

Spring 2012

Introduction to Design for Social Innovation

Instructor: Kate Canales

Office Hours: By Appointment • 512-964-4587 • kate.canales@frogdesign.com

Course Description:

Over the past decade, the field of design and the field of business have become increasingly fascinated by one another's practices, methods and objectives. Today, many smart business people know the vocabulary and thinking of design, and vice versa. Nowhere is this combination of the two fields more powerful than in social entrepreneurship – smart, passionate people starting businesses of meaning. This course is for individuals interested in learning how to put the tools of design toward their passion for changing the world.

“Design Thinking” has emerged as a popular term to describe the application of design theory to any number of problems. This course is both design thinking and design *doing*. Students will use the principles of design research, research synthesis, ideation, prototyping and storytelling to develop a thoughtful and compelling idea for a new product or service that has genuine impact and human value. The tool kit learned during this course is a problem solving tool kit, applicable to problems outside the traditional boundaries of design. In fact, some argue that “Design Thinking” is a set of tools applicable to almost any problem, from the traditional design form-giving to large systemic and social problems. (Hence, its exciting application to social innovation.) The reason Design Thinking works so well for systemic social problems is its focus on understanding the human needs, motivations and behaviors that underlie a design challenge first. Design Thinking then responds explicitly to those needs

The spirit of the course lies in a now-famous interview with Charles Eames from the late 1960's. Eames was arguably one of the most famous designers of all time, giving us, in partnership with his wife, Ray, some of the most iconic shapes and forms of modern culture. But even Eames knew design's power was far beyond the shape of a chair. Here are a few choice tidbits from that interview:

Interviewer: What is your definition of design?

Eames: A plan for arranging elements in such a way as to best accomplish a particular purpose.

Interviewer: What are the boundaries of design?

Eames: What are the boundaries of problems?

Interviewer: Does the creation of design admit constraint?

Eames: Design depends largely on constraints.

Interviewer: What constraints?

Eames: The sum of all constraints. Here is one of the few effective keys to the design problem: the ability of the designer to recognize as many of the constraints as possible (and) his willingness and enthusiasm for working within these constraints—the constraints of price, size, strength, balance, surface, time, etc.; each problem has its own peculiar list.

Interviewer: To whom does design address itself: to the greatest number (the masses)? The specialists...the enlightened amateur...a privileged social class?

Eames: To the need.

Students will leave this course with 1) an understanding of design process, 2) a methodology for researching human needs at the heart of a problem, 3) frameworks for interpreting those needs into opportunities for a social business, 4) skills and confidence in rapid visualization and making ideas tangible through drawing and prototyping, 5) the thick skin required to take critique, and 6) techniques for making ideas resonate with potential funders and potential customers.

Course Structure:

Design work is collaborative. The course will focus around a group project which will run throughout the semester. A portion of your grade will be determined by your team members' interpretation of your participation in the group project.

Broad project topics will be pre-determined and groups will choose a topic that is an area of passion for them. Each topic will be associated with an outside expert/mentor who has deep domain expertise in that area. This person will serve as your first interview on the topic and will share their local network with you as necessary for research purposes. These mentors will also participate in the Mid-term Research Presentation and the Final Presentation and will confer with the instructor about the success of the final project concepts.

Classes will be split between discussion of readings and assignments, and hands on exercises. Discussions will be interactive so please come prepared to ask and answer questions. Some classes may include outside lecturers. Part of your grade will depend on your level of enthusiasm for and participation in these discussions and exercises. Factors considered in determining the class participation portion of your grade:

- Do you promote a learning environment where everyone feels free to express themselves and stretch their thinking?
- Do you take risks by sharing your thoughts and experiences, particularly when they are still forming?
- Are you a good listener?
- Are you willing to interact with classmates in discussion or exercises in a way that contributes to their learning?
- Do you make your points succinctly?

Materials:

In addition to books and course readings, purchase a notebook (8" by 10" or larger, unlined with blank or gridded pages) for sketching. This notebook is your Log Book. You may purchase it after the first class meeting if you need further guidance about what to choose.

Determination of Grade:

7 Assignments, 5 points each	35 Points
1 = abysmal/redo	
2 = lame but I won't make you redo it	
3 = satisfactory	
4 = very good	
5 = professional quality/outstanding	
• Assignments 1, 2 and 3 will not be graded, but your participation grade will be affected if they are not submitted.	
• Most of the assignments will be submitted and graded as a group.	
Peer Review (from group project team):	10 Points
Class Participation:	15 Points
Research Presentation:	15 Points

Final Presentation:	25 Points
Total Grade	100 Points

Assignments:

Assignments are due in hard copy form at the beginning of class. Please do not email assignments to the instructor. Assignments not submitted on time will receive 0 points, though each group will be allowed one three-day extension for extenuating circumstances.

Course Administration:

1. Students are expected to attend every class. If you cannot attend, please send a report of your preparation prior to the class you are missing in order to receive partial credit for class participation.
2. Complete all readings and assignments in advance of class unless otherwise instructed.
3. A key component of creative work is in the engagement of different ways of thinking and documenting. We will be “thinking with our hands” as much as possible in this course. Therefore, laptops may not be used during lectures or discussion, but may be used if absolutely needed during exercises or course project work in class. During class, cell phones and other electronic devices must be turned off.

Course Outline

	Topic	Reading	Assignment
1	Intro to Design	<i>The Design of Business</i> , Roger Martin (Chapter 1: the Knowledge Funnel) <i>Change by Design</i> , Tim Brown (Chapters 1, 2, 5 and 8) "Behavioral Economics: A Primer," Alain Samson and Orlando Wood "Design Thinking for Social Innovation," Tim Brown & Jocelyn Wyatt, <i>Stanford Social Innovation Review</i>	Assignment 1 (INDIVIDUAL): Personal Intro. (To be completed in class)
2	Collaboration and Introduction to Contextual Design Research	<i>A Whole New Mind</i> , Daniel Pink (Chapters 4, 5 and 6) "Ethnography in the Field of Design," Christina Wasson <i>Thoughtless Acts</i> , Jane Fulton Suri (p. 162 – 180) "Insight into What Really Matters," Rick Robinson	Assignment 2 (GROUP): "Three in One"
3	Contextual Research Methods	"Research Methods for Designing Effective Experiences," Nathan Shedroff (from <i>Design Research: Methods and Perspectives</i>) "Non-Assumptive Research," Dorothy Deasy (from <i>Design Research: Methods and Perspectives</i>)	Assignment 3 (GROUP): "AEIOU" and Expert Interview schedule and guide GUEST LECTURE/WORKSHOP: Jon Freach and Ben McAllister: Research Photography
4	Research Planning		Assignment 4 (GROUP): Audio from expert interview and Revised "Big Question" document
5	In the Field		Assignment 5 (GROUP): Research Plan DUE THREE DAYS PRIOR TO NEXT CLASS SESSION
6	Synthesis	<i>Exposing the Magic of Design</i> , Jon Kolko (Chapters 1, 2, 5, 6, 7 and 8) "Ambiguity as a Resource for Design," Bill Gaver "Making Sense of Making Sense," Rick Robinson The Key to Innovation is Problem Definition, Min Basadur (trying to source article) VIDEO: "Social Entrepreneurs: Pioneering Social Change," Skoll Foundation http://www.youtube.com/watch?v=jk5LI_WcosQ	Assignment 6 (GROUP): observation and photography "Big Boards"
7	Group Working Session		Assignment 7 (GROUP): How Might We...Definitions
8	Research Presentations		
9	Rapid Visualization and Ideation	<i>Rapid Viz</i> , Kurt Hanks and Larry Belliston (excerpt TBD) <i>Experiences in Visual Thinking</i> , Robert McKim (excerpt TBD) <i>The Art of Innovation</i> , Tom Kelley (Chapter 4: The Perfect Brainstorm) "The Design of Possibilities: the Shift from Object to Situation," Ralf Caplan (in <i>By Design: Why there are no locks on the bathroom doors in the Hotel Louis XIV and other object lessons</i>)	Assignment 8 (INDIVIDUAL): Rapid Visualization GUEST LECTURE: Michael McDaniel and Ahmed Riaz: "Sketch Jam"
10	Evaluation and Prototyping	<i>Made to Stick</i> , Chip Heath and Dan Heath (excerpt TBD) <i>The Art of Innovation</i> , Tom Kelley (Chapter 6, Prototyping is the Shorthand of Innovation)	Assignment 9 (GROUP): Brainstorms
11	Critique and Iteration		Assignment 10 (GROUP): Prototypes
12	Storytelling, Documentation and Presentation	<i>Resonate: Present Visual Stories that Transform Audiences</i> , Nancy Duarte (excerpt TBD)	Assignment 11 (INDIVIDUAL): Storyboards
13	Group work session		

14	Final Presentations	
----	---------------------	--

Session 1: Introduction to Design

Guiding Questions and Objectives:

- What is design, and what are its core principles?
- Can design be codified?
- What does this have to do with Social Entrepreneurship?
- Understanding the art of “time-boxing” (a guiding concept for the course)
- Overview of design process
- Overview of course

Readings (to be completed in advance of class):

Martin, Roger. *The Design of Business*, Chapter 1
 Brown, Tim. *Change by Design*, Chapters 1, 2, 5 and 8
 Samson, Alain, and Orlando Wood. “Behavioral Economics: A Primer”
 Brown, Tim, and Jocelyn Wyatt, “Design Thinking for Social Innovation,” *Stanford Social Innovation Review*

Assignment 1 (distributed and completed in class):

Personal introduction: A questionnaire for the instructor to use to get to know all class participants. Includes questions about background, interest in course, assumptions about course content, level of experience with design. Will be used in part to balance groups for group projects. **Completed and graded individually.**

Session activities:

- Discussion of readings and guiding questions
- Completion of Assignment 1
- Introduction of group project topic areas
- Formation of groups
- Mind map activity (in groups)
- Review of Assignment 2

Session 2: Collaboration and Introduction to Contextual Design Research

Guiding Questions and Objectives:

- Is “good” design collaborative?
- What is the power of multi-disciplinary teams?
- Establish collaboration in project groups
- Why does empathy matter in design?
- What is the theory of ethnography in design research?
- Overview of design research as a methodology and philosophy
- How to use the classroom space

Readings (to be completed in advance of class):

Pink, Daniel. *A Whole New Mind*, Chapters 4, 5 and 6
 Wasson, Christina. “Ethnography in the Field of Design”
 Suri, Jane Fulton. *Thoughtless Acts*, p. 162-180
 Robinson, Rick. “Insight into What Really Matters”

Assignment 2 (due at start of class):

1. “Three in One:” From David Sherwin’s Creative Workshop: 80 Challenges to Sharpen Your Design Skills. This exercise is about symbolism, overcoming preconceived notions, and the power of storytelling. It is intended to get groups working together, to expose differences in style and background, and begin a dialog about how to work together.

2. Schedule an interview with the expert/mentor assigned to your group. This interview should take place between Day, Date ##th and Day, Date ##th. Please alert me early if you are having difficulty contacting or scheduling with your expert/mentor.

Completed and graded as a group.

Session activities:

- Discussion of readings and guiding questions
- Discussion of Assignment 2
- Team building exercise
- Revisit mind-map from previous class
- Early research planning discussion

Session 3: Research Methods

Guiding Questions and Objectives:

- What are the fundamental differences between market research and design research?
- Where is market research more valuable than design research and visa versa?
- Discussion of research methods, mindsets, tools and process.
- Deep dive into photography and visualization in design research (guest lecture).

Readings (to be completed in advance of class):

Shedroff, Nathan. "Research Methods for Designing Effective Experiences," from Design Research: Methods and Perspectives
 Deasy, Dorothy. "Non-Assumptive Research," from Design Research: Methods and Perspectives

Assignment 3 (due at start of class):

1. "AEIOU:" This assignment helps articulate an outline of your ultimate research plan. Use your mindmap from the previous class as a starting point. Capture all of the research questions you hope to answer starting with the AEIOU Framework from Wasson. (Activities, Environments, Interactions, Objects, and Users. Further this analysis into a concise set of 4-6 "Big" research questions to guide future planning.
2. Expert Interview Guide: This document provides a structure for an interview with your assigned expert. The guidelines for this interview should be based on your 4-6 "Big Questions."
3. Ensure that interview with your expert is scheduled and confirmed.

Completed and graded as a group.

Session activities:

- Discussion of readings and guiding questions
- Discussion of Assignment 3
- Research methods activity in groups
- Guest Lecture: Research Photography and Documentation, Jon Freach and Ben McAllister, frog

Session 4: Research Planning

Guiding Questions and Objectives:

- What methods are right for which questions?
- Fundamentals of recruitment/finding your users
- Begin research plan for each group

Readings (to be completed in advance of class):

No reading this week

Session activities:

- Discussion of readings and guiding questions
- Discussion of Assignment 4
- Research planning activity in groups (discussion guide, equipment checklist, interview/observation schedule, early synthesis planning)
- Guest Lecture: Research Photography and Documentation, Jon Freach and Ben McAllister, frog

Assignment 4 (due at start of class):

1. Notes and audio from expert/mentor interview.
2. Revision to “Big Questions” document based on expert/mentor interview
Completed and graded as a group.

Session 5: In the Field _____

This week’s session is replaced by time for field research. Please schedule interviews and observations at convenient times throughout the week and use this class period to check in with the instructor and one another for extra support. A research plan will be due to the instructor 2 days prior to the scheduled class meeting. **I will be available during class hours in the class studio to consult on research plans, schedules, tools, interview guides etc.** PLEASE take advantage of this time. If you have not made significant headway on field research by this date, your final work will likely show for it. Let me help you get and stay on track!

Readings (to be completed in advance of class):

No reading this week.

Assignment 5 (DUE THREE WORKING DAYS PRIOR TO CLASS IN DIGITAL FORM TO INSTRUCTOR’S EMAIL):

Final research plan. A template for this plan will be provided. Research plan should include at least 3 distinct research methods. If your team does not have a camera, audio recorder or other key piece of equipment by this due date, please inform the instructor. Photographs and direct quotations are an expectation in your research report.

I will provide written feedback on your plan prior to the scheduled class period so you can revise your plan as necessary. **Completed and graded as a group.**

Session 6: Synthesis _____

Guiding Questions and Objectives:

- The value of stories as data.
- What do I do with all this data? These photos? These stories?
- Process and methods for creating actionable opportunities from the muddle of research stories.
- Begin data synthesis in groups.

Readings (to be completed in advance of class):

Kolko, Jon. Exposing the Magic of Design, chapters 1, 2, 5, 6, 7 and 8
 Gaver, Bill. “Ambiguity as a Resource for Design”
 Robinson, Rick. “Making Sense of Making Sense”
 Basadur, Min. “The Key to Innovation is Problem Definition”
 VIDEO: “Social Entrepreneurs: Pioneering Social Change,” Skoll Foundation
http://www.youtube.com/watch?v=jk5LI_WcosQ

Session activities:

- Discussion of readings and guiding questions
- Discussion of in-field research experiences
- Creation of Synthesis “Big Boards”
- Framework for synthesis

Assignment 6 (due at start of class):

“Big Boards:” Follow the template provided to begin the creation of synthesis boards. We will continue to work with these boards for the duration of the project. **Completed and graded as a group.**

Session 7: Group Working Session _____

Each team will have time with the instructor for feedback on the state of their research and synthesis. The remainder of the class period will be spent refining synthesis and planning for the research presentations.

No readings are due for this session.

Assignment 7 (due at start of class):

“How Might We...Statements:” Using Min Bassidur’s structure for framing problem statements, each group should formulate at least 20 strong How Might We statements directly from the research synthesis. These statements will be revised and will ultimately direct the creation of specific solutions. **Completed and graded as a group.**

Session 8: Research Presentations _____

Each team will present a 15 minute overview of its research and (most importantly) the opportunities for new products or services that come from the research. Additional time will be allowed for questions from the audience. This does NOT mean that the teams are expected to present solutions to the topics they have researched, but rather, well articulated problem statements/needs that the research has defined. Solutions to those needs will be the focus of the remainder of the course.

This session will be attended by several outside guests/experts who will provide feedback to the instructor on the quality of the presentations (both content and presentation). These outside guests will hopefully include the teams’ expert mentors and course guest lecturers.

No readings or other assignments are due for this session.

Session 9: Rapid Visualization and Ideation _____

Guiding Questions and Objectives:

- Why does externalization of the design process help to solve problems?
- What is “Drawing on the Right Side of the Brain?”
- The Rules of Brainstorming

Readings (to be completed in advance of class):

Hanks, Kurt and Larry Belliston. [Rapid Viz](#)

McKim, Robert. [Experiences in Visual Thinking](#)

Kelley, Tom. [The Art of Innovation](#), chapter 4: The Perfect Brainstorm

Caplan, Ralph. “The Design of Possibilities: the Shift from Object to Situation,” (in *By Design: Why there are no locks on the bathroom doors in the Hotel Louis XIV and other object lessons*)

Session activities:

- Discussion of readings and guiding questions
- Guest Lecture: Michael McDaniel and Ahmed Riaz: “Sketch Jam”
- Visual Thinking Exercises
- Group Brainstorms

Assignment 8 (due at start of class):

Visual Thinking: Assignment from the McKim book to practice visualization of ideas and build confidence with drawing skills. **Completed and graded individually.**

Session 10: Evaluation and Prototyping

Guiding Questions and Objectives:

- What makes an idea “good?” How do we evaluate ideas?
- How do we test ideas without investing too much in their development?
- What makes a prototype valuable?

Readings (to be completed in advance of class):

Heath, Chip and Dan Heath. Made to Stick

Kelley, Tom. The Art of Innovation, Chapter 6: Prototyping is the Shorthand of Innovation

Session activities:

- Discussion of readings and guiding questions
- Introduction to storyboarding/storyboarding activity

Assignment 9 (due at start of class):

“Brainstorms” Complete brainstorms for at least 5 of the group’s strongest “How Might We” questions and bring ALL ideas to class/post on Big Boards. Each brainstorm should show evidence of QUANTITY, VISUALIZATION, and WILD IDEAS.

Session 11: Critique and Iteration

Guiding Questions and Objectives:

- Why is the first solution so rarely the right solution?
- Understanding how and when to iterate.
- Methods and emotional strength to gather feedback, and make changes
- “Fail early to succeed sooner.”

Readings (to be completed in advance of class):

TBD

Session activities:

- Discussion of readings and guiding questions
- Critique from peers on early solutions
- Iteration activity

Assignment 10 (due at start of class):

Early prototypes: Each group should come to class with 3-5 solutions to their topic areas sketched or storyboarded and described using the provided template. These solutions will be discussed, debated, and built upon with a group of peers from another group.

Session 12: Documentation, Storytelling and Presentation

Guiding Questions and Objectives:

- Where does design meet marketing and how?
- What is the format for a good story?
- What are the principles for making a presentation great?

Readings (to be completed in advance of class):

Duarte, Nancy. Resonate: Present Visual Stories that Transform Audiences (excerpt TBD)

Session activities:

- Discussion of readings and guiding questions
- Finish iteration on single selected concept
- Outline the final story/presentation of your idea
- Guest Lecture: Presentation Skills (TBD)

Assignment 11 (due at start of class):

Storyboards: Each individual should create a storyboard that presents key aspects and attributes of the selected solution. A successful assignment will incorporate sticky research stories, rapid visualization skills and components of storytelling from the reading. **Completed and graded individually.**

Session 13: Group Working Session _____

Session 14: Final Presentations _____