

Course Form for PKU Summer School International 2018

Course Title	Design Informatics
	设计信息学
Teacher	Maria Wolters
First day of classes	July 16, 2018
Last day of classes	July 27, 2018
Course Credit	2 credits
Course Description	
Objective	
<p>Most of the current technological advances are powered by data. The right data can help us optimise devices, make services more efficient, and gain novel insights into the world around us. Design Informatics is concerned with designing better products, services, and technologies - for, with, and by data. We use Design Thinking because it is particularly well suited for problems that do not have a single correct solution - like most real world problems.</p> <p>In this course, you will learn how to apply principles of User Centred Design to create data-driven or data-centric solutions that really work for your users. In part 1 of the course, we review basic concepts and theories from design, human-computer interaction, and human factors. In the second part, you will design a prototype for an app, product, or service that provides data to users, collects data from users, or adapts itself automatically to users.</p> <p>Detailed readings and materials will be available on the course web site, which will be announced on http://mariawolters.net and go live on June 1, 2018.</p>	
Pre-requisites /Target audience	
<p>Computer science, Engineering, and Design students with an interest in Human Computer Interaction. Senior undergraduate students and graduate students</p>	
Proceeding of the Course	

User Requirements Analysis and User Research Project.	
Assignments (essay or other forms)	
Readings, User Research Project, Design	
Evaluation Details	
Attendance, Readings: 30% User Research Project: 40% (1000 words) Final Design: 30% (short video)	
Text Books and Reading Materials	
<ol style="list-style-type: none">1. Frank Ritter, Gordon Baxter, and Elizabeth Churchill (2014): Foundations for Designing User-Centred Systems. Springer (FUCD)2. http://interaction-design.org - Web site of the Interaction Design Foundation (ID website)3. http://usability.gov - Web site with basic guidance on measuring usability (Usability web site)4. http://inclusivedesigntoolkit.com - Web site on inclusive design (IDT website) <p>Further readings will be provided on the course web page.</p>	
Academic Integrity (If necessary)	
CLASS SCHEDULE (Subject to adjustment)	
Session 1: Design Thinking I	Date:7/16
【Description of the Session】 Overview and general introduction to the course	
【Questions】	

【Readings, Websites or Video Clips】 selected materials from the ID website	
【Assignments for this session (if any)】	
Session 2: <i>Design Thinking II</i>	Date:7/16
【Description of the Session】 Introduction to Design Thinking	
【Questions】	
【Readings, Websites or Video Clips】 selected materials from the ID website	
【Assignments for this session (if any)】	
Session 3: Introduction to Human Factors I	Date:7/17
【Description of the Session】 scope of Human Factors, perception, cognition, anthropometry. Form and function in design.	
【Questions】	
【Readings, Websites or Video Clips】 FUCD Chapters 1+2	
【Assignments for this session (if any)】 short commentary on readings	
Session 4: Introduction to Human Factors II	Date:7/17

【Description of the Session】 Inclusive Design and accessibility. Errors as data. Service Design.	
【Questions】	
【Readings, Websites or Video Clips】 selected materials from the IDT web site. FUCD Chapter 7	
【Assignments for this session (if any)】	
Session 5: <i>Assessing User Requirements</i>	Date:7/18
【Description of the Session】 What are user requirements? How can we establish them? What are potential sources of data?	
【Questions】	
【Readings, Websites or Video Clips】	
【Assignments for this session (if any)】 short commentary on readings	
Session 6: <i>Personas and Scenarios</i>	Date:7/18
【Description of the Session】 Personas and scenarios as tools for describing user requirements. Agile user stories.	
【Questions】	

【Readings, Websites or Video Clips】 Usability and ID web site - selected resources	
【Assignments for this session (if any)】	
Session 7: <i>Questionnaire Design</i>	Date:7/19
【Description of the Session】 Introduction to designing and administering questionnaires. Standardised Questionnaires	
【Questions】	
【Readings, Websites or Video Clips】 selected readings from usability and ID web site.	
【Assignments for this session (if any)】 completion and scoring of sample questionnaires	
Session 8: Questionnaire analysis	Date:7/20
【Description of the Session】 Questionnaire analysis, descriptive statistics.	
【Questions】	
【Readings, Websites or Video Clips】	
【Assignments for this session (if any)】	
Session 9: <i>Interviews</i>	Date: 7/23

【Description of the Session】 Structured versus semi structured interviews. Active Listening.	
【Questions】	
【Readings, Websites or Video Clips】 Usability and ID web site - selected resources	
【Assignments for this session (if any)】 conduct and transcribe short semi-structured interviews with classmates	
Session 10: <i>Interview Analysis</i>	Date:7/24
【Description of the Session】 principles of qualitative analysis, affinity diagramming	
【Questions】	
【Readings, Websites or Video Clips】 Usability and ID web site - selected resources	
【Assignments for this session (if any)】	
Session 11: Initial Personas and Scenarios	Date:7/24
【Description of the Session】 Develop initial personas and scenarios based on questionnaire and interview data	
【Questions】	

【Readings, Websites or Video Clips】	
【Assignments for this session (if any)】	
Session 12 User Observation	Date:7/25
【Description of the Session】 techniques for observing how people interact with technology. Definitions of usability.	
【Questions】	
【Readings, Websites or Video Clips】 selected materials from the usability.gov website	
【Assignments for this session (if any)】 observe classmates according to protocol developed in class	
Session 13: <i>Observation Analysis</i>	Date:7/26
【Description of the Session】 Techniques for summarising user observations	
【Questions】	
【Readings, Websites or Video Clips】 selected materials from the usability.gov website	
【Assignments for this session (if any)】	
Session 14: <i>Creating a Design</i>	Date:7/26

【Description of the Session】 Group work on distilling findings from user research into design	
【Questions】	
【Readings, Websites or Video Clips】	
【Assignments for this session (if any)】	
Session 15: User Journey	Date: 7/27
【Description of the Session】 Creation of a user journey based on the design	
【Questions】	
【Readings, Websites or Video Clips】 selected materials from the usability.gov website	
【Assignments for this session (if any)】	
Session 16: Summary	Date: 7/27
【Description of the Session】 Brief presentation of user journeys and feedback	
【Questions】	

【Readings, Websites or Video Clips】

【Assignments for this session (if any)】