This is the end of Week 1. Now you should be able to:

* Explain the difference between good and poor interaction design.

A central concern of interaction design is to develop interactive products that are usable. By this is generally meant easy to learn, effective to use, and provide an enjoyable user experience.

* It uses familiar physical objects that indicate visually at a glance how many messages have been left.
* It is aesthetically pleasing and enjoyable to use.
* It only requires one-step actions to perform core tasks.
* It is a simple but elegant design.
* It offers less functionality and allows anyone to listen to any of the messages.

Understanding the User:

* taking into account what people are good and bad at
* considering what might help people with the way they currently do things
* thinking through what might provide quality user experiences
* listening to what people want and getting them involved in the design
* using "tried and tested" user-based techniques during the design process
* Explain the relationship between the user experience and usability.

To recap, usability is generally regarded as ensuring that interactive products are easy to learn, effective to use, and enjoyable from the user's perspective. It involves optimizing the interactions people have with interactive products to enable them to carry out their activities at work, school, and in their everyday life. More specifically, usability is broken down into the following goals:

* effective to use (effectiveness)
* efficient to use (efficiency)
* safe to use (safety)
* have good utility (utility)
* easy to learn (learnability)
* easy to remember how to use (memorability)

In addition to the four basic activities of design (??), there are three key characteristics of the interaction design process:

1. Users should be involved through the development of the project.

2. Specific usability and user experience goals should be identified, clearly documented, and agreed upon at the beginning of the project.

**3.** Iteration through the four activities is inevitable.

* Describe what and who is involved in the process of interaction design.

1. Identifying needs and establishing requirements.
2. Developing alternative designs that meet those requirements.
3. Building interactive versions of the designs so that they can be communicated and assessed.
4. Evaluating what is being built throughout the process.

* Evaluate an interactive product and explain what is good and bad about it in terms of the goals and core principles of interaction design.
* Explain how to conceptualize interaction.

Reasoning through your assumptions about why something might be a good idea enables you to see the strengths and weaknesses of your proposed design. Clarifying your usability and user experience goals is a central part of working out the problem space. This involves making explicit your implicit assumptions and claims. Assumptions that are found to be vague can highlight design ideas that need to be better formulated.

* It is important to have a good understanding of the problem space, specifying what it is you are doing, why and how it will support users in the way intended.
* **A** fundamental aspect of interaction design is to develop a conceptual model.
* There are various kinds of conceptual models that are categorized according to the activity or object they are based on.
* Describe what a conceptual model is and how to begin to formulate one.

By a conceptual model is meant:

***A description of the proposed system in terms of a set of integrated ideas and concepts about what it should do, behave and look like, that will be understandable by the users in the manner intended.***

* Outline the core interaction types for informing the development of a conceptual model.
* Interaction modes (e.g., conversing, instructing, manipulating and navigating, exploring and browsing) provide a structure for thinking about which conceptual model to develop.
* Interaction styles (e.g., menus, form fill-ins, focus on way model is used (tool, book, vehicle)) are specific kinds of interfaces that should be decided upon after the conceptual model has been chosen.

This is the end of Week 2. Now you should be able to:

* Explain some advantages of involving users in development.
* Explain the main principles of a user-centered approach.
* Present a simple lifecycle model of interaction design.
* Consider how interaction design activities can be integrated into the wider product development cycle.

This is the end of Week 3. Now you should be able to:

* Explain what cognition is and why it is important for interaction design.

Cognition is what goes on in our heads when we carry out our everyday activities. It involves cognitive processes, like thinking, remembering, learning, daydreaming, decision making, seeing, reading, writing and talking. Chunking lets us remember more things(503 733 3233)

**4.1 lecture:** Recognition vs Recall: Strength of GUI’s is that they emphasize recognition over recall. Downside to recognition based is that it slows people down. So find solutions to increase speed. Two kinds of knowledge declarative knowledge = facts and rules. Procedural knowledge= How to spin a basketball on finger, boot an iphone. User interface needs to be structured to use more declarative knowledge(its faster). Encoding = memorizing stuff (EX:appearance sound, rhythm, feel) Encoding is tied to constraints(like poems rhyme so you can factor out many words). Constraints reduce the amunt of encoding needed, easier to memorize.

* Discuss what attention is and its effects on our ability to multitask.
* Describe how memory can be enhanced through technology aids.
* Explain what mental models are.
* Try to elicit a mental models and be able to understand what it means.

**Normans 2 Gulf’s reminder:**

Gulf of Evaluation: What was the effect of what I just did.  
Gul of Execution: How do I do what I want to do.

**Suggestions of questions based on the gulfs:**

1.Useful feedback in Response to Inputs

2.Make UI consisten /w underlying workings.

3. Context sensitivedevices for guidance

7 steps:

1. What is the goal? What do we want to do

2. Execution intention(How, without details)

3. Sequence of actions involved in the how.

4. Physically do them.

5. Percieving with your senses what the world did in response. Did it work as it was supposed to?

6. Interpreting the perception. What the feedback means.

7. If system is in desired state.

Week 4 Lecture Perception:

Perception🡪senses, balance, temp, etc. Red stands out the most cuz lots of cones see red. Get rid of distracting colors. Want to create contrast to increase UI effectiveness. Saturate the dark color, desaturate the light. Senses are not in the brain. Banner Ads steal attention pre-brain. Brain cannot multi-task.

Interruptions:

**Immediate**: Something pops-up, requires immediate attention

**Mediated**: Computer decides when to interupt

**Scheduled**: Give interruptions at predictable times(save them up)

**Negotiated**: Best for productivity and learning (grammar error red squiggly line)

This is the end of Week 4. Now, you should be able to:

* Provide an overview of the many different kinds of interfaces.
* Highlight the main design and research issues for each of the interfaces.
* Describe prototyping and different types of prototyping activities.
* Produce simple prototypes from the models developed during the requirements activity.
* Produce a conceptual model for a product and justify your choices.
* Explain the use of scenarios and prototyping in design.