

IDP 316: [Critical] Design Thinking Studio

Fall 2016

- Course Schedule:** Mondays and Wednesdays 1.10pm to 4.00pm
Fridays 1.10pm to 2.30pm
- Location:** Capen Annex
- Instructor:** Zaza Kabayadondo, zkabayadondo@smith.edu
- Office Hours:** (to be held at Capen Annex)
Wednesdays 11.00am to 12.00pm (by appointment)
Fridays 11.00am to 12.00pm (by appointment)
- Course Website:** <http://smithiesdesign.com/critical-design-thinking-studio/>
- Course Application:**
<http://tinyurl.com/IDP316-Fall2016>.
Due on Sunday 11 September 2016, at 11.59pm.

There is a course application for permission to enroll. There are no prerequisites and first years are eligible, but preference will be given to seniors, juniors, and sophomores.

*This is a 4-credit course. The estimated weekly time on this course will be 12 hours:
7.5 hours of in-class engagement split into instruction, workshop and also studio time reserved for teams to meet and work collaboratively.
2.5 hours of reading and discussion preparation.
2 hours of project portfolio, design research and fieldwork where necessary.*

All required reading materials will be available for download on the course website.

Course Description

This interdisciplinary project-based course emphasizes human-centered design process as well as critical social theory on the relationships between humans and designed things. Through hands-on, individual, and collaborative making, students will learn design thinking skills such as: user-experience research, rapid idea generation techniques, prototyping and iterative implementation. This learning will happen alongside rich class discussions of both seminal and contemporary scholarly work on design's role in shaping the lived experience. Perspectives include: archaeology, critical psychology, civil engineering, postcolonial studies, cognitive science, sociology, and art history. Course application <http://tinyurl.com/IDP316-Fall2016>.

Course Objectives and Topics Covered

Students in this course will appreciate that a “design” results in social action or interventions that are not limited to new products and new services, but include new experiences and new narratives. Students will learn to be critical of design’s role in shaping and transforming social structures that both empower and endanger users. By critiquing their own designs, and those of the latest social intervention startups, students will interrogate how power and social justice issues are constituted in design processes, institutions, and claims of expertise.

Students will learn the following design process techniques:

Synthesis of user experience research and qualitative research observations. Agility in scaling from single-user insights to multiuser design ideas. Use of storytelling to frame problems, to communicate ideas, and to understand the ethical, political, and socioeconomic implications of design in the world.

Students will develop the following design thinking mindsets:

Human-centeredness – design that is driven by empathy for an articulated “other.”

Experimental – learning through iteration, learning with materials.

Collaborative – leadership and joint effort in vision and execution of design tasks.

Metacognitive – reflective awareness and conscious use of process techniques.

Students are also encouraged to attend the Design Thinking Initiative’s speakers’ series, **Speaking of Design...** Our three speakers—Anna Ly and Etosha Cave (19 October 2016, 4.30pm Graham Hall) and Liz Gerber (7 November 2016, 4.30pm Graham Hall)—are designers engaged in diverse education, sustainability and social justice projects. They will visit campus this semester, and have been invited to attend class sessions that coincide with their visits.

Assignments & Grading

Weekly Reading Assignments (30% Total)

There is one reading per week, to be completed well in-advance of class discussions on Fridays. On the first day of classes, students must sign up to be the lead discussant (10%) for one reading, and the supporting discussant (10% each) for a second and a third reading. The lead discussant’s role is to prepare, in advance, prompts for discussion and steer the conversation to insightful and nuanced readings of the texts. The supporting discussants’ collaborate with the lead discussant in creating a lively class discussion. Together the discussants have flexibility to plan creative engagements with the readings for peers.

Project Portfolio (60% Total)

Emphasis will be placed on process and portfolio work of students. While teamwork will merit a team grade, individual members of the team must demonstrate their contributions to the collaborative efforts of the team.

The grading will be based on a portfolio of three projects (digital and physical documentation of process and results); and the show and tell class sessions.

Deep Dive 1 (10%) [individual]

Deep Dive 2 (20%) [team]

Deep Dive 3 (30%) [team]

The three projects (“Deep Dives”) will be weighted for the same following qualities.

- “Embrace of failure that results in demonstrable learning or new understanding.” The designers must explain their process, describe their iterations, and detail how they incorporate user feedback.
- “Human-centeredness.” There is evidence the design is inspired by users. The role of the user’s story on the evolution of the project is clear and evocative.
- “A major intellectual risk was taken.” There is evidence that “bad” ideas were entertained in a productive and reflective way for the purposes of creating moments of learning.
- [For team projects only] The team shows the ways they work together, and shows examples of reflective teamwork in action.

Community Membership (10%)

Contributions to other teams’ efforts and to class discussions that foster a spirit of collegiality and intellectual generosity will be rewarded.

Late Submissions

An assignment is treated as a late submission if it is not ready for delivery on the due date. Late submissions will not be accepted. Should students experience extenuating circumstances, which require late submissions, they should work directly with the instructor and their Class Dean to accommodate changing needs.

Honor Code

Throughout this course, it is expected that students will adhere to the Smith College Honor Code. It is a violation of the Honor Code to submit another’s work as one’s own or provide one’s work to another student for submission. That said, collaboration is strongly encouraged, and indeed, the goal of the course is to facilitate opportunities to work with fellow students and explore concepts learned in imaginative ways. Team project submissions must outline the role and contributions of each team member. If there are concerns about what is considered to be an Honor Code violation students must refer to the College guidelines and/or talk to the instructor. Any violation of the Honor Code is serious and will be presented to the Honor Board for their adjudication.

Disability Accommodation

Contact the Office of Disability Services in College Hall 104 or ods@smith.edu for any accommodations needed. This must be done as soon as possible to ensure accommodations can be implemented in a timely fashion.

Course Schedule

Week 1

Theme: What on earth is design thinking?

No Reading.

Friday 9-Sep-16

Syllabus overview. What is design thinking? What is critical theory?

Week 2

Theme: Designs that solve some problems while creating others.

Monday 12-Sep-16

A mini design challenge. Introduction to tools and space. Expectations and norms.

Wednesday 14-Sep-16

Show and tell prototypes. Modelling critiques. Reading to be started in class, followed by class discussion. Prototyping reading responses.

Friday 16-Sep-16

Discussion of Reading.

Reading:

Latour, B. (1992). 'Where are the missing masses? The sociology of a few mundane artifacts.' In W.E. Bijker and J. Law (Eds.), *Shaping Technology/Building society: Studies in sociotechnical change*, pp. 225–258. Cambridge, MA: MIT Press.

Week 3

Theme: Story-telling and Problem-framing: Turning away from the language of "problem-solving."

Monday 19-Sep-16

Design techniques: Empathy. Interview skills. Mapping interview-generated insights. Introduction to assignment: Deep Dive 1

Wednesday 21-Sep-16

Design techniques: Define. Telling stories. Story-boarding techniques.

Friday 23-Sep-16

Discussion of Reading.

Reading:

Beckman, S. L. & Barry, M. (2012). Teaching students problem framing skills with a storytelling metaphor. *International Journal of Engineering Education*, 28(2), 364-373.

Week 4

Theme: Fluid technologies: emergent meanings and grassroots uses.

Monday 26-Sep-16

Design techniques: Ideate. Understanding Flare and Focus.

Wednesday 28-Sep-16

Design techniques: Prototype and Test.

Friday 30-Sep-16

Discussion of Reading.

Reading:

De Laet, M. & Mol, A. (2000). The Zimbabwe bush pump: Mechanics of a fluid technology. *Social Studies of Science*, 30(2), 225-263.

Week 5

Theme: What are the properties of designed things? Design Review exercise.

Monday 3-Oct-16

Studio time.

Wednesday 5-Oct-16

Show and tell for Deep Dive 1. Debrief of assignment.

Friday 7-Oct-16

Discussion of Reading.

Reading:

Gibson, J. J. (1977). The theory of affordances. In R. Shaw & J. Bransford (Eds.), *Perceiving, acting, and knowing: Toward an ecological psychology*, pp. 67–82. Hillsdale, NJ: Lawrence Erlbaum.

Week 6

Theme: The technology sensorium. The sensory experience of design.

Monday 10-Oct-16

No Class - Fall Break

Wednesday 12-Oct-16

Introduction to Deep Dive 2. Time to form teams.

Friday 14-Oct-16

Discussion of Reading.

Reading:

Hutchins, E. (2010). Cognitive ecology. *Topics in Cognitive Science*, 2(4), 705–715.

Week 7

Theme: Redefining the object-human relationship.

Monday 17-Oct-16

Fieldwork and team time.

Wednesday 19-Oct-16

Techniques for synthesizing design perspectives.

Friday 21-Oct-16

Discussion of Reading.

Reading:

Gibson, B.E., Carnevale F.A., & King, G. (2012). "This is my way": Reimagining disability, in/dependence and interconnectedness of persons and assistive technologies. *Disability and Rehabilitation*, 34(22), 1894-1899.

Week 8

Theme: The circulation of things. Global flows and social forces.

Monday 24-Oct-16

Fieldwork and team time.

Wednesday 26-Oct-16

Why prototype? Techniques for prototyping experiences.

Friday 28-Oct-16

Discussion of Reading.

Reading:

Hodder, I. (2011). Human-thing entanglements: Towards an integrated

archaeological perspective. *Journal of the Royal Anthropological Institute*, 17(1), 154-177.

Week 9

Theme: Who gets to call themselves a designer? Iterative cycles of design.

Monday 31-Oct-16

Fieldwork and team time.

Wednesday 2-Nov-16

Show and tell for Deep Dive 2. Class-wide debrief on Deep Dive 2.

Friday 4-Nov-16

Discussion of Reading.

Reading:

Kabayadondo, Z. (2016, under review). The disinherited: Zimbabwe's kombi riders and a case for the role of cognition in informal economies.

Week 10

Theme: Technological tools as sites of power.

Monday 7-Nov-16

Deep Dive 2 portfolio due. Introduction to Deep Dive 3. Team formation.

Wednesday 9-Nov-16

Workshopping and planning project outline in class.

Friday 11-Nov-16

Discussion of Reading.

Reading:

Fanon, F. (1965). This is the voice of Algeria. A dying colonialism. *Monthly Review*, 69-98.

Week 11

Theme: Designs that shape how and what is visible.

Monday 14-Nov-16

Fieldwork and team time.

Wednesday 16-Nov-16

Testing prototypes. Generating valuable feedback. Learning from failure.

Friday 18-Nov-16

Discussion of Reading.

Reading:

Goodwin, C. (1994). Professional Vision. *American Anthropologist*, 96(3), 606-633.

Week 12

Theme: More testing!

Monday 21-Nov-16

Norms and techniques for rapid idea generation.

Wednesday 23-Nov-16

No Class - Thanksgiving Break

Friday 25-Nov-16

No Class - Thanksgiving Break

No Reading.

Week 13

Theme: Advancing a new school of design.

Monday 28-Nov-16

Fieldwork and team time.

Wednesday 30-Nov-16

Troubleshooting and workshopping ideas.

Friday 2-Dec-16

Discussion of Reading.

Reading:

Nieusma, D. (2004). Alternative design scholarship: Working toward appropriate design. *Design Issues*, 20(3), 13-24.

Week 14

Theme: "Work, work, work, work!"

Monday 5-Dec-16

Fieldwork and team time.

Wednesday 7-Dec-16

Troubleshooting and workshopping ideas.

Friday 9-Dec-16

No Reading.

Week 15

Theme: Show and tell.

Monday 12-Dec-16

Show and tell for Deep Dive 3.

Wednesday 14-Dec-16

Studio portfolios due. Debrief of assignments and discussion of course outcomes.
