These are the approximate agendas that were followed this term.

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Day 1 - Sept 27, 2021

First Day of Class

X Jokes?
√ Introductions.
√ Mask policy.
√ What to do if you feel sick.
√ Take roll.

Assignment 1: Simple task description.
√ Pair activities to learn about things you would use for the project.

X Covid stories.
√ The pre-class survey.

Take a break in the middle.

Take to class:
__ white board pen
__ USB adapter
__ fan
__ masks
__ little camera
__ roster
__ P1 warmups downloaded

Day 2 - Sept 29, 2021

√ Photos.
√ Overview of class.
Overview of Chapter 1.
√ Overview of Chapter 1 SBD
X Discuss P1 initial submission.
√ Discuss P1.

__ How to do an interview.
__ Paying Off your OCCU Credit Card Bill.pdf
√ Use the whiteboard to set up Zoom meetings with all students on Thursday or Friday afternoon.

**Day 3 - October 4, 2021**

- Recruit someone to interview.
- Introduce the students to each other.
- Quiz?
- Quick lecture on Chapter 2.
- Prepare for interview.
- Conduct interview to understand a user's task.
- Analyze the Results.
- What did we learn about the task?
- What did you observe about the interview?
- Very quick feedback on Project 1 Initial Submission.
  - I did not look at all of them, so everyone will not get specific feedback.
  - Please pay attention to the comments I make here.
- Work in pairs to do a 5-minute interview. What did you learn?
- Read Annett for Wednesday. And the Project 1 description.

**General Feedback on Project 1 - Initial Submission.**
- Please submit a SINGLE PDF file. Figure out how to merge. Develop your tech skills if necessary.
- Reduce your files to well under 0.5 MB per file.
- Every photo should have a caption. Please see "Good Writing" in the syllabus.
- I did not study your HTAs. We will work on HTAs on Wednesday.
- Please try to do another interview this week.
- It is most impressive and helpful if you can show how you prepared for the interviews, such as the questions that you asked, and the order in which you asked them. It contributes to validity.
- Don't need to give last names of your interviewees.

**Take to class:**
- white board pens
- USB adapter
- fan
- swivel camera, tripod, laptop
- speaker and music player
- laptop, synchronized
- quiz?
- photos
Day 4 - October 6, 2021

__ HTA mini-lecture.
__ Interview a student on how to do Project 1.
__ Ask students what was missing from the report on how to do Project 1.
__ Break into pairs (new partner) and do a hierarchical task analysis of Project 1.

Take to class:
__ white board pens
__ USB adapter
__ fan
__ swivel camera, tripod, laptop
__ speaker and music player
__ laptop
__ quiz?
__ photos

The components needed for the task included:
__ A printout of the assignment. (Just one or two)
__ A lot of small Post-It pads, one for every two students.
__ 11x17 inch paper. At least one for every two students.
√ A document projector, or some means to project the analyses for all of the students to see.

Day 5 - October 11, 2021

Project 2 discussion.
Affordances.

Day 6 - October 13, 2021

The point of the class: To build useful and usable interfaces, it is helpful for the designer to think of the human as a rational agent—using its goals, perceptors, actuators, and knowledge—trying to accomplish tasks on a computer. The user is engaged in a cycle of plan-execute-perceive. Cognitive strategies are a key component in this cycle.

What we actually did in class today
Students seemed to have a hard time knowing how to even start doing Project 2. For example, how does current technology support the task. Unfortunately, no students had yet applied the SQ4R technique to reading the textbook, and so I did a live demo in which I started doing exactly that, for the first few pages of the appendix in the textbook. I then wrote on the board the activity that we are trying to design, and polled the class to identify the information that needs to pass between the user's brain, and the technology, in order to do what I just did. The four main pieces of information, and how they moved were:

- The content of the textbook moved from the paper in the book to my brain.
- Information regarding the content of the textbook that went into my brain then came back out, and was output to the handwritten notes by means of my hand using a pen.
- Information on how to apply the SQ4R technique went from the computer screen to my brain.
- Information on how to apply the SQ4R that went into my brain then came back out, and was output to the handwritten notes by means of my hand using a pen.

I gave a 5-minute overview of Chapter 3 "Activity Design".

What was scheduled for class today

- √ Design is an activity and an outcome.

- Schedule updated
These slides discuss the outcome, hoping this helps you with the activity.

- "Interaction Design - Including Printer Driver example" (slides on Canvas)
  - √ "Paying off your credit card bill" (slides on Canvas)
- Storyboards
  - EyeDraw prototype.
  - √ EyeMusic storyboard.

For Monday:
- Read Chapter 4.
  - Come ready to show a design for P2.

Prep: √ Cue up eyemusic storyboard and performance (including audio).

Day 7 - October 18, 2021

The goal in creating a user-interface is to "support the user's task". In other words, to present the user with the exact information they need, and the exact communication and control opportunities that they need, at the exact time the user needs them, so that the user can execute procedures and accomplish tasks. This is much easier said than done.
The goal today is to help you to learn how to design a system that supports a user's task.

Look at the schedule.

"Support the user's task"
- The task of talking to friends over the phone. While looking at faces.
- The task of backing up your hard drive.
- The task of paying your bills online. - "Support the Task of Paying Bills Online.pdf"

Students present their designs.

Ponder the assignment
- What is the task?
- What would be hard about using SQ4R? What needs supporting?
- What is the goal state?
- What information will be presented?
- Show updated schedule.

Paper prototypes
https://uxplanet.org/the-magic-of-paper-prototyping-51693eac6bc3
http://web.mit.edu/6.813/www/sp17/classes/08-prototyping/

Why the eyes rotate in their sockets
Again, think of the human as a rational agent using its goals, sensors, actuators, and knowledge to accomplish tasks on a computer.

Information Design

Day 8 - October 20, 2021

The two most important things in visual design are: (1) The information that the user needs to accomplish their task must be visible, and (2) it should be easy for the user to access the information with a small number of eye movements (and ideally no hand movements).

The eyes rotate in their sockets to direct high resolution vision to objects in the world so that those objects can be perceived in greater detail (not to "shift focus"). People develop specific cognitive strategies to do this effectively.

Information Design (with a focus on visual information)
- The info necessary to do the task must be perceivable.
__ Some principles and elements of graphic design.
__ How these principles relate to human perception, memory, cognition, and action.

__ What is the info needed for P2? Model it after the examples in the book.

__ Paper prototypes
https://uxplanet.org/the-magic-of-paper-prototyping-51693eac6bc3
http://web.mit.edu/6.813/www/sp17/classes/08-prototyping/
__ Possibly CW's initial submission.

__ If there will be an in-class activity, count off by fives, and reseat yourselves.

**Day 9 - October 25, 2021**

__ Students present their interaction designs.
__ How many students brought a paper prototype or storyboard to class?
__ Possibly work in pairs. Take turns presenting to the other.
__ Can you really imagine what it would be like to use their system?
__ Project 3
__ Event-based programming
__ Working with sound, and sound files

**Day 10 - October 27, 2021**
Review for Midterm exam.

**Day 11 - November 1, 2021**
Midterm exam.

**Day 12 - November 3, 2021**

(Note to self: Get the lavalier microphone so I don't have to yell.
Review speaking points.
Set up two cameras.)

How is the programming going? (flexible, up to 20 minutes max)
Comment on student designs. (20 minutes)
• These should not be your final designs. Develop them.
• In every state, it should be clear what all 5 keys will do.
• Please keep your file sizes small, as in < 0.5MB.
• How will the user know the options? The state? Review the handout.

Mini lecture on "An Info-Processing Theory of Human Cognition and Performance"
(10 minutes, focused on design.)

Students collaborate in pairs on designs. (time permitting)

Return Midterm exam (30 minutes fixed)
• Switch camera for recording.
• Go through answers. Ask students to put a post-it on at most 3 Qs they would like me to read and comment on in front of the class, anonymously. I will see how many I can get through
• Provide responses.

Read for next week:
__ Slides on Canvas: An Info-Processing Theory of Human Cognition and Performance

Day 13 - November 8, 2021

It is useful for a designer to understand the basics of cognitive psychology; that is, how perception, cognitive processing, memory, and motor processing interact to produce human performance.

__ An Info-Processing Theory of Human Cognition and Performance
__ How it relates to P3.

Day 14 - November 10, 2021

It is useful for a designer to understand some of the basics of cognitive psychology; that is, how perception, cognitive processing, memory, and motor processing interact to produce human performance.
Day 15 - November 15, 2021

The ultimate question when evaluating the usability of an interface is "How will the interface support real-world users doing real-world tasks in a real-world task-environment?"

User Observation Studies
__ Cause and effect relationship (see lecture notes).
__ Validity.
   __ "Yours is Better" by Dell et al. (2012)
   __ The procedure and methodology section are for validity and reproducibility.
Walk through the CHI 2005 EyeDraw presentation and paper.

How do the details of the

Good representative tasks. For this project, perhaps the following, giving each task on paper, after the previous task has been completed.

- Listen to the headings and topic sentences, and write down a few sentences explaining what is discussed in the chapter.
- Identify a major real-world system failure discussed in the chapter.
- What are mental models?
- What is learned helplessness?

Or simpler:

- Start reading Chapter 2 of The Design of Everyday things.
  - What is the very short story that starts the chapter?
- Listen to all the headings of this chapter. Is there a section entitled....
  - Learned helplessness?
  - Affordances?
- Listen to all the headings and topic sentences of this chapter. Does the chapter discuss....
  - Mental Models?
  - Room thermostats?

Before class:

Open the Dell paper.
Open the EyeDraw presentation and paper.

ON HOLD:

It is useful for a designer to understand some of the basics of cognitive psychology; that is, how perception, cognitive processing, memory, and motor processing interact to produce human performance.

Human vision integrates all of these, including cognitive strategies.
Fitts' law: The cost of a hand movement.
Day 16 - November 17, 2021

Agenda:

√ In-Class Usability Study.

Day 17 - November 22, 2021

Agenda:

__ Questions on P4.
__ Informal feedback on P4 Initial Submission. I looked at half the submissions just to get an idea of where students are at. I'll stop evaluating with those. The same issues arose a lot. And so please pay attention to the issues that I will identify here.
__ Your hypothesis. What you are trying to show. Your Q.
__ Your conditions. Your independent variable. You need one.
__ How will performance across the conditions answer your Q?
__ Chapter 7: Walk through running an experiment. Note: tasks, graphs.
__ Informal Evaluation of Teaching