Syllabus for I604 Fall 2015:
Human-Computer Interaction Design Theory

Time: Mondays 1.00 - 2.15
      Wednesdays 1.00 - 2.15

Location: Room 150, Informatics Connector building

Instructor
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Prerequisites
This course is available after permission of the instructor. This course is suitable for PhD and MS students in Informatics and HCI design. The course is also open to anyone who has interest in the content after approval from the instructor.

Course Description
Many professionals are involved in the ongoing design and re-design of our environments, artifacts, machines, systems, and tools. This is true also for informatics and HCI professionals. The challenge for most designers is to design artifacts, systems, and environments that have qualities good enough to be accepted and incorporated into peoples’ everyday reality. The design process is highly complex, difficult to describe, hard to understand, and almost impossible to prescribe, however, every design is a result of someone’s idea about how to perform a design process.

This course aims at supporting each student to create a developed intellectual understanding of the professional design process. An underlying assumption is that a reflective and philosophical understanding of practice supports and fosters a developed practical design competence. In the course we will therefore examine, analyze, study, and discuss how design can be understood, described, and developed as a process of inquiry, thought, and action.

The course is divided into two types of activities. The two are (1) theoretical and philosophical studies of design, and (2) empirical studies of design practice. We will also to some degree engage in studies on how to explain and argue for design. These activities are designed to support each student to establish a personal, reflective, and examined intellectual position in relation to design as a professional practice.

The overall purpose of the course is to prepare students (1) to take a leadership role when it comes to design as a professional activity and (2) for scholarly work in the field.
**Class Schedule**

As the core reading of the course we will use the book


Amazon has the paperback for about $20. The rest of the readings will be provided via Canvas.

During the course we will engage in different classroom activities.

- **Mondays** will primarily be lectures and about the readings.
- **Wednesdays** will primarily consist of presentations, group work, and discussions.

This is a **preliminary schedule** for the class.

<table>
<thead>
<tr>
<th>WEEK</th>
<th>DAY</th>
<th>TOPICS</th>
<th>ASSIGNMENTS</th>
<th>READINGS</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Mon Aug 24</td>
<td><strong>Course introduction</strong> and Introduction of assignment <strong>Research Into Practice 1</strong></td>
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<tr>
<td>1</td>
<td>Wed Aug 26</td>
<td>An in-class design process experiment</td>
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<td>Watch Video # 1</td>
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<tr>
<td>2</td>
<td>Mon Sep 1</td>
<td><strong>What is a theory, and why do we need it in design?</strong></td>
<td><strong>Content Critique 1</strong></td>
<td>Ken Friedman + Nigel Cross</td>
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<tr>
<td>2</td>
<td>Wed Sep 2</td>
<td>Present individual work to group</td>
<td><strong>Upload individual slides for RIP 1 on Canvas before class</strong></td>
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<tr>
<td>3</td>
<td>Mon Sep 7</td>
<td><strong>Labour Day--NO CLASS</strong></td>
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<td>3</td>
<td>Wed Sep 9</td>
<td>Group work on RIP1 and Introduction of RIP2</td>
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<td>Video # 2</td>
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<td>4</td>
<td>Mon Sep 14</td>
<td><strong>Design as a tradition of human inquiry and action</strong></td>
<td><strong>Content Critique 2</strong></td>
<td>Nelson &amp; Stolterman (pp 1-23)</td>
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<td>Week</td>
<td>Date</td>
<td>Activity</td>
<td>Reading/Notes</td>
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<td>4</td>
<td>Wed Sep 16</td>
<td>Work on RIP2</td>
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<tr>
<td>5</td>
<td>Mon Sep 21</td>
<td>Theories of Design: Overview and history</td>
<td>John Heskett (pp 1-23) + Vitruvius + Videos # 3</td>
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<td>5</td>
<td>Wed Sep 23</td>
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<td>6</td>
<td>Mon Sep 28</td>
<td>Theories of Design</td>
<td>Content Critique 3 Horst Rittel</td>
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<td>6</td>
<td>Wed Sep 30</td>
<td>Presentations of RIP2</td>
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<td>7</td>
<td>Mon Oct 5</td>
<td>Theories of Design</td>
<td>Content Critique 4 Hatchuel</td>
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<td>7</td>
<td>Wed Oct 7</td>
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<td>8</td>
<td>Mon Oct 12</td>
<td>Theories of Design</td>
<td>Content Critique 5 Donald Schön</td>
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<td>8</td>
<td>Wed Oct 14</td>
<td>TBD</td>
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<td>9</td>
<td>Mon Oct 19</td>
<td>TBD</td>
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<td>9</td>
<td>Wed Oct 21</td>
<td>Work on RIP3 + Intro of RIP 4</td>
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<td>10</td>
<td>Mon Oct 26</td>
<td>Theories of Design</td>
<td>Nelson &amp; Stolterman (pp 27-56)</td>
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<td>10</td>
<td>Wed Oct 28</td>
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<td>11</td>
<td>Mon Nov 2</td>
<td>Theories of Design</td>
<td>Content Critique 6 Nelson &amp; Stolterman (pp 105-138)</td>
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<td>11</td>
<td>Wed Nov 4</td>
<td>Work on RIP4</td>
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<td>12</td>
<td>Mon Nov 9</td>
<td>Theories of Design</td>
<td>Nelson &amp; Stolterman (pp 139-158)</td>
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<tr>
<td>Date</td>
<td>Monday</td>
<td>Topic</td>
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<td>Nov 1</td>
<td>Presentation of RIP4</td>
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<tr>
<td>Nov 16</td>
<td>Theories of Design</td>
<td>Nelson &amp; Stolterman (pp 183-200)</td>
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<td>Nov 18</td>
<td>What is a personal design philosophy—introduction of final paper</td>
<td>Content Critique 7</td>
<td>Videos # 4</td>
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<td>Nov 23</td>
<td>FALL BREAK - NO CLASS</td>
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<td>Nov 25</td>
<td>FALL BREAK - NO CLASS</td>
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<td>Nov 30</td>
<td>Design Theory &amp; Practice</td>
<td>Cross (Expertise ...) + Stolterman (The Nature...)</td>
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<td>Dec 2</td>
<td>Design leadership and personal design philosophy</td>
<td>Nelson &amp; Stolterman (pp 239-259)</td>
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<td>Dec 7</td>
<td>“My Design Philosophy” presentations</td>
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<td>Dec 9</td>
<td>“My Design Philosophy” presentations + course reflections</td>
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<td>Dec 14-18</td>
<td>Final week Paper writing</td>
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**I604 Fall 2010 Assignments**

**Content Critique**

As a way of getting to know the readings of the course you have to develop **Content Critiques (CC)**. During the course you will do this a number of times (see schedule). For each CC you have to read the required texts of that week in advance and choose what you consider is one important core idea in one of texts. For each CC you have to write a one page document consisting of three parts. In part 1 you present the idea that you have chosen, in part 2 you explain what the author means with the idea, and in part 3 you critique/discuss the idea and express your opinion/view of the it.
Remember to make it clear what text you selected! A CC cannot be more than one page per idea! The CC has to be uploaded on Canvas before class starts the day marked in the schedule.

Research Into Practice 1: Designers’ knowledge and skill set

This assignment consists of several parts. The assignment is a combination of group work and individual work. Each group should consist of five members.

The assignment is to interview designers about what is (1) the core of their design competence and skills and (2) their design philosophy and (3) what they do to stay competent over time. The outcome will be a better understanding of design practice and how practitioners reflect and understand design.

First part (group): As a group you should decide what you want your interviews to focus on and roughly what questions you want to ask.

Second part (individual): Each of you should interview two designers. The persons selected can be anyone who is involved in some kind of design activity (professionally or otherwise) or in some craft.

• These interviews are done individually.
• It is a good idea to audio/video record the interviews.
• You should individually analyze your own interviews in search of what is surprising and interesting.
• You should present your two interviews on slides that briefly presents (1) the two interviewees, (2) what your questions were, (3) a summary of the answers, and (4) your analysis of the results.

You have to develop about 3-5 slides. The slides should be uploaded to Canvas.

Third part (group): This part consists of working together in your group to compare, analyze and interpret the combined interviews and present what the group considers to be the most surprising and interesting findings.

This should be presented as a number of slides

• describing the interviewees,
• the focus that the group decided on,
• and the group findings. Give each finding a name and a short explanation.
• also add a last slide that summarizes what you learned from this project.

Upload slides to Canvas.

Research Into Practice 2:

Research Into Practice 3: Design quality and me

This is an individual assignment. Showing who you are as a designer is difficult. Determining what is good design quality is difficult.
The purpose of this assignment is to show who you are as a designer (your philosophy, principles, values, etc.) by presenting examples of design quality.

You should select three artifacts that in your mind manifest good design in a way that also reflects you as a designer. You should also select three artifacts that in a similar but opposite way manifest bad design quality.

Document each artifact with one or more images, and for each design develop a list of five properties that you think contribute to the good quality of the artifact, and a one paragraph explanation of how you see these properties come together into a whole design, what kind of design philosophy you see the artifact express. The same should be done for the three examples of bad quality.

Summarize your work with a slide where you try to characterize yourself as a designer based on the exercise.

The document (slides) will be presented to the class. Upload slides on Canvas.

**Research Into Practice 4:**

Professionals who are engaged in interaction design often express some kind of design thinking and design philosophy. They often do this by proposing certain approaches, methodologies, ideas, ideals, values and principles. The purpose of this assignment is to examine two professional interaction design blogs and the design thinking they express.

Each of you should chose two blogs by a professional (interaction) designer (group or company) to study. By reading a sufficient number of the blog posts you are to analyze and reveal what you see as their design philosophy. (Do not select a blog that consists of posts from different sources that represent different individuals.)

Your analysis should cover most of these questions:

- A brief presentation of the blogs.
- What is the overall design philosophy expressed on the blog (ideas, ideals, values and principles)?
- Do they express ideas about the design process when it comes to process models, design management, business aspects, etc.?
- Do they express ideas about what constitutes design competence (mind set, knowledge set, skill set, tool set)?
- Do they express ideas about design quality in relation to materiality, form, functionality, aesthetics, performance, user experience, etc.?
- To what extent does their writing, blog and website design reflect their design thinking?
- Are their any unusual or surprising aspects of their design thinking?
- Do you see the blog as an expression of well-developed design thinking and philosophy?

- Do you see any examples, traces or similarities between the readings in the class or other theoretical sources and the ideas expressed in the posts?

- How would you overall judge the value of the blogs for you? And for professionals in general?

You should also compare the two blogs. Do you find anything distinctly different or similar? Are there any other interesting observations?

The outcome of the assignment is a slide presentation. You will have about 10 min each to present to a group of colleagues (including questions and discussions). Upload slides on Canvas before class.

**My design philosophy**

This assignment is about your personal understanding and philosophy of design. The purpose is to

(1) develop your awareness of your personal design philosophy and

(2) develop a text and a presentation material (slides or video) of your design philosophy.

The presentation should:

(i) include overall postulates, thoughts, and assumptions about the nature of design,

(ii) contain some core principles of design,

(iii) a description of the process structure and flow

(iv) a list of what you see as core necessary design activities

(v) and an explanation of what are crucial characteristics of the outcome of the design process.

The assignment has two outcomes, a presentation (with slides) and a paper. The two formats have different purposes and should be different even though they should reflect the same philosophy.

The presentation should be easy to understand and possible to present to a real team of practicing designers. Think of this as a job interview presentation. After such a presentation the audience should know who you are as a designer. The presentation should also reflect course readings and the work you did in the assignments and should address the bullet points mentioned above in some relevant fashion. The presentation should not be more than 5 min.

The paper is an essay style text that addresses the same as the presentation. The paper should be a personal intellectual reflection on who you are as a designer and what your design philosophy is. Again, the points in the list above should be addressed. The paper does not have to be written as a research paper but if you want to do that, it is ok. The paper could be seen as an article that would fit in a recognized professional blog or magazine. The length should be around 5 pages. The text should reference all the course readings and preferably also to activities done in class.

The presentation (slides or video) will be done in class but the paper deadline is at the end of the class. They will be graded separately.
**Grading**

The Content Critiques will be individually graded.

The RIP assignments will be graded either individually or as a combined group achievement.

The assignment “My design philosophy” will be graded individually.

The weight of the CCs is about 30%, the RIPs around 45% and the “Design philosophy” about 25%.

The overall grade will be an overall judgment where all the assignments will be considered and not a mathematical exercise.

**Attendance and late assignments**

Low attendance and late assignments will lower the specific assignment grade and could affect the overall grade.

**Videos – preliminary list**

**Video 1: Design Philosophies**
- Designed by Apple-Intention [https://www.youtube.com/watch?v=VpZmIiXuZ0](https://www.youtube.com/watch?v=VpZmIiXuZ0)
- BMW Car Design Process [https://www.youtube.com/watch?v=RRr_GvD1fqY](https://www.youtube.com/watch?v=RRr_GvD1fqY)
- Hyundai Design Philosophy [https://www.youtube.com/watch?v=66G5tNi5pDM](https://www.youtube.com/watch?v=66G5tNi5pDM)
- Aedas Design Philosophy [https://www.youtube.com/watch?v=JOOE_PziUtE](https://www.youtube.com/watch?v=JOOE_PziUtE)
- Here is a collection of design talks from TED [https://www.ted.com/playlists/127/design_giants](https://www.ted.com/playlists/127/design_giants)

**Video 2: Design tools**
[https://www.youtube.com/watch?v=KFmnySOFoI](https://www.youtube.com/watch?v=KFmnySOFoI)

**Video 3: Design History**
[http://www2.open.ac.uk/openlearn/design_nutshell/index.php#](http://www2.open.ac.uk/openlearn/design_nutshell/index.php#)

**Video 4: “My design philosophy”**
- Jacques Garcia [https://www.youtube.com/watch?v=j__IA1twdKA](https://www.youtube.com/watch?v=j__IA1twdKA)
- Philippe Starck [https://www.youtube.com/watch?v=Z4PwHD7XKj0](https://www.youtube.com/watch?v=Z4PwHD7XKj0)
Phillip Lim  
https://www.youtube.com/watch?v=hTKpB25OE_U

Steve Jobs & Johnathan Ives  
https://www.youtube.com/watch?v=L7gb7rxhvE1

Bing Thom  
http://vimeo.com/29996305

Readings: most reading will be on canvas or available via link


Eisner, E. see web link on Canvas


Rittel, H. *The Reasoning of designers.*


Vitruvius. (about first century B.C). “*Ten Books on Architecture*” Chapter 1 is on Canvas. (Whole book is here http://www.gutenberg.org/files/20239/20239-h/29239-h.htm)