Designing for Behavioral Change

67–356

"Interaction design is about shaping behavior — about creating a representational dialogue between a person and technology. An interaction designer thinks mostly about people and works to craft an interface on top of technology to help a person achieve their goals."
— Jon Kolko

"We designers have been working to stimulate people's souls and minds. But in reality, I'm not thinking about this pen when I'm writing with it. Rather, it's when you least think about it that the pen can be held most naturally. I developed the ability to find this world, made only of actions that human beings make subconsciously, without thought. Design needs to be plugged in to natural human behavior. I like to say 'Design dissolving in behavior'." — Naoto Fukasawa

Carnegie Mellon University

Syllabus

About this Studio	Our behaviors are influenced in large part by the built world around us. Information, devices, physical environments and architectures all contribute to our decisions from what we consume to how we participate as citizens. These influences occur mostly without our knowing; we're manipulated in ways that may or may not be in our interest. Designers and technologists have a more direct hand in how our world takes shape and subsequently on people's actions. To design from a human-centered perspective, we are tasked with shaping behaviors for the good of the individual, for the good of our communities, and for the good of our interconnected planet. Positively affecting behaviors and influencing decision-making on an individual level contributes to these greater positive outcomes, ones that can reduce global energy consumption, improve public health, shape the urban experience, and create new paradigms of human interactions.

A long history of design exists to manipulate people into actions and decisions that go against their interest and that of the common good. This has led to excessive consumerism, landfills piled high, the preception that self worth comes from product ownership, and digital interactions that leave users frustrated and confused.

A rich history in the social sciences exists to study the positive and negative forms of influence and behaviors through psychology, sociology, and behavioral economics. The influence of design occurs in information design, interaction design, space- and place-making, human factors and ergonomics, and business design. In this studio we employ a variety of human-centered design methods to shape to information, products, interactions, and environments, then test and iterate those ideas in a variety of contexts. We will practice a few of the ways designers act as agents of positive change for individuals, communities, and the environment.

Spring 2016	9 Credit Hours	Alexander R. Wilcox Cheek	alexcheek@cmu.edu
Sunday and Tuesday	Prerequesite: 67–265	Assistant Teaching Professor	www.arwc.xyz
3:00 pm – 4:20 pm	Fundamentals 1: Shaping	Information Systems	twitter @arwcheek
Studio 1030 & Lab 1032	Interactions and Experiences	Office 2155 (Door is Open)	

Expectations	I expect each student by the end of this course to be versed with the skills of ideation, prototyping, and engagement with people and environments. A human- and ecologically-centered design disposition means to design in response to this insight. The results are a more just, respectful, meaningful, and holistic design. This class intends to build positive values and foundational skills as you design for interactions.

Objectives	
↗	To develop a command of the **design process** towards the design of interactions.
↗	To **engage with communities** of people to understand latent and expressed needs and desires.
↗	To develop an approach that **balances intuition with research insight**.
↗	To develop abilities in **translating research findings** into focused design outcomes.
↗	To develop **lateral thinking** abilities through ethnographic research and design inquiry.
↗	To build **concept development abilities** through individual and group design activities.
↗	To build and develop the most fundamental of design activities: **making and prototyping**.
↗	To develop **critical thinking** through design criticism, evaluation, and written work.

Text & Materials		
↗	*Universal Methods of Design* by Hanington, et al.	ISBN 978–1592537563
↗	Sketch App 3 for Macintosh	

Evaluation	Generally speaking, projects are evaluated on **research** (evidence that you have conducted a spectrum of research and turned it into interpretations and models); **ideation** and **concept development** (strength of the idea and how well it responds to the research or insight; how grounded and relevant the concept direction is); and **implementation** and **validation** (attention to detail, professional presentation, validation with user communities and improvements as needed). The course rubric details evaluation criteria for each project.

25%	Interventions	20%	Communications	10%	Participation
20%	Interactions	25%	Space & Place	100%	Final Grade

Decorum	Please do not multi-task this class with other work, email, texting, or web browsing. Evidence that you are not fully engaged in the class will be reflected in your participation grade and you may be asked to leave the class.
	Please maintain good communication with me throughout the course. If you feel like the class is not matching your expectations, please let me know *during* the semester.

Extracurricular	Pinterest is a great resource for designers of all kinds. Get an account and start pinning! Students are also encouraged to take advantage of cultural activities and architectural landmarks in Qatar like mathaf: arab museum of modern art, Museum of Islamic Art, Richard Serra's two installations, Souq Waqif, Jazz at Lincoln Center, and whatever else is fun and interesting.

Course Flow

| Spring 2015 | Sunday and Tuesday 3:00 pm – 4:20 pm, Studio 1030 and Lab 1032 |

| Introduction | Sun, Jan 10 | Syllabus Review & Welcome |
| | | SLIDES: Designing for Behavioral Change |

Interventions — Tue, Jan 12

PROJECT ONE: In teams of two, develop two tangible prototypes for three of the issues from the list below (for a total of six deliverables). Ideate and prototype ways you might **trigger a positive change from the community through environmental changes**. This can be a noticeable intervention or one that subtly nudges participants. Deliver your concepts as physical mockups and documentation of the mockups in context. These deliverables will be handed off to Behavioral Psychology for validation and testing.

→ People need to wash their hands after using the restroom.
→ Leaving books and bags all over the atrium, preventing others from using the tables.
→ More people should take the stairs more frequently than the elevator.
→ Not using the shoe racks at the prayer rooms.
→ People leave their printouts on the copy machines and never pick them up.
→ You're not supposed to bring food or drinks into the library.

→ Leaving stuff in conference rooms.
→ Taking ten too many napkins at the canteen or ten too many paper towels in the bathroom.
→ Forgetting outdated posters on the bulletin boards.
→ Using the wrong trash receptacle (not separating waste from recycling).
→ Trays are not being returned in the cafeteria area.
→ Propping open the smoking door with a stone.
→ Should be wearing ID badge when entering the building.
→ ... ?

Sun, Jan 17	Field Work
Tue, Jan 19	Studio Day
Sun, Jan 24	Studio Day
Tue, Jan 26	Studio Day
Sun, Jan 31	Studio Day
Tue, Feb 2	PROJECT DUE: Submissions and Critique

Interactions — Sun, Feb 7

PROJECT TWO: Individual students will design a digital interface in Sketch 3 for a thermostat that **nudges users into better decisions around heating and coolin genergy consumption**. Determine a format, either square, rectangular, or circular, and design a set of screens listed below with a consistent and thoroughly considered design language. The design language needs to demonstrate a consistent application of typography, color, layout, and graphic elements. The user flow should be simple and intuitive.

1 Default Screen with Current Indoor Temperature
2 Temperature Adjustment with a Default Choice
3 Temperature Adjustment with Social Proof
4 Temperature Adjustment with Loss Aversion
5 Temperature Adjustment with Priming Question
6 A Chart Screen showing Temperature Changes over One Week
7 Rush Hour Notification Screen
8 Simple Settings Screen with Reset, Schedule, Away, and Network

IN-CLASS VIEWING: Deena Rosen, IxDA 2015: https://vimeo.com/120403188

| Tue, Feb 9 | Studio Day |
Sun, Feb 14	Studio Day
Tue, Feb 16	Studio Day
Sun, Feb 21	Studio Day
Tue, Feb 23	PROJECT DUE: Submissions and Critique

Sun, Feb 28 & Tue, Mar 1 **SPRING ☀ BREAK**

Communications

Sun, Mar 6 — PROJECT THREE: Design a poster to **elicit a behavioral change, specifically a call-to-action for your audience**. Identify an issue that in your mind deserves community attention. This could be a societal matter, environmental issue, political or economic, big or small. Compose a clear, plain language statement calling on your audience to act. Language is key to the success of this piece: marketing spin or soft-sounding appeals won't work. The call-to-action should be evidence-driven and difficult to dismiss. Language can be different between the two posters. Create two A3 posters — portrait or landscape — in Adobe InDesign applying the design principles covered in class.
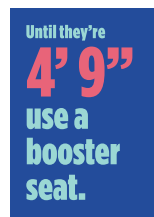
Poster 1:
Type Only +
Color Palette
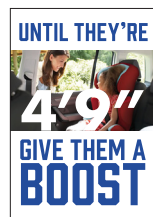
Poster 2:
Type and
Image

Tue, Mar 8	Brainstorming & Ad Council Reels
Sun, Mar 13	Preliminary Concepts Due + Pin-up
Tue, Mar 15	Studio Day
Sun, Mar 20	Studio Day
Tue, Mar 22	PROJECT DUE: Submissions and Critique

Sun, Mar 27 — **PROFESSOR IS OUT OF TOWN** ✈ **NO CLASS**

Student groups are expected to begin their fieldwork.

Space & Place

Tue, Mar 29 — PROJECT FOUR: Students in groups of 2 to 3 will identify a neighborhood in Doha that they wish to focus on and develop design solutions that address issues in its urban landscape. Groups should begin by studying the neighborhood and documenting it with photographs of its buildings and infrastructure, the movements of people, it's green spaces, and other elements. Map these characteristics. Through a process of research and ideation, produce a document that presents **balanced criticisms of the neighborhood with specific design solutions that promote public health, pedestrian safety, and a more cohesive and integrated urban fabric**. Documents should include maps, diagrams, storyboards, journey maps, and annotated photographic evidence. Districts in Doha to consider focusing on may include: West Bay, The Corniche, Msheireb, Education City, The Pearl, the neighborhood surrounding Souq Waqif, or any zone that is both dense and shared use. Address the following themes and aspects:

Geometry ↓	Interactions ↓	Features ↓	Landscaping ↓
Roadways and Bikeways	Recreation	Materials	Trees and Canopy
Public Transit	Programming	Lighting	Roadway Plantings
Sidewalks	Commerce	Signals	Sidewalk Plantings
Crosswalks	Play Areas	Seating	Stormwater Capture
Medians	Plazas	Wayfinding	
Connectivity	Traffic Calming	Waste	
Legibility	Touchpoints & Exposure	Public Art	
Accessibility	Bicycle Networks	Spans, Stairs	
		Facades	

Sun, Apr 3	Studio Day
Tue, Apr 5	Studio Day
Sun, Apr 10	Studio Day
Tue, Apr 12	Studio Day
Sun, Apr 17	Studio Day
Tue, Apr 19	PROJECT DUE: Submissions and Critique