CS-486  Human computer interaction
Pu Pearl

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<th>Cursus</th>
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<td>Cybersecurity</td>
<td>MA2, MA4</td>
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<td>Data Science</td>
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<td>Humanités digitales</td>
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Summary
This course focuses on goal-directed design and interaction design, two subjects treated in depth in the Cooper book (see reference below). To practice these two methods, we propose a design challenge, which is to be carried out by a team of three students.

Content
**Design methods for HCI**
What is HCI: its aims and goals
Design thinking
Goal-directed Design
Mental model and different types of users
Qualitative research and user interviews
User modeling: persona and empathy diagram
Scenarios, requirements and framework design
Visual design

**Basic prototyping methods for HCI**
Storyboarding
Context scenario
Interactive prototype
Video prototype

**Human computer interaction evaluation methods**
Cognitive walkthrough
Heuristic evaluation
Evaluation with users

Keywords
Interaction design, design thinking, design for playfulness, rapid prototyping techniques, evaluation with users.

Learning Prerequisites
**Required courses**
Introduction to Visual Computing

**Recommended courses**
Open to students enrolled in the Master and PhD programs in IC.

Important concepts to start the course
Goal-direction design

Learning Outcomes
• Interview users and elicit their needs using the goal-directed design method
• Design and implement interfaces and interactions
• Project management: set objectives and devise a plan to achieve them
• Group work skills: discuss and identify roles, and assume those roles including leadership
• Communication: writing and presentation skills

Teaching methods
Lectures, exercises, hands-on practice, design review

Expected student activities
Reading, case studies, peer discussions, project

Assessment methods
Group project, presentation, mid-term exam

Supervision
Office hours No
Assistants Yes
Forum Yes

Resources
Virtual desktop infrastructure (VDI) No

Bibliography
About Face 3: The Essentials of Interaction Design by Alan Cooper et al. (available as e-book at NEBIS)
100 Things Every Designer Needs to Know about People by Susan Weinschenk (available as e-book at NEBIS)

Ressources en bibliothèque
• About Face 3 / Cooper
• 100 Things Every Designer Needs to Know about People / Weinschenk

Moodle Link
• http://moodle.epfl.ch/course/view.php?id=12291