

# Teoría del diseño

Teoría del Diseño, martes y jueves en el salón A2-321

## Design Theory

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## Course Description

A rapidly changing and increasingly complex world demands a science of design and a comprehensive and universal design theory. With each new emerging design field and the new and ever more complex use of the term design, a theoretical framework and adequate theories for enhancing communication between all participants involved in the design process become increasingly important. As a trans-disciplinary platform, design needs to develop clear terms and concepts, as well as an applied methodology. For a long time, design has been thought of as an applied art; but, currently, it is also understood as a basic modus of human actions, like a language or other media, and as a discipline that creates objects of identification and communication in social systems. If we consider design to be a medium or a production of metaphors for communication, then we can also consider design to be something theoretical that merits further evaluation.

This class is focused on the understanding of a comprehensive design theory. Therefore we will study existing design research, and necessary existing theories from various disciplines to build a comprehensive understanding.

## Course Objectives

The focus of this design theory class is the understanding of the term design as well as concept within a historical framework, the methodologies applied as well as the specific and increasing research in design, and the possible impact and application for a theoretical model. Here are some exceptional terms we will look into:

Creative thinking

Design process

Problem analysis

Design research

Problem solving

Aesthetics

Design principals

Design ethics

Sustainable design

The course is intended to provide you with the following benefits:

- Gaining knowledge regarding understandings and definitions of design within a historical context
- Confidence in your own abilities to read theoretical excurses about design
- Knowledge about the various process in design and methods
- Ability to understand design research, their methods and possible applications
- Enhanced team working skills.

## Expectations

Accordingly, the course has been designed as a 3 hours per week class time and we meet twice a week for one hour and a half. In addition 6 hours per week for preparation is expected to prepare for class sessions and to enhance class discussions. There are several reading assignments as well as research assignments included, which will help you to develop skill beyond our class topic. A few team based project oriented tasks will generate high expectations and excitement. But we will make sure that the expected class and preparation time will not exceed the planned class.

## Course Schedule

<b>Week</b>	<b>Tuesday</b>	<b>Thursday</b>	<b>Assignment</b>
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Week 1	<p><i>Introduction</i></p> <p>We will mainly discuss course logistics and project descriptions.</p> <p>team-based learning and designers on design</p>	<p>a. Basic components of a theory.</p> <p>b. Definitions and understanding of design in various design fields</p>	<p><b>Assignment 1</b></p> <p>Research a few different design categories (at least 10)</p> <p><b>Reading:</b> please read text Nr. 1 from Boya de mazota</p>
Week 2	<p>Perception, knowledge and construction</p> <p>b. Definitions and understanding of design in various design fields</p>	<p>Design and a constructed world</p> <p>b. Design seen within the context of the evolution of Human Consciousness</p> <p>C. <b>Present your research</b></p> <p><b>Assignment 1</b></p>	<p><b>Assignment 2</b></p> <p>Write an essay about a selected historical design theme</p> <p><b>Reading:</b> please read text Nr. 2</p>
Week 3	<p>Definitions and understanding of design in various design fields</p>	<p>Design definitions in science, engineering, art, technology</p> <p>Design theory as a universal theory</p>	<p><b>Assignment 3</b></p> <p>Compare the various design methodologies from various design fields</p> <p><b>Reading Nr 3:</b> Harvard Business School Case 9-600-143: IDEO Product Development.</p>
Week 4	<p>Design methodology</p> <p>What is a design method and why do we need methods</p>	<p>Design methodology in science, engineering, art, technology</p>	
Week 5			
Week 6	<p>Design Methodology models</p>	<p><i>The Product Development Process: "IDEO"</i></p>	

Week 7	Design Methodology	How would you characterize IDEO's process? Its organization and management? Alternatives to problem solving approach Design research	<b>Assignment 4</b>
Week 8	Design research		Design Research
Week 9	Presentation of historical essays <b>Assignment 2</b>	Presentation of historical essays <b>Assignment 2</b>	
Week 10	Design research	Design research	<b>Assignment 4</b> Design Research
Week 11	Design principals	Design principals	
Week 12	Design research	Design research	
Week 13	Design ethics	Design ethics	
Week 14	Presentation of <b>Assignment 4</b>	Presentation of <b>Assignment 4</b>	<b>Assignment 4 due</b>
Week 15	Sustainable design	Sustainable design	
Week 16			

## Readings:

### Reading Nr 1.

Brenda Laurel, ed. Design Research: Methods and perspectives. MIT Press, 2003, The Design Cluster, from Peter Lunefeld

### Reading Nr. 2

"The Idea of Design." A design issues reader. Ed. Vistor Margolin and Richard Buchanan.

### Reading Nr 3:

Harvard Business School Case 9-600-143: IDEO Product Development

### Reading Nr. 4

Van de Ven, Engaged Scholarship, Chapter 4

Supplementary Readings:

Weick, "Theory Construction as Disciplined Imagination," AMR, 1989

11-19 and 11-21:

Design Methods, by John Chris Jones. Chapters One and Five.

The Social Aspects of Design

- "The Way Things Mean." Chapter Three from *By Design* by Ralph Caplan.
- *City*. By William H. Whyte. Chapters 1 and 2.

Design Representations

- Benjamin, Walter. *The Work of Art in the Age of Mechanical Reproduction*. A must-read.
- Scott McCloud's *Story Machine*. Also check out the Big Triangle at this site, and McCloud's online comics. Especially interesting for this week is the morning improv comic section, and the Original Carl, a look at story expansion and compression.

Recommended, not required:

- Hanks and Belliston. *Rapid Viz*. Good basic techniques for sketching in notebooks and for communicating with others.
- Neil Gaiman's essay "Where Do you get your Ideas?"
- McKim, R. *Experiences in Visual Thinking*. Another good book about thinking and drawing. Out of print but can be had used via Amazon.
- Edwards, S. *The New Drawing on the Right Side of the Brain*. Try to ignore the pop cog-sci stuff and go for the excellent practical advice.
- *New Drawing on the Right Side of the Brain Workbook: Guide Practice in the Five Basic Skills of Drawing*. Kind of the opposite of sketching for thinking, but great references for those wanting to make drawings that aid presenting ideas to others.
- Simon, M. *Storyboards: Motion in Art*. A good basic text in storyboarding.
- McCloud, S. *Understanding Comics*. The book that preceded the links listed above. Good for getting a lot of depth on graphic novels and other-frame-based story-telling. Principles do generalize to other forms of sequential art.
- Tufte, E. *The Visual Display of Quantitative Information*; *Envisioning Information*; *Visual Explanations: Images and Quantities, Evidence and Narrative*. All three of the Tufte books are valuable for getting an understanding of presenting correlated ideas.
- Gupstill, A. *Rendering in Pencil*. Great, detailed, down-to-earth book on the practicalities of sketching in pencil.
- McCullough, Malcolm. "Abstracting Craft." Chapter One, "Hands," and 3 "Tools."
- Jones, J. C. "Softecnic." In *Design After Modernism* (Thakara, J., ed) [Chapter 17]

- Baudrillard, J., "The System of Objects." In Design After Modernism (Thakara, J., ed). [Chapter

Recommended, not required:

- Dewey, John. "The Art of Experience."
- Shedroff, Nathan. "Experience Design."

Universal Principles of Design, William Lidwell

1. David Raizman, History of Modern Design. Prentice Hall, 2004. ISBN: 0-13-183040-6.

Bergman, E. (2000) Information Appliances and Beyond: Interaction Design for Consumer Products, Morgan Kaufmann Publishers

## Assignments

### Assignment 1:

Research a few different design categories (at least 10) from the internet as well as from books and magazines. Look for unusual and surprising examples and their definition in order to understand the various use of the term design. Bring this research to the class in the second week.

### Assignment 2:

#### Write a short essay about a historical Design topic:

Please select from the following topic:

1. Design and the Industrial Revolution
2. The Arts and Crafts Movement and Its Heritage
3. Art Nouveau
4. The Genesis of Twentieth-Century Design
5. Art Deco
7. Bauhaus
8. The influence of the HFG, Ulmer Hochschule for Gestaltung
9. De Stijl
9. Constructivism
10. Corporate Identity and Design
11. Postmodern Design
12. How did Digital Technology change the process of designing?

Do a solid research (please use several sources) and prepare a small essay, minimum of three written pages about a selected topic. Prepare a verbal /visual presentation about this topic in class (8 min, not more!!) and use at least 2 Powerpoint visuals to illustrate your presentation.

Make sure that you quote the source texts right and make sure that you don't. Hand the paper in week Nr. 6.(digital format through blackboard)

Name, e-mail address as well as the theme must be in the letter head (Type font, Times14) Body text, 11 points Times)

### Assignment 3

Assignment 3 is a team work and includes a team presentation. Compare at least three different design methodologies in various design fields and prepare a 10 minute presentation for the class. Write a 2 page abstract for the class which includes a overview of the compared design methods and process models as well as the differences and the evaluation of these differences. Prepare also a Powerpoint or other visual presentation for the class.

## **EVALUATION SYSTEM**

### **CLASS EVALUATIONS:**

#### **1. Regular class sessions, visits and Course Room participation: 10 %**

Knowledge and abilities will be evaluated through formal and informal individual and group activities. Attitudes and values will be evaluated by expressing and supporting well sustained arguments, through listening and respecting other opinions and positions and by attending class regularly and punctually. It is required that the "Profile" section (name, enrollment number, major, e-mail, and picture) be completed to obtain the accumulated points on this section. According to the professors criteria achievements and unfulfilled assignments will be registered on the following chart to obtain a final percentage at the end of the semester.

#### **2. Partial exams: 40%**

Knowledge & abilities will be evaluated through a written open question class examination emphasizing written and graphic expression capabilities.

Attitudes & values, such as individual progress and honesty, will be evaluated in a formative way through written or oral comments made by the professor.

### **OUT OF CLASS EVALUATIONS:**

#### **1. Weekly homework: 25%**

Knowledge & abilities will be evaluated throughout the semester by individual weekly homework related to its corresponding readings.

#### **2. Formal group investigation: 25%**

Knowledge & abilities such as analytical, synthetically and research skills will be evaluated through graphic and written and sometimes oral presentations. Each formal group of students is expected to turn in on time the corresponding progress of their research. Each one of these should be turned in on the following class after presenting a partial exam.

Attitudes & values, such as companionship and team-work skills will be evaluated through self and peer evaluations according to the points established.