

## **Introduction to Human-Centered Design**

Course number: IEME E4200

Fall Semester 2016, second half, 5 consecutive Fridays

November 4 – December 9, 2016, [9:00 - 12:00 + 1:00 – 2:30]

0 credit, P/F on transcript

Class will meet in CEPSR 750

This class is open to graduate students from Columbia Engineering and Columbia Business School, as well as advanced undergraduate students with permission of instructor. Students from GSAPP and other schools are also welcome to apply to the instructor. Enrollment will be limited to 50 students.

Today design has emerged as a key differentiator among the most valuable brands, products, and services in the world. The reason for this is customers, consumers, constituents, employees - the users - are now in control. Users are more discerning, they have more choices and are more comfortable exercising their choice. Users are demanding that their products and services work for them in the fullest sense: that their total experience is as good as it can be. Companies, other organizations and even governments are finding that they have to address the demands of their users, and do so with an unaccustomed urgency. If they do not, their users will exercise their choices and change brand, change behavior, or even change their government.

Human-Centered Design is an approach that puts the customer, consumer, citizen or employee at the center of the process and designs around them rather than asking human beings to adapt to technological, process, tradition or other constraints. By putting the customer at the center of the enterprise, you establish a shared meaning that brings teams together and guides their work. Human-centered design teams develop better products and services which are more likely to succeed.

In this course, students will learn the vocabulary of design methods and gain an understanding of design processes. The class will be organized around small group projects that will involve writing, sketching, and creating simple prototypes using cardboard and other material, and students' personal computers. The course will be a fast-paced introduction: you will not become an expert, but you will gain insights into the concept of human centered design. We will begin with the design of a simple product and work our way towards the design of more complex systems of products and services, and then on to the design of a business.

Each class will meet for 4.5 hours divided into three 1.5 hour blocks with one 15-minute break and one 1-hour lunch break. Students will be expected to attend all parts of all sessions and participate in team activities, presentations, sharing and critique. Some additional time will be assigned outside of class for a small amount of reading and project work.

### **Deliverables:**

- Field research documentation
- Requirements documents
- Design descriptions
- Prototypes
- Videos

## Preliminary Class schedule and Topics:

### November 4:

- Introduction to Human-Centered Design
- Ethnographic research
- Reframing and creating a well posed problem
- Immersion in a design challenge

### November 11:

- Segments and Personas
- Journey Maps
- Immersion in a design challenge

### November 18:

- Brainstorming and Arguing
- Prototype to learn - Evaluation and Resonance Testing
- Immersion in a design challenge

November 25: (day after Thanksgiving – no class)

### December 2:

- Customer Experience Design
- System Design
- Immersion in a design challenge

### December 9:

- Team Design
- Business Design
- Immersion in a design challenge

## Sample of Reading Assignments:

- Chris Bangle, How BMW turns Art into Profit, HBR
- Roger Martin, The Design of Business

## Instructors:

Harry West, CEO, frog

Harry leads frog. He helps organizations see what people will want in the future and envision how to transform their business to make that future real.

Turi McKinley, Executive Director, frog NY studio

Turi leads the design research and co-creation practices in the NY studio. Globally she leads frogCamp, and partners closely with companies seeking to develop new skillsets and capabilities for human centered design and innovation.

Here is a description of frog from its website:

frog is a global design and strategy firm. We transform businesses at scale by creating systems of brand, product and service that deliver a distinctly better experience. We strive to touch hearts and move markets. Our passion is to transform ideas into realities. We partner with clients to anticipate the future, evolve organizations and advance the human experience.

frog's twelve studios across three continents house a creative community that includes interaction design, industrial design, visual design, design research, design technology, mechanical engineering, copywriting, film, software engineering, quality assurance, solutions architecture, business strategy, and program management. We take on the biggest challenges for many of the leading companies in the world. Our design vision and executional focus pull these organizations through large-scale transformations driven by new technology and changing customer expectations. We design new systems for these companies and work with them to build new capabilities.

For more information or to apply for the class, contact:  
Nicole Loo, [nicole.loo@columbia.edu](mailto:nicole.loo@columbia.edu)

Applications due by: Thursday, October 20<sup>th</sup> at midnight

Applications should include information about students' undergraduate or graduate status; SEAS, CBS or other school affiliation; 1-paragraph explanation of reasons for being interested in taking the course and commitment to attending all parts of all 5 sessions.