To Provost 2/24

UWUCC Appr 2/21/06
Senate Info 3/28/06

05-44

Undergraduate Distance Education Review Form
(Required for all courses taught by distance education for more than one-third of teaching contact hours.)

Existing and Special Topics Course

Received
FEB 17 2006
Liberal Studies

Course: LBST499-Interactive Products and Usability

Instructor(s) of Record: Rose Shumba

~~Phone: 724-357-3166~~ ~~Email: shumba@iup.edu~~

Step One: Proposer

A. Provide a brief narrative rationale for each of the items, A1- A5.

1. How is/are the instructor(s) qualified in the distance education delivery method as well as the discipline?

   I am a qualified instructor. I have a PhD in Computer Science. I have been teaching the course for the past two years as face to face instruction. I have been using WebCT over the last three years for my regular courses I am member of the on-line teaching circle of the Reflective Teaching Practice at IUP. We meet every two weeks to discuss resources, challenges and our experiences of teaching online courses. As a group we have received a number of tutorials on the WebCT tools from the Instructor Development Center.

2. How will each objective in the course be met using distance education technologies?
   WebCT will be used for online delivery. The following WebCT tools will be used: discussion board, public presentation area, private emails, file-sharing, assignment tool and private bulletin board. Students will need to have Microsoft Office installed on your computer. To provide collaborative and applied learning experiences, most work will be done in groups. Groups of 4 will be created through WebCT by the instructor. I will be a member of every group. The first group exercise that I expect the students to do is the "Getting to Know You", exercise explained under Week one. The main goal of this exercise is for the students to get to know each other. After the first exercise, I expect the students to develop a memorandum of operation, which includes the following roles in the group, the game plan and group identity.

   Course Objectives:
   - Evaluate and critique the usefulness of the support material for interactive products ranging from user's manuals to error messages through the usability testing.
     - Working in pairs, students will identify an everyday product to evaluate, carry out the usability testing, and develop a list of instructions (dummy guide) on using the everyday product. Students will exchange dummy guide through email, evaluate each other's dummy guide and record any successes and failures in using the dummy guide.
   - Critique and review other student's work through group work and class presentations.
     - Students will work in groups on a number of projects. Private bulletin board, file sharing facility and private mail tools will be used for collaboration within the group. Each group is required to present their work to the whole class through the public student presentation area. Private bulletin board, file sharing facility, private mail tools and public student presentation area all WebCT tools.
     - The rest of the students will be required to write a brief review of one report or presentation presented by a group other than their own. Project reviews will comment on the strengths and limitations of the project, the links between the project and material covered in class, and to offer suggestions for developing the project further. The review papers will be submitted through the assignment tool.
   - Demonstrate sufficient knowledge necessary for the design and evaluation of interactive products through interface evaluation and design.
     - Students will evaluate and then redesign the interface of an everyday product of their choice. In groups, students will critique each other's new design through the private discussion board and file sharing facility of WebCT.
     - Lecture notes, movie clips, reading assignments will be posted by the instructor into the content module of WebCT.

    - The Discussion board in WebCT will be used for students to reflect publicly on issues and respond to each other's reflections.
- Show evidence of a synthetic understanding of the synergy among the different disciplines involved in user interaction design by incorporating a variety of perspectives in the redesign of the user interface.
    - In groups, students use the file sharing facility, email and private discussion board to critique each other's design.
- Explain their experiences with interactive products.
    - Through private group discussion areas and private group emails, students share their experiences of using interactive products.
- Demonstrate the impact of good and bad interfaces.
    - Through private discussion boards, email and the file sharing facility, students share experiences of good/bad interfaces.
- Show evidence of the role of culture and its impact on the design of user interfaces.
    - Students will carry out a research work on usability and culture. Through private group bulletin and private group email, students will "synthesis" their research findings with the course material. *Using* the public group presentation tool, students will present their findings to the whole class using the public presentation tool. .
- Relate the psychology of everyday things concepts to the usability of everyday products.
    - Students will each take pictures of one familiar and one unfamiliar product. Using the private group bulletin board and the private email facility, students collaborate on the relationship between the psychology concepts and the daily products. A report will be produced and submitted through the assignment tool.

3. How will instructor-student and student-student, if applicable, interaction take place?

- WebCT email, class discussion board, public and private presentation areas will be used by students and the instructor to communicate. The instructor is added as a member of every group.
- The instructor will be available during office hours to chat to students with problems.
- Within groups students will interact through the private bulleting board, file sharing facility and private group emails.
- Through the public student presentation tool, students can share their presentations with the rest of the students in the class.
- Through the class discussion board students will interact with both the instructor and other students.
- Discussion questions and topics, WebCT assignments, group work assignments, summary discussion review papers will allow for interaction between instructor and student.

4. How will student achievement be evaluated?

- **Self/peer evaluation**: Group work participation will be evaluated from the contribution by individual members within the group (self/peer evaluation) as is monitored by the instructor and participation in discussion topics. The specified rubric defined in the course syllabus will be used.
- **Review paper:** After every group presentation, each student will be required to write a brief review of one report or presentation produced by a group other than your own. Project reviews will comment on the strengths and limitations of the project, the links between the project and material covered in class, and to offer suggestions for developing the project further. This will be submitted for grading.
- All submitted reports will be evaluated for content, clarity, critical thinking, and presentation through a rubric.
- **Class discussion board contribution**: students will be required to contribute towards a posted discussion topic. From the student's pro, con, and his/her position on a discussion topic, the instructor will determine the student's ability to digest the material, critically think, and express his/her view.
- All students will know the due date of all assigned work from the syllabus. After each assignment is submitted by the students, the professor will check through the assignment tool to determine if all the assignments have been submitted properly. The professor will then release the grade. Each assignment will be evaluated through a specified rubric in the course syllabus. The assignment will be graded on understanding of the material, completeness, content, and presentation.

5. How will academic honesty for tests and assignments be addressed?
    - Students will use WebCT which is exclusive to registered students. The instructor will have several interactions with the students several times a week.

B. Submit to the department or its curriculum committee the responses to items A1-A5, the current official syllabus of record, along with the instructor developed online version of the syllabus, and the sample lesson. This lesson should clearly demonstrate how the distance education instructional format adequately assists students to meet a course objective(s) using online or distance technology. It should relate to one concrete topic area indicated on the syllabus.

Step Two: Departmental/Dean Approval

Recommendation: ☒ Positive (The objectives of this course can be met via distance education)

☐ Negative

Wm. Oglikin 2/8/06.

Signature of Department Designee Date

Endorsed: John D. [illegible] 2/17/06

Signature of College Dean Date

Forward form and supporting materials to Liberal Studies Office for consideration by the University-wide Undergraduate Curriculum Committee. Dual-level courses also require review by the University-wide Graduate Committee for graduate-level section.

Step Three: University-wide Undergraduate Curriculum Committee Approval

Recommendation: [X] Positive (The objectives of this course can be met via distance education)

[ ] Negative

Gail S Sechrist 2/23/06

Signature of Committee Co-Chair Date

Forward form and supporting materials to the Provost within 30 calendar days after received by committee.

Step Four: Provost Approval

[1] Approved as distance education course [ ] Rejected as distance education course

2/24/06

Signature of Provost Date

Forward form and supporting materials to Associate Provost.

Sample Lesson

This is a sample lesson on "The Psychology of everyday things"

1. Students log into WebCT
2. Go to the content module
3. Retrieve and read the notes on the theoretical concepts on the psychology of everyday things.
4. Go thorough the examples of bad designs and good designs given.
5. Using the private discussion board, students within their groups discuss and understand the underlying concepts.
6. Students then set timelines for posting pictures of familiar and unfamiliar products to the private discussion area. The developed memorandum of operation will be used to assign responsibilities.
7. For each product, each student documents and posts the perceived affordances, constraints, transfer effect and any causality factors.
8. For the unfamiliar product, each student documents and posts the initial conceptual model.
9. Students then discuss all the contributions from other group members.
10. In groups students discuss how the initial conceptual model helped the group understand the function of the unfamiliar product.
11. A group report titled "The Psychology of Everyday Things" is produced.
12. The produced report is posted onto the discussion board or the student presentation tool for other students to critique.
13. Each student is required to produce a review paper on one of the posted presentations, other than theirs.
14. A peer evaluation for each group member is carried out.

Indiana University of Pennsylvania
Computer Science Department
LBST499: Interactive Products and Usability
On-Line Course Syllabus
Summer I 2006

Instructor information

Instructor: Rose Shumba, Ph.D. Phone: 724-357-3166
Office: 317 Stright Email: shumba@iup.edu
Office Hours: Tuesday and Thursday 9-12am

Catalog description

How many interactive products are there in everyday use? How many are actually easy, effortless, and enjoyable to use? Many products that require users to interact with them to carry out your task have not necessarily been designed with the users in mind. While many work effectively from an engineering perspective, it is often at the expense of how the system will be used by real people. The aim of this course is to address this concern by bringing usability into the design process. This course is about developing products that are easy, effective and enjoyable to use from the user's perspective. This is **NOT** a technical course

Course objectives

You will be able to:

1. Evaluate and critique the usefulness of the support material for interactive products ranging from user's manuals to error messages through the usability testing. **(4,5)**
2. Critique and review other student's work through group work and class presentations. **(2b, 4b, 5c, 7)**
3. Demonstrate sufficient knowledge necessary for the design and evaluation of interactive products through interface evaluation and design. **(4,5)**
4. Show evidence of a synthetic understanding of the synergy among the different disciplines involved in user interaction design by incorporating a variety of perspectives in the redesign of the user interface **(5)**
5. Explain your experiences with interactive products. **(3)**
6. Demonstrate the impact of good and bad interfaces **(3).**
7. Explore the role of culture and its impact on the design of user interfaces. **(7)**
8. Relate the psychology of everyday things concepts to the usability of everyday products.**(2)**

Course text

There is no required text for this course. There will be several assigned readings from popular usability websites like http://www.jnd.org, www.useit.com, http://www.usabilityfirst.com.

Online interface

WebCT will be the primary method of interaction in this course. You may log in at http://www.iup.edu/webct. Everyone is expected to be familiar with the WebCT interface before classes formally start. The course will be available on WebCT a week before the start of the classes. Please log in and gain familiarity with the interface and navigation, paying particular attention to discussions, student presentation tool, assignment tool, group tool, email and the content module. Read the syllabus thoroughly. Sign and submit the declaration in the syllabus by the first day of classes. Read the readings for week one. Note that the course will have an intense pace.

Special Resource Requirements

The below information comes from www.iup.edu/distance/. Please visit this site for more specifics on the hardware requirements for taking this online class.
You need to have Microsoft office installed on your computer.

Because it is necessary to access WebCT through the Internet, you will need to have access to a computer and the hardware and software resources needed to access the Internet. Suggestions for each are listed below:

- The computer must be robust enough to run a recent web browser and download files in a reasonable amount of time. Minimum System Requirements: Pentium II processor, 64 MB RAM, 56K modem
  Operating Systems Supported: Microsoft Windows 98 (2nd Edition), Windows 2000/XP or Mac OS 9, OS X 10.1.x, OS X 10.2.x.
- It is necessary to access the IUP WebCT Welcome Page (http://www.iup.edu/webct) using the internet, either through a network at your place of business or through a modem connection from home. The modem should be at least 56k bps. If you can, use an Internet Service Provider (ISP) that has a local access number so that you can avoid long distance charges.
- IUP is presently using WebCT Version CE 4.1. If you are having problems accessing or using WebCT with your browser it is recommended that you visit WebCT Browser Tune-up (http://www.webct.com/tuneup) and follow relevant directions to ensure your browser version, settings, and plug-ins/viewers are optimized for running WebCT Version CE 4.1 and potential media content.

  It is necessary to activate your IUP E-Mail account in order to receive instructions from IUP and your instructor.

Group project work

To provide collaborative and applied learning experiences, most work will be done in groups. Groups of 4 will be created through WebCT by the instructor. I will be a member of every group. The first group exercise that I expect you to do is the "Getting to Know You", exercise explained under Wee. After which I expect you to develop a memorandum of operation, which includes the following:

1. **Defining roles:** It will be up to the group/team members to determine each person's role. Post this in a common area where all can see.
2. **Creating a group identity:** Group/team members should decide among themselves on a name for your group. Formal or informal name, it doesn't really matter. Identification of the groups can then be used in any communication with the class.
3. **Drawing up a game plan**: Establishing definite days of the week that the group will meet online is essential. Include in that plan a definite time of day. If you cannot find a common time, think of setting deadlines to your discussion board contributions. This will take any mystery out of what is expected. Sticking to this game plan will insure that each group member will understand what each has contributed to-date. Contributions from each member will enable the group to interact smoothly. A group/team feeling will evolve from this schedule.

Enormous amounts of knowledge can be shared during 'play time. Think of how to bring a sense of 'play time' into your group. Perhaps the sharing of online jokes could be considered.

Please post your memorandum of operation so that we can all see it. This should be done during the first three days of the course.

In groups I expect you to complete two reports; **The Future of User Interfaces** and **The Psychology of Everyday Things** and two group presentations; **The Design Presentation** and the capstone project presentation on **Culture and Usability**. Each project is linked to course content and readings.

Within your group, I expect you to use email, electronic document sharing, and a private discussion board to share ideas and coordinate your work.

Group Project reviews

To encourage members of the class to examine other group's finished projects each one of you will be required to write a a 2-page review paper on one report or presentation produced by a group other than your own. Project reviews will comment on the strengths and limitations of the project, the links between the project and material covered in class, and to offer suggestions for developing the project further. I expect review papers for the **Psychology of Everyday Things** report, **Design Presentation** and the **Capstone Project Presentation.**

Group work assessment

Group work will be assessed using a group grade and a self/peer evaluation grade.

Group grade: Members of each group will receive a group grade for each completed report or presentation. All names that appear on a finished project will be awarded the group grade. Please leave off any members who did not contribute. Non-contributing group members will receive zeros for projects they were not included on.

Self/Peer evaluation grade: At the end of each group project, you will be asked to complete a self/peer evaluation form. The results of this self/peer evaluation will contribute towards your group participation grade. The rubric for self/peer evaluation is given at the end of the course outline.

Discussion Board

There will be four threaded discussions via WebCT; the three best will count toward the discussion grade. At least one response of a minimum of 100 words is required for each discussion topic. Also, at least one comment on another student's response is required for each discussion topic. Discussion topics are given in your course outline and will be posted in advance. Responses and comments must be posted on separate days, that is, your 2 messages must be posted on separate days on different topics. Insightful messages that add to the substance of the postings are required. Participation in discussion board discussions will be graded on relevancy to the assigned readings, justification of responses, participation in the discussion, clarification of questions and responses, and critical thinking. No verbatim text is allowed without citation or reference. There is no upper limit on the amount of discussion you can post. Each week begins/ends on Sunday for responses. **Discussion deadlines are inflexible.**

What constitutes good participation in weekly discussion threads? Some of the answer to that question comes from netiquette, good manners for our online discussion. Here are some ground rules for the discussion threads in our course (both for group work and class discussion).

1. To count as a posting, your comments must do more than agree. This the same rule that applies to critiques. If you have nothing more to say than "me, too," then you have nothing to say. You are not moving the discussion along. Disagree, qualify, extend, amplify, but do not simply apply ditto marks.
2. All discussion postings must name exact points of an earlier post or posts. That will often entail summarizing, paraphrasing, or snip quoting part of what you respond to.
3. Disagreement is fine and useful. Name-calling is forbidden. The anonymity of the online environment is no license for incivility.
4. Where discussion refers to a particular work from our course text, cite that text exactly, naming the particular feature or aspect of the text that supports your point.
5. Shun emoticons, abbreviations, and partial sentences. Discussion threads are not online chats. Please write in full sentences.

Examinations

There will be no examination in this course. To mark the end of this course, you will be required to do a review paper on one other presentation.

Group work and individual work evaluation

The student's final grade is based on the following:

1. **Group work (65%)**
    a. **20%: synthetic reports one and two.** The purpose of these reports is to promote critical insight into your's experience with interactive products, and to engage you into activities that require application of user interaction design principles. Evaluated on the ability to explore user interaction principles in a given situation.

b. **15%: Design presentation:** The purpose of the design reports is to provide hands-on practice in task articulation and prototype-walkthroughs. Evaluation is based on the way the new proposed design is presented, and how the interactive design is carried out.
c. **15%: Final group presentation on culture and usability.**
d. **15%: Group participation**: This is the peer evaluation grade for all the group work done.

2. **Individual contribution (35%)**
   a. **10%: Participation in Discussion Board discussions:**
   b. **15%: Usability study report.**
   c. **10%: Review paper.** There will be three review papers.

Grading Scale

A: 90-100 % **B**: 80-89 % **C**: 70-79 % **D**: 60-69 % **F**: below 60 %

Individual work

You will be expected to complete 1 individual report titled **Usability Testing Report** and three review papers as outlined under group work. All submitted reports will be evaluated for content, clarity, critical thinking, and presentation through a rubric All the work is outlined in your course outline. The same work will also be posted through the WebCT assignment tool. Assignment deadlines are not flexible for any reason. Assignment submissions are via WebCT Assignment tool.

Online etiquette

Diversity has many manifestations, including diversity of thought, opinion, and values. You are encouraged to be respectful of that diversity and to refrain from inappropriate commentary. Should such inappropriate comments occur, we will intervene as needed. You as well as faculty will be guided by common sense and basic etiquette. The following are good guidelines to follow:

- Never post, transmit, promote, or distribute content that is known to be illegal.
- Never post harassing, threatening, or embarrassing comments.
- If you disagree with someone, respond to the subject, not to the person.
- Never post content that is harmful or abusive; racially, ethnically or religiously offensive; vulgar, sexually explicit or otherwise potentially offensive to readers.

Tentative Course Schedule

Week One

1. Introduction

a. Discuss synthetic thinking
   i. What is synthetic thinking?
   ii. Why is it important?

iii. How does this course differ from other courses?

b. An introduction to usability engineering
   i. Usability engineering process overview,
   ii. An overview of usability testing and its importance.

c. Readings
   i. http://www.consult-me.co.uk/csc-usability-engineering page.htm:Usability Engineering, designing for easy use
   ii. http://www.usability.gov/basics/
   iii. http://en.wikipedia.org/wiki/Usability%5Ftesting
   iv. http://usability.gov/methods/usability_testing.html

d. **Discussion Board topic one:** Course introduction. During this discussion, the instructor will introduce the course. You are expected to have gone over the assigned readings in (b) above. You are expected to respond to discussion questions posed by the instructor.

e. **Getting-to-know-you exercise**: You are required to complete this exercise in the first two days of the course. Within your groups, I would like you to email each other and determine five facts about each person. The fifth fact should address the student's motivation for participating in the course. Assign one member of the group to collect the data and email it to me for verification of this task completion. I expect to receive this data within the first two days of the course.

f. **Collaborative work**

To show the futuristic and visionary interfaces, you watch the Apple video *(2020, by Apple Inc. (~1992, distributed with the video set from the Apple Developer's Conference)* video. The video is posted in WebCT under Week One's class notes. Some are currently available, with others many years in the future. The video not only inspires and motivates, but also illustrates the major interaction problems that must be solved before these visions can be realized.

In groups you are tasked to:

1. Identify and explain at least seven innovations, associated with interactive products, displayed in the Apple video. One example is the virtual laboratory. *An example of an explanation would be: In the video there is the use of hand gestures tied to moving screen artifacts like test tubes. There is the simulation of physical process through a chemistry experiment. Key events in the laboratory trigger outside action e.g notify the instructor.*
2. Discuss the major problems that must be solved before the visions in the video are realized.

What to hand in through the assignment tool

1. A synthetic report one titled "The Future of User Interface" based on 1 and 2 above.
2. A peer evaluation for each group member.

2. Psychology of everyday things

a. Theoretical considerations

i. Psychopathology of everyday things:

1. Frustrations of everyday life
2. The psychology of everyday things concepts; affordances, mapping, visible constraints, principle of causality.
3. Examples of bad designs.
4. Examples of good designs
5. The challenge of product design

b. Collaborative work

The main idea of this project is to relate the psychology of everyday things concepts to interactive products. Each student is required to take at least two pictures; a very familiar interactive product, for example a hand held devices (remote controls, PDAs, cell phones, scissors, musical instruments), and a very unfamiliar product to most of the you. Examples of familiar and unfamiliar products are posted in WebCT. Collected pictures are posted into the private discussion area for each group. In groups you do the following:

1. For each familiar product, you discuss the perceived affordances, real affordances, constraints, transfer effect and any causality factors.
2. For each posted unfamiliar product:
    a. Write down what first impression that comes to mind as to the use of the product (the initial conceptual model). The initial conceptual model is derived from the perceived affordances, constraints, transfer effect and causality factors
    b. Discuss how the initial conceptual model helped each member of the group understand the function of the product.

What to submit for grading

1. A synthetic report two titled "The Psychology of Everyday Things" based on 1 and 2 above.
2. Post your reports onto the discussion board or the student presentation tool for others you to critique.
3. Review paper on one of the posted presentations, other than yours.
4. A peer evaluation for each group member. Please use the provided rubric

Video

The Strauss Mouse, Mantei (1990, SVGR 56). This video is a re-enactment of situations where people used a mouse in inappropriate ways. It is humorous, and reminds us that even very "familiar" interactive products may be a mystery to new users.

c. **Readings**
   i. Affordance, Conventions and Design (Part 2)
   http://www.jnd.org/dn.mss/affordance_conventi.html
   ii. Affordances and Design
   http://www.jnd.org/dn.mss/affordances_and_desi.html
   iii. Trapped in a Lufthansa Airline Seat
   http://www.jnd.org/dn.mss/trapped_in_a_lufthan.html
   iv. The Riddles for the Information Age. The Inmates Are Running the Asylum, Sams Publishing, 2004

3. Emotional design of products

a. Theoretical considerations
   i. The three levels of emotional design (visceral, behavioral, reflective)
   ii. People, places and things
   iii. Cognitive Friction

b. Discussion Board topic two:
   i. Do attractive products work better?
   ii. Using examples from everyday life, identify two products that you love or hate, explain how your nteraction with the products reflects the three levels of emotional design.

c. Readings
   i. Problem of Automation: Inappropriate feedback and interaction, not over-automation
   http://www.jnd.org/dn.mss/problem_of_automatio.html
   ii. Interaction Design for Automobile Interiors
   http://www.jnd.org/dn.mss/interaction_design_f.html
   iii. Emotion & Design: Attractive things work better
   http://www.jnd.org/dn.mss/emotion_design_at.html
   iv. Emotional Design: People and Things
   http://www.jnd.org/dn.mss/emotional_design_pe.html
   v. Designing for Pleasure, The Inmates Are Running the Asylum, Sams Publishing, 2004

Week Two

4. Evaluation of user interfaces

a. Theoretical considerations
   i. What is usability testing?
   ii. What are the methods for usability testing?

1. Natural testing approach
2. Laboratory based approach

iii. Methods of evaluating interfaces with the users
1. Conceptual model extraction
2. Think-aloud
3. Strict observation
4. Constructive interaction

iv. Handbook of usability testing

v. Ethics and usability testing

b. Collaborative work

i. You watch the movie "The Big Fat Liar". The Big Fat Liar (commercial video, available from any video store) shows an example of poor ethics.

ii. To ensure that you understand the role and importance of usability testing in user interface evaluation, you will carry out a usability test for an everyday product. **For this project you need to pair up with someone in your group**. These are the tasks that are required of you.

1. **Choose an everyday product**: Choose an everyday product that is NEW to you and also to your partner. Your partner also chooses a product that is NEW to him/her and you. This can either be a website, software application or an electronic device like a cell phone. Make sure you choose one that is NEW to you and your partner and that you can use to perform some specific task (it shouldn't be so trivially easy that nothing can go wrong, or you won't have enough to write about).
2. **Document** the product chosen and your experience of using similar products. First tell us what the product you are going to try out is, and in a sentence or two, note any previous experience you have that may be relevant to your choice of application. *Hypothetical examples*: Although you have used another drawing program, you have never used PaintShop Pro before. So you decide to document the usability of PaintShop Pro. Start by briefly describing your experience with paint programs. (2-4 sentences is good enough). Or maybe someone has used a Motorola cell phone but never a Sony brand.
3. **Decide on the tasks**: Before trying out the product, document at least three different tasks that you think you will be able to accomplish with the application. Take notes about what you tried to do and what happened; success and failures are recorded. *Example*: For a drawing program, you might decide to create and print three kinds of drawings, for instance: a freehand sketch, a diagram made up of geometric elements, and a drawing that includes text (or else a collage of drawings already contained in the computer). For a cell phone the tasks can be:

   a. Answer the phone when it rings and have a two minute conversation, then save the phone number of the person that called.
   b. One hour later call the person back of the number that you had saved, and hold a two minute conversation with them.
   c. Set the alarm on the phone for midnight so they can bring the phone back.

4. **Take detailed notes:** Now sit down with your product and try it out. Make sure you take notes about what you try to do and what happens, step by step. Then say how you start using the product. In several sentences, describe what you see on the screen (or hear, etc.) and your initial impressions. Include the initial instructions (if any) the product gives you, or any initial options that appear on a menu, buttons, etc.Then start using the product; as you use it, write down each thing that you do (include what you type, any selecting). Write down what the product does in response to your actions, or on its own initiative (*for example for an application you can have something like* : "I selected FILE from the menu; a menu of options appeared; I selected OPEN, and a dialog box appeared that asked for FILE NAME. I typed in the filename README, and selected the DO IT button. A box popped up saying FILE NAME "README" UNKNOWN."). Be sure to include any false starts, error messages, or things you found puzzling. For repetitive actions in your session, just describe them in detail once.
5. **Describe successes and errors.** As you keep a log of your actions and the product's, make it clear what you're trying to accomplish in your task and when an action is successful. Note especially when something weird or unexpected happens, or when you try to do something the product won't let you do. When it's interesting, make a note of how you figured out what to do next. Note also when you *didn't* know how to do something at first, and describe how you figured it out (*if* you were able to figure it out!). We are particularly interested in any errors you experience- these include outcomes that you didn't intend, or misconceptions on your part, or **error messages** from the product. Were you able to figure out what went wrong? Did you experience any dead ends, where you had to give up and start over? Why do you suppose these problems occurred? Organize your notes and describe your experience with clarity and detail.
6. **Develop a dummy guide**: Now, you want your partner to try the tasks you did. Remember your partner has never used the

product before. Write a short but very clear list of steps for your partner (dummy's guide) to carry out the same tasks.

7. **Evaluation of the dummy guide by your partner**: Email the dummy guide to your partner. Your partner uses the dummy's guide. Your partner is required to document any problems encountered in using the dummy guide. The idea is to identify as many problems as possible and then feed the input into the next design phase.

What to submit for grading

Each student will produce a usability test report with the following:

1. The product evaluated and past experiences with any similar products.
2. The three tasks that you decided on in 2 above.
3. Your detailed notes as you explored ways of carrying out the tasks
4. A description of your successes and errors
5. The developed dummy guide.
6. An evaluation of the dummy guide by your partner.

c. **Readings**
   i. Usability Is Not a Luxury
   http://www.jnd.org/dn.mss/usability_is_not_a_l.html
   ii. Minimizing the annoyance of the mobile phone
   http://www.jnd.org/dn.mss/minimizing_the_annoy.html
   iii. When Bugs Become Features
   http://www.jnd.org/dn.mss/when_bugs_become_fea.html
   iv. Problem of Automation: Inappropriate feedback and interaction, not over-automation
   http://www.jnd.org/dn.mss/problem_of_automatio.html

d. **Videos**
   i. Ghostbusters
   ii. The Big Fat Liar

e. **Discussion Board topic three**
   Narrate the events of each movie. Discuss how the events in the movie relate to ethical values, and how ethical values can be applied to usability testing.

Week Three

5. Redesigning a new interface

a. **Theoretical considerations**
   i. Paper prototyping and sketching
   ii. Evaluating user interfaces without the users
      1. Cognitive walkthrough
      2. Heuristic evaluation

b. **Individual work**

From the evaluation report from the partner and your successes and failures, use the paper prototyping method to redesign the evaluated interface. Drawing programs like Paintpro and Paintbrush can be used in the redesign. The new design addresses the problems identified by the usability testing in 4 above. Document the problems as outlined by your partner, your suggested solution and the new interface design.

c. **Collaborative work**

In groups you are required to do the following:

i. Share and critique each other's new designs (redesigns) through cognitive walkthrough and heuristic evaluation methods.

ii. Develop evaluation criteria. Based on some criteria set by your group, pick two of your best new designs for a "Design presentation" to the whole class. You may decide to pick the best designs based on your heuristic and cognitive walkthrough results and the relevance of the tasks to daily usage.

iii. Post your presentation into the student presentation tool for all class members to review and critique.

iv. Pick two posted presentations and produce a review paper on each of them.

What to submit for grading

v. A design report which consists of the following:

1. Results from the walkthrough and heuristic evaluation.
2. The criteria used to pick the best two designs for presentation
3. The new designs for the best two

vi. A review paper based on one other presentation.

d. **Video**

How to paper prototype: Nielsen Norman Group

e. **Readings**

i. Designing for People The Inmates Are Running the Asylum, Sams Publishing, 2004

ii. Desperately Seeking Usability The Inmates Are Running the Asylum, Sams Publishing, 2004

iii. The Usability Methods Toolbox,
http://jthom.best.vwh.net/usability/index.htm
http://www.usabilityfirst.com/methods/cogwalk.txl

Week Four

6. Technology in the future

a. **Theoretical considerations**

Future of user interfaces

b. **Readings:**

i. Robots in the Home: What Might They Do?

http://www.jnd.org/dn.mss/robots_in_the_home_.html

ii. How Might Humans Interact with Robots?

http://www.jnd.org/dn.mss/how_might_humans_int.html

c. **Discussion Board topic four**

As intelligent devices are entering into our everyday lives, in particular, in the home and automobile, the 21st Century introduces a rich new area for designers: *The Automation of Everyday Life.* Not simple automation such as in washing machines, but smart, intelligent, autonomous things, such as robot house cleaners, automobiles that drive themselves, and smart homes. Many home medical systems will be smart and intelligent, whether for diagnosis, rehabilitation (and exercise), or care of the elderly. Explain what this new technology will bring into the homes, how might humans interact with the new technology? What challenges does the new technology impose on the human interface designers?

Part of Week four/Week Five

7. Usability and culture capstone project

The objective of this project is to synthesize all the learnt material by exploring the influence of culture on usability for globally used products. In groups you are required to research on the following issues:

a. Does culture affect usability evaluation process?

b. Does culture affect the design of the product interface

You are required conclude your work by critiquing the work by the Japanese available at a website http://www.chindogu.com.

Post your presentation into the student presentation tool.
Pick two posted presentations and produce a review paper on each of them.

What to submit for grading

i. A review paper based on one other presentations

Tips for Working in online groups

The following list of tips is based on my experience working with hundreds of learners in a variety of online settings over the last few years. I hope you find them useful and encourage you to help me further develop the list!

1. Arrange a synchronous chat as soon as possible; especially if you are working with people you've never met face to face. This will help you develop the "real person" sense of someone and address the social aspect of learning that is important to many people. It will also help you make some important decisions early on in your process.
2. Do spend time up front addressing your own "netiquette or etiquette" rules ... this will help other group members work with you. Telling people, for example, that your email communication is fairly direct will help others know what to expect from you.
3. Also, spend time sharing your learning or group process preferences up front. Spending the extra time figuring out how you will work together before actually getting to the task will save you time in the long run and contribute to a greater sense of comfort in your online group.
4. Spend some time clarifying the expectations you have for each member in terms of time commitment and checking in to confirm decisions and so forth. Many online groups spend time waiting for one member who may have had something come up in his/her life. Having an agreement whereby the group waits no longer than 2 or 3 days and then goes on with whom ever is there and whatever decision is made, for example, will help keep your group on track.
5. Think about assigning some group roles. Because you will have a multitude of tasks going on in the same conversation area, it can become overwhelming to track where you are and which decisions have been made. Having a "summarizer", whose role it is to track and summarize for the group, will address this.
6. Remember that your online group may go through the same phases as a face to face group and to not be overly anxious if you're unclear about the assignment initially. Remember that one of the first phases any group goes through is to clarify your task.
7. Try to "suspend" some of your assumptions about working collaboratively online. If you think it's going to be hard and unrewarding, it just might be! If you think it's impossible, it just might be!

Self/Peer Evaluation Report

For the self/peer evaluation report, you are asked to grade your peers within the group. The chart below asks you to rate each group member for the amount of work s/he has done on the assignment (the total amount should be 100%), give comments and examples of each member's achievement, and give him/her a grade on a scale of 1-10. Try your best to be honest and fair in this peer evaluation. No other students will see this sheet. For the grade section, please use the following:

Basic Scoring Guidelines:

1. 10: This student was undoubtedly the group leader. S/he came up with the majority of the ideas & assigned tasks, and did more than his/her share of the work.
2. 9: This student was one of the group leaders, paid attention, and did more than his/her share of the work.
3. 8: This person was a significant contributor to the group's effort, did not good around, and did his/her share of the work.
4. 7: This person may have goofed around a little, but did most of his/her share of the work and contributed to the overall product.
5. 6: This person was generally unproductive and didn't contribute their fair share to the group's effort but still gave some assistance to the rest of the group's effort.
6. 4: This person did not contribute to the group's effort at all.
7. 2: This person did not contribute to the group and negatively affected other people in the group with his/her behavior.

Note: If somebody gets a 9 or 10, s/he made up the work for somebody else and should receive below an 8.

Group member name	% work done	Comment	Score

Sample Lesson

This is a sample lesson on "The Psychology of everyday things"

1. Students log into WebCT
2. Go to the content module
3. Retrieve and read the notes on the theoretical concepts on the psychology of everyday things.
4. Go through the examples of bad designs and good designs given.
5. Using the private discussion board, students within their groups discuss and understand the underlying concepts.
6. Students then set timelines for posting pictures of familiar and unfamiliar products to the private discussion area. The developed memorandum of operation will be used to assign responsibilities.
7. For each product, each student documents and posts the perceived affordances, constraints, transfer effect and any causality factors.
8. For the unfamiliar product, each student documents and posts the initial conceptual model.
9. Students then discuss all the contributions from other group members.
10. In groups students discuss how the initial conceptual model helped the group understand the function of the unfamiliar product.
11. A group report titled "The Psychology of Everyday Things" is produced.
12. The produced report is posted onto the discussion board or the student presentation tool for other students to critique.
13. Each student is required to produce a review paper on one of the posted presentations, other than theirs.
14. A peer evaluation for each group member is carried out.

CLASS ROOM SYLLABUS

Synthesis Summary

Topic

Many consumer products, including computer software products are difficult to understand, hard to learn, and complicated to use. Difficult to use products waste the user's valuable time, and are not exploited to full advantage because many users are discouraged from using advanced features. For example, a recent survey by a VCR manufacturer found that 75% of consumers have never used the advanced VCR features. With intelligent devices entering into our everyday lives, in the home and automobile in this 21st century, this introduces complex issues of how people will interact with the new technology. Difficult to learn products can frustrate the consumer. On the other hand, designing highly usable products is a challenge.

The primary focus of this course is the usability engineering of products, which is the designing[1], development and evaluation of interactive products[2] so that they are easy, effective and enjoyable to use from the user's perspective. Usability engineering is an area that is at the intersection of interactive system design, multimedia design, and interface engineering. The course emphasizes the empirical and methodical aspects of interactive products. The main areas covered by the course include the psychological aspects of everyday products, method and tools for product interface design and evaluation, globalization and its relationships to user interaction and the future of interfaces. This course does **NOT** cover the technical aspects of using interface building software.

This is a very relevant course because, we are living in very exciting times where we are flooded with interactive products; ATMs, ticket machines, photocopiers, intelligent devices, cell phones, the web, library information systems, calculators, video games, remote controls, ... The list is endless. Of all these products, maybe only one or two products are easy, effortless, and enjoyable to use. Use of many of these products to perform a task causes so much grief, from the user's perspective. This is because the products are not necessarily designed with the user in mind; they have only been designed to provide some set of functionality.

Disciplinary Perspective

The primary disciplines are psychology, social sciences (sociology and anthropology), education, communication, computer science, engineers, marketing, entertainment and media. Building up interactive products requires skills from all the above.

Contributions of each discipline

Human Computer Interaction sits at the cross-roads of so many disciplines:

1. **Psychology**: Psychologists provides information about human capabilities, for example the structure of human memory and decision making.

[1] "Design" relates to how the product communicates; the relationship between a product and a user

[2] *All classes of interactive systems, technologies, environments, tools, applications and devices.*

2. **Media and design professionals** which include graphical design, industrial design, film industry, anthropologists, and sociologists, have the right skills and understanding of the different application areas necessary to design the new generation of interactive media systems.
3. **Engineers** who know about electronics, hardware and software are needed to configure, assemble and program the consumer electronics and other devices to be able to communicate with each other.
4. **Education experts:** Because there is such an abundance of interactive learning environments, educational software and training simulators education experts can bring in the skills required to evaluate such products.
5. **Business/marketing** people provide ideas of how to plan and structure interactive products, especially websites.

Pedagogy

- The course is designed to be highly interactive and collaborative to facilitate student learning. Students will be expected to do their own synthesizing. Some of the time I will give the theoretical background, some of the time we will work on group reports or students will present results of their findings to groups or to the whole class.
- There will be assigned readings from a variety of books, journals and magazines and websites
- Students will be allocated to groups. Allocation will be based on identification of high and low contributors as evident from class participation. Each group will have at least 5 students. The groups will be mixed gender, age, discipline and culture in order to force interaction.
- Students will work on a usability testing project that incorporates all the theoretical knowledge acquired. This will allow students from all backgrounds, to clearly see how a given core task can be described and interpreted in different ways.
- Students will be expected to keep an individual log of the work done in the lab and in class. A group log of the group activities performed will also be maintained. These will be inspected each week by the professor.
- Learning outcomes will be tangible deliverables; these will be clearly set out in the course outline; they include synthetic reports, usability study report, design reports and the usability testing report.
- Coordination between internationalization of content, design, and usability is essential for some interactive products.

Syllabus

Course objectives

Students will be able to:

- Evaluate and critique the usefulness of the support material for interactive products ranging from user's manuals to error messages through the usability testing.

- Critique and review other student's work through group work and class presentations.
- Demonstrate sufficient knowledge necessary for the design and evaluation of interactive products through interface evaluation and design.
- Show evidence of a synthetic understanding of the synergy among the different disciplines involved in user interaction design by incorporating a variety of perspectives in the redesign of the user interface.
- Explain their experiences with interactive products.
- Demonstrate the impact of good and bad interfaces through usability testing.
- Explore the role of culture and its impact on the design of user interfaces.
- Clearly see how a given core task can be described and presented to the user in many different ways.
- Explain the relationship between the psychology of everyday things and usability of products.

Detailed course outline

1. Introduction (2 weeks)

a. Theoretical considerations (1 week)

i. Synthetic Thinking

1. What is synthetic thinking?
2. Why is it important?
3. How does this course differ from other courses?

ii. An introduction to usability engineering

1. Usability engineering process overview,
2. An overview of usability testing and its importance,

b. Collaborative work (1 week)

c. Videos

Students watch the Apple video *(2020, by Apple Inc. (~1992, distributed with the video set from the Apple Developer's Conference),* which shows the futuristic and visionary interfaces. The video not only inspires and motivates, but also illustrates the major interaction problems that must be solved before these visions can be realized.

In groups students are tasked to:

i. identify all the innovations displayed in the Apple video,
ii. figure out the relationships between the innovations and interactive products and then,
iii. discuss the major problems that must be solved before the visions in the video are realized.

d. Readings for discussion

The Dancing Bear, Alan Cooper, The Inmates Are Running the Asylum, Sams Publishing, 2004

A synthetic group report one, based on (i),(ii) and (iii) above is then produced.

2. Psychology of everyday things (2 weeks)

a. **Theoretical considerations (1 week)**
   i. Psychopathology of everyday things:
      1. Frustrations of everyday life
      2. The psychology of everyday things concepts; affordances, mapping, visible constraints, principle of causality.
      3. Examples of bad designs.
      4. Examples of good designs
      5. The challenge of product design

b. **Collaborative work (1 week)**
Each student is required to bring to class a very familiar interactive product, for example a hand held devices (remote controls, PDAs, cell phones, scissors, musical instruments), and a very unfamiliar product to most of the students. In groups students do the following:
   1. For the familiar products, students discuss:
      a. How well the familiar product works,
      b. What is good and bad about the way the familiar product works?
      c. Students then list the functionality and range of tasks a typical user would want to do using this product.
   2. For each unfamiliar product, the students:
      a. Write down what first impression comes to mind as to the use of the product.
      b. Discuss how visual clues helped them understand the function of the product.
      c. Discuss possible improvements to the interface based on their usability evaluation.

The discussion is compiled into synthetic report two. The report should clearly demonstrate how the psychologies of everyday concepts relate to the design of interactive products. Each group is then expected to do a presentation based on the produced report.

c. **Video**
The Strauss Mouse, Mantei (1990, SVGR 56). This video is a re-enactment of situations where people used a mouse in inappropriate ways. It is humorous, and reminds us that even very "familiar" interactive products may be a mystery to new users.

d. **Readings**
   i. Affordance, Conventions and Design (Part 2)
   http://www.jnd.org/dn.mss/affordance_conventi.html
   ii. Affordances and Design
   http://www.jnd.org/dn.mss/affordances_and_desi.html
   iii. Trapped in a Lufthansa Airline Seat
   http://www.jnd.org/dn.mss/trapped_in_a_lufthan.html
   iv. The Riddles for the Information Age. The Inmates Are Running the Asylum, Sams Publishing, 2004

3. Emotional design of products (2 weeks)

a. **Theoretical considerations (1 week)**

i. Do attractive products work better?
ii. The three levels of emotional design (visceral, behavioral, reflective)
iii. People, places and things
iv. Cognitive Friction

b. **Collaborative work (1 weeks)**
Students are requested to think of four products from everyday life, including websites that they love or hate or have a love/hate relationship. In groups students discuss:
i. The reasons behind the love and hate relationship.
ii. How the interaction with the products reflects the three levels of emotional design in different ways.

c. **Readings**
i. Human-Centered Design Considered Harmful
http://www.jnd.org/dn.mss/human-centered_desig.html
ii. Problem of Automation: Inappropriate feedback and interaction, not over-automation
http://www.jnd.org/dn.mss/problem_of_automatio.html
iii. Industrial Design: Claims Without Substance
http://www.jnd.org/dn.mss/industrial_design_c.html
iv. Interaction Design for Automobile Interiors
http://www.jnd.org/dn.mss/interaction_design_f.html
v. Emotion & Design: Attractive things work better
http://www.jnd.org/dn.mss/emotion_design_at.html
vi. Emotional Design: People and Things
http://www.jnd.org/dn.mss/emotional_design_pe.html
vii. Designing for Pleasure, The Inmates Are Running the Asylum, Sams Publishing, 2004

4. Evaluation of user interfaces (2 weeks)

a. **Theoretical considerations (1 week)**
i. Natural testing approach
ii. Laboratory based approach
iii. Conceptual model extraction
iv. Think-aloud
v. Constructive interaction
vi. Handbook of usability testing
vii. Ethics and usability testing

b. **Collaborative work (1 weeks)**
i. Students watch the movie "The Big Fat Liar". The Big Fat Liar (commercial video, available from any video store) shows an example of poor ethics. In groups students discuss the events in the movie. Students then discuss how poor ethics values portrayed in the movie can be avoided in usability testing.
ii. **Individual work**: To ensure that students understand the role and importance of usability testing in user interface evaluation, students carry out a usability test for an everyday product. This can either be a website, software application or an electronic device like a cell phone. Students choose the testers, identify the tasks, select the testing environment, carry out the usability test and record the results. The idea is to identify as many problems as possible and then feed the input into the next design phase.

An individual usability test report, is produced.

c. **Readings**
   i. Usability Is Not a Luxury
   http://www.jnd.org/dn.mss/usability_is_not_a_l.html
   ii. Minimizing the annoyance of the mobile phone
   http://www.jnd.org/dn.mss/minimizing_the_annoy.html
   iii. When Bugs Become Features
   http://www.jnd.org/dn.mss/when_bugs_become_fea.html
   iv. Problem of Automation: Inappropriate feedback and interaction, not over-automation
   http://www.jnd.org/dn.mss/problem_of_automatio.html

d. **Videos**
   i. Ghostbusters
   ii. The Big Fat Liar

Both videos portray poor ethics.

5. Towards redesigning a new interface (2 weeks)

a. **Theoretical considerations (1 week)**
   i. Cognitive walkthrough
   ii. Heuristic evaluation
   iii. Paper prototyping and sketching

b. **Individual work (1 weeks)**
From the results of the usability test report above, students use the PICTIVE method to produce a new storyboard design of the evaluated interface. The new design is supposed to address the problems identified by the usability testing in 4 above

c. **Collaborative work (1 week)**
In groups students critique their new designs (redesigns) through cognitive walkthrough and heuristic evaluation method. Based on some given criteria, students pick the two of their best redesigns for a "Design presentation" to the whole class. Students are expected to give enough justification for the redesign decisions. Other students interact with the new design, and the group modifies their design accordingly.

d. **Video**
How to paper prototype: Nielsen Norman Group

e. **Readings**
   i. Designing for People The Inmates Are Running the Asylum, Sams Publishing, 2004
   ii. Desperately Seeking Usability The Inmates Are Running the Asylum, Sams Publishing, 2004
   iii. The Usability Methods Toolbox,
   http://jthom.best.vwh.net/usability/index.htm
   http://www.usabilityfirst.com/methods/cogwalk.txl

6. Technology in the future (1 week)

a. **Theoretical considerations**

   i. Future of user interfaces

b. **Readings:**

i. Robots in the Home: What Might They Do?

http://www.jnd.org/dn.mss/robots_in_the_home_.html

ii. How Might Humans Interact with Robots?

http://www.jnd.org/dn.mss/how_might_humans_int.html

7. Usability and culture (2 week)

Students work on a capstone project on the influence of culture on usability for globally used products. Students also critique the work by the Japanese available at a website http://www.chindogu.com.

8. Examination Week: Oral group presentations

Students in groups will present oral reports on the capstone project done in 7 above. The purpose of the oral reports is to synthesize all the learnt material and also show students how usability differs among cultures.

Evaluation Methods

Examinations

There will be no examination in this course.

Group work and individual work evaluation

The student's final grade is based on the following:

1. **Group work (65%)**
   a. **5%: Group journal recordings:** students will keep a group journal in which to record notes and reflections on class discussions and individual thoughts. This is collected regularly and checked.
   b. **20%: Synthetic Reports 1 and 2.** There will be a number of brief one- or two-page essays based on issues identified during collaborative group work. The purpose of these reports is to promote critical insight into student's experience with interactive products, and to engage students into activities that require application of user interaction design principles. Evaluated on the ability to explore user interaction principles in a given situation.
   c. **20%: Design presentation:** The purpose of the design reports is to provide hands-on practice in task articulation and prototype-walkthroughs. Evaluation is based on the way the new proposed design is presented, and how the interactive design is carried out.
   d. **20%: Oral group presentations.**

2. **Individual contribution (35%)**
   a. **5%: Individual journal grade**: students will keep an individual journal in which to record notes and reflections on class discussions and individual thoughts. This is collected regularly and checked.

b. **30%: usability study report**. The purpose of the usability study report is to stimulate thinking in preparation for structured usability testing. Evaluated not on how well the dummy friend performs, but on what students choose to do with materials from usability testing, and how well prepared the student was.
c. **10%: Participation grade:** For each of the reports listed under group work, individual contribution will be based on a participation grade (**5%** of each report contribution). This participation grade will be based on peer evaluation by group members during meetings using a grading rubric, class attendance, participation grade assigned by instructor and an evaluation by the rest of the class during each presentation. A typical grading rubric for individual participation is attached at the end of this document.
d. **EXTRA CREDIT** towards participation can be attained thorough the wing:
    i. Writing up and turning in a reaction paper to a class discussion or presentation.
    ii. Bringing to class an article offering a new or different point of view on a topic of the day.
    iii. Actively participating in class discussions. No more than 10 points can be earned each week.

Grading scale

Weighted grade	Symbol
90-100	A
80-89	B
70-79	C
60-69	D
59 and below	F

Attendance policy

Since this is a seminar course and student participation is needed, students must attend classes. After 3 unexcused absences, each three classes missed will result in the loss of a letter grade. To obtain an excused absence, students must present a request in writing preferably before the event: (Funerals of relatives' two classes only, documentation that you were seen at the Health Center, school activities- letter from faculty member, religious observances- letter from your pastor.)

Appeals Policy

To appeal a grade, send an e-mail to me within two weeks of the grade having been received stating the problem. Please note that this is not the same as the IUP policy for appealing for a FINAL grade. You may be called upon to produce the assignment in question, so keep a copy. You must inform the instructor immediately if your graded

work is not returned with the other assignments. KEEP A COPY OF ALL WORK TURNED IN. Overdue appeals will not be considered.

Homework Late Policy

Homework solutions that are between 0 and 24 hours late will receive a penalty of loss of 25% of the grade. Those that are between 24 and 48 hours late will lose 50% of their grade. Any homework handed in after 48 hours will lose 100% of the grade. In general, you are better off handing in an incomplete homework, than you are to hand in something late. Much of your work will be done in teams. Thus, late homework by one member of the group necessarily affects the grade of the entire group.

Resources required

If available, a usability lab is a place that the observer team can observe the participants interacting with the product under evaluation. The lab is not mandatory for this course. Most labs have two rooms. The observers' section is where the usability team can watch and discuss the users' interaction with the product. The participant's side is a room set up to mimic an office environment and is where the user is working. The participant side is equipped with a camera to record gestures and facial expressions as the user is working on the computer. In addition, a software, Spector Pro 5.0 which takes snapshots of the screen and records all commands typed onto the computer will be installed on the participant computer. The Psychology Department has observation rooms fitted with cameras, and are willing to let us use their rooms. The computer science department will then provide the software, which costs $39.95 per node license for the entire usage of the software..

Required Readings

1. Norman, D; The Design of Everyday Things (Excerpt pp. 5-22); 1988.
2. National Cancer Institute. Research-Based Web Design and Usability Guidelines; http://usability.gov/guidelines/; 2000
3. Berkun, S; Why Good Design Comes from Bad Design; http://uiweb.com/issues/issue08.htm; 2001.
4. Nielson, J; How to Conduct a Heuristic Evaluation; http://www.useit.com/papers/heuristic/heuristic_evaluation.html; 2000
5. Osswald, M; User Testing: Does your site need it? http://www.hansoninc.com/newsletter/news-i7.asp; 2001
6. Veen, J; Click Here, You Idiot http://hotwired.lycos.com/webmonkey/00/02/index1a.html; 2000
7. Osswald, M; User Testing: Does your site need it? http://www.hansoninc.com/newsletter/news-i7.asp;2001
8. Nielson, J; Information Pollution; http://www.useit.com; 2003
9. Tufte, E; Graphics and Web Design Based on Edward Tufte's principles; http://www.washington.edu/computing/training/560/zz-tufte.html.

Bibliography

1. Nielsen, J and Mack.R; Usability Inspection Methods; Wiley and Sons (1994)
2. Greenberg, S; Working through Task-Centered System Design; in Diaper, D. and Stanton, N. (Eds); The handbook of Task Analysis for Human-Computer Interaction; Lawrence Erlbaum Associates. In press (2003)
3. Greenberg, S; Considering Work Contexts in Design. p.187-272. In Baecker, R., Grudin, J., Buxton, W., and Greenberg, S., eds . Readings in Human Computer Interaction: Towards the Year 2000. Morgan-Kaufmann. (1995).
4. Greenberg, S. (1996) Teaching Human Computer Interaction to Programmers ACM SIGCHI Bulletin, March, 1996.
5. JoAnn Hackos, Janice Redish; User and task Analysis; John Wiley;2002.
6. Ben Schneiderman; Designing User interfaces; Addison Wesley;2000
7. John Carroll; Human Computer Interaction in the new Millennium; Addison Wesley; 2001.
8. Deborah Hix, Rex Hartson; Human Computer Interaction; Developing User Interface; Elements of user interface design; John Wiley; 2000.
9. Preece, Rogers and Sharp; Interaction Design: beyond human-computer interaction;; John Wiley, 2002.
10. Rubin Jeffrey: Handbook of Usability Testing; How to plan, design and conduct effective tests. John Wiley; 1994.

Grading rubric for individual participation

Group Facilitator _____

Date_____

Group Member	Assigned Role	Task Completed	Grade

Group Grade Average: _____

Grading Rubric:

(If anything but a 3.0 is given either a 4.0 or under a 3.0, the group leader is required to give an explanation for this on the comment section of this form.)

- 4.0 Student cooperated fully, or respectfully/productively disagreed, with group and leader, performed assigned tasks, found necessary information as well as additional information and could explain it.
- 3.0 Student cooperated fully with group leader, performed assigned tasks and found necessary information.
- 2.0 Student required reminders to get to work, found only the necessary information, and completed the minimum assigned tasks.
- 1.0 Student completed assigned tasks after extensive pressure or teacher involvement.
- 0.0 Student was uncooperative and unproductive.

Comments:

05-44
extra stuff

LSC#_____

Action/Date_____

COVER SHEET: Proposal for Section of LBST 499 Senior Synthesis

---

SECTION TITLE: Interactive Products and Usability

PROFESSOR(S) : Dr Rose Shumba

PREREQUISITES: None

SCHEDULING INFORMATION: Earliest semester: Fall 2004. After consulting with my department, I expect to be able to teach two sections of the synthesis course each fall. My plan is to use this topic for three or four years, after which I will probably want to change to something fresh. I will also be available for summer teaching

SIGNATURES: Professor(s) & Date

Department Chairperson(s) & Date

College Dean(s) & Date

Director of Liberal Studies & Date

Table of contents

Publicity form for synthesis section

TOPIC TITLE: Interactive Products and Usability

PREREQUISITES: None

PROFESSOR: Dr. Rose Shumba

DESCRIPTION (limit 100 words):

How many interactive products are there in everyday use? How many are actually easy, effortless, and enjoyable to use? Many products that require users to interact with them to carry out their task have not necessarily been designed with the users in mind. While many work effectively from an engineering perspective, it is often at the expense of how the system will be used by real people. The aim of this course is to address this concern by bringing usability into the design process. This course is about developing products that are easy, effective and enjoyable to use from the user's perspective. This is **NOT** a technical course. Assignments: (1) journal recording your reflections, (2) Synthetic reports, (3) usability study report, and (4) design presentation,(5)oral report

TYPICAL READINGS* (provide author and short title):

1. Norman, D; The Design of Everyday Things (Excerpt pp. 5-22); 1988.
2. National Cancer Institute. **Research-Based Web Design and Usability Guidelines**; http://usability.gov/guidelines/; 2000
3. Berkun, Scott; **Why Good Design Comes from Bad Design**; http://uiweb.com/issues/issue08.htm; 2001.
4. Jacob Nielson; How to Conduct a Heuristic Evaluation;
5. http://www.useit.com/papers/heuristic/heuristic_evaluation.html; 2000
6. Oswald Mike; **User Testing: Does your site need it?** http://www.hansoninc.com/newsletter/news-i7.asp; 2001
7. Jeffrey Veen; **Click Here, You Idiot** http://hotwired.lycos.com/webmonkey/00/02/index1a.html; 2000
8. Osswald, Mike; **User Testing: Does your site need it?** http://www.hansoninc.com/newsletter/news-i7.asp;2001
9. Jacob Nielson; Information Pollution; http://www.useit.com; 2003

Plus photocopied packets