IXDSN210 Interaction Design 2: Systems (SPRING ONLY)

COURSE DESCRIPTION

In a world where data resides in the cloud and access is achieved with various devices used in different contexts, designing in terms of systems is a crucial part of delivering useful and compelling user experiences. However, the value of a systems approach to interaction design problems goes much deeper than the current networked world in which we live and gets at the essential nature of interactivity, communication and information itself. This course will introduce you to formal methods for analyzing systems and help you to see any process you choose as a system of objects, flows and states. You will learn to use observational methods to define systems, and you will practice different techniques for modeling systems including concept maps, system schematics and simple prototypes. You will learn to transform system models into an organized set of discrete transactional experiences by developing scenarios, use cases and wireframes. Finally you will explore the challenges of creating compact and effective functional specifications that communicate both the breadth and the details of your design.

LEARNING OBJECTIVES

1. Understand the value a systems approach brings to interaction design problems. Be familiar with the important thought leaders in the discipline, historical and current, and their contributions.

2. Understand how what a system model is, what it is good for, how to create one, and how to share it with others.

3. Be able to transform a system model into a standard interaction design artifacts such as personas, scenarios, use case, wireframes, prototypes and functional specifications.

COURSE OUTLINE

I. SEEING SYSTEMS

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Developing a systems lens for looking at the world.

> THE SYSTEMS APPROACH

Identify and discuss the important thought leaders in the development of the interaction design discipline including the explicit and implicit uses of a systems approach by these individuals

> DESCRIBING SYSTEMS

Introduce formal methods for describing systems. Use analogies to mechanics and thermodynamics to begin a discussion of cybernetics, the formal system most relevant to interaction design. Include a discussion of genetics, as the most important information system of all.

> LEARNING TO OBSERVE

Focus on seeing systems in our world, how and on what basis to draw boundaries. Using fieldwork, find and describe a system. Practice ethnographic techniques of contextual enquiry and interviews.

> ORGANIZING INFORMATION

Understand classification as a primary tool for making sense of complexity. Discuss formal taxonomies, the value of using standards, and the crucial role that terminology plays in communication and sense making.

II. MODELING SYSTEMS

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Learning to express systems in a tangible form.

> A REPRESENTATION OF REALITY

Introduce rigor about what is and is not a model within context of Box's insight that all models are wrong, but some are useful.

> IDENTIFYING THE PIECES

Learn to breakdown software or real world systems into objects and flows. Introduce ideas of transactions and state to clarify time's role as the fundamental interactive force.

> TELLING STORIES

Make explicit the connection between models and narrative. Make evident analogies between dramatic conventions like theme, structure, scene, act, meter and interactive experiences. Communicate the power in the fact that all humans understand stories.

> MENTAL MODELS AND DATA MODELS

Present the relationship between mental and data models as the ultimate "API" for all man-machine interfaces. Demonstrate how assumptions drive both mental and data models, and vice-versa.

> ABSTRACTING THE CONCEPTS

Introduce concept maps as premier modeling tool for information spaces. Learn to read and create them.

III. DESIGNING FROM SYSTEMS

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The practical application of the systems approach to interactive design.

> PLAN THE WHOLE EXPERIENCE

Given the networked world introduced in the course description, consider how a system model applies to an entire eco-system of devices and contexts.

> PERSONAS, SCENARIOS AND USE CASES

Practice the steps involved in going from a system model to a set of specific, tightly constrained, interaction problems.

> WIREFRAMING

Understand wireframes as a type of system model that represents navigation, state and transactions in terms of screen/device layout.

> BUILDING A PROTOTYPE

Learn to model flow through time. Practice simple prototyping techniques. Understand how to make the appropriate prototype for a given design question.

> SPECIFYING BY SHOWING AND TELLING

Introduce a specification framework, as the final modeling concept for the class. Develop the rationale for a specification as an essential communication tool; characterize the distinction between showing and telling, and how to understand which is required for whom.

> FINAL PROJECT

Last week devoted to finishing the final project.