate the other members of their group. The instructor will hand out a form that you will complete where you will rate each member of your group’s level of effort and capabilities on a score of 1-10 with 10 being the highest. You may use written comments as well. The instructor will use these comments and scores to come up with an appropriate Peer Evaluation Score for each individual. All comments provided will be kept confidential and not shared with team members or anyone else.

Evaluation: Your Peer Evaluation Score represents 10 points of your final grade.
Individual Exercises

Purpose:
To encourage engagement with readings and provide immediate assessment and feedback on material covered in them.

Instructions:
At the beginning of certain class periods (not specified ahead of time), an individual exercise will be provided that assesses your understanding of the reading material. You may use notes that you have taken, but not the course reading material itself to complete the exercises.

Evaluation: Individual Exercises will account for 15 points of your final grade.