HCI HS 2019 course plan

(preview version; check back for updates on the first week of the lecture)

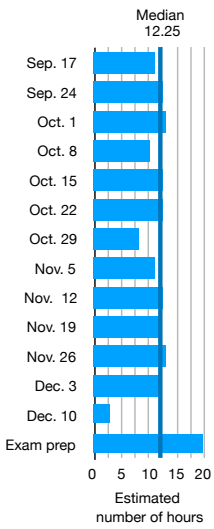
Date	Topical block	Classroom activity	Lecture video	Project activity (in- and outside the classroom)	R: Reading assignment E: Extra reading (optional)	Estimated student workload (hours)				
						C	V	P	R	∑
Sep. 17	Design	Lecture 1: Human-centered design & Interviewing • What is HCI? Why is it important? • Human-centered design process • Course administrative details • How to ask questions • (spillover to Hands-on 1)			R: DOET Human-centered design E: CD-3 (Principles of contextual inquiry)	2			1.5	
Sep. 18		Hands-on 1: Interviewing • Problematic interview questions • Whom should I interview? • Principles in contextual inquiry • Video interviewing • Grouping • Time for project meeting and planning for the project • Groups setup IT infrastructure	Lecture 2: Analyzing qualitative data • Thematic analysis • Interpretation session • Affinity diagramming ✔ (required for the next lecture)	Brainstorm potential user groups Deadline for proposing the user group, 18:00	R: RCD-3,4 planning and running contextual inquiry interview (required for the project next ✔ week)	1	2	1	3.5	11
Sep. 24		Hands-on 2: Analyzing qualitative data • Practice: Coding and affinity diagramming from an example dataset • Q&A about interviewing and analysis • Time for drafting the first interview guide	Lecture 3: Ideation and Prototyping • Brainstorming technique and pitfall • Prototyping: rationale, purpose • Storyboarding • Drawing crash-course • Paper prototyping • Prototyping software and limitations • Other forms of prototyping (video, hardware) ✔ (required for the next lecture)	Prepare the interview guide	R: RCD-5, 8 interpretation session, building an affinity diagram E: RCD-6,7 work modeling (required for the project next ✔ week)	1	2.5	2	3.5	
Sep. 25		Hands-on 3: Brainstorming and paper prototyping • Practice: brainstorming • Storyboarding existing situation • Paper-prototyping given UI • Q&A about prototyping		Interviewing		1.5		2		12.5
Oct. 1		Lecture 4: Testing • Principles • Usability test setup • Think-aloud • Wizard-of-oz • Heuristic evaluation		Transcription and coding		2		3		
Oct. 2		Project work slot (unsupervised) • Interpretation session and affinity analysis • Prepare further interview questions or further research on the topic	Lecture 5: Design principles • Conceptual model & discoverability • Affordance • Signifier • Feedback • Mapping • Constraints and forcing functions	Interpretation, affinity diagram Further interviews and research	R: DOET Fundamental principles of interaction		2	3	3	13
Oct. 8	Psychology	Lecture 6: Model human processor • Perceptual processor • Cognitive processor • Motor processor • Memory • Knowledge in the head vs. in the world		Further interviews and research	E: DMM-7–10 attention, memory, recognition and recall, learning	2		4		
Oct. 9		Project work slot (unsupervised) • Further interpretation session and affinity analysis • Prepare the presentation		Prepare the presentation and the mid-term report				4		10
Oct. 11		Deadline for canceling module booking midnight								
Oct. 15		Presentation: understanding status-quo (8 minutes/team)	Lecture 7: Time • Human time limits • GOMS-KLM • Fitts's law • Hick-Hyman Law • Information-theoretic efficiency • Practice: estimating time from case studies	Finalize the report	R: The Humane interface • GOMS-KLM • Information-theoretic efficiency E: DMM-13,14 Laws and Time requirements	1	2.5	3	4	
Oct. 16		Presentation: understanding status-quo (8 minutes/team)		Mid-project submission deadline, 18:00		1		1		12.5
Oct. 22		Project work slot (unsupervised) • Brainstorming and prototyping	Lecture 8: Errors • The seven stages of action model • Gulfs of evaluation and gulfs of execution • Taxonomy of errors • The Swiss cheese model • Practice: case study discussion	Brainstorm the design directions and create initial prototypes	E: RCD-13,14 Testing with paper prototypes and paper prototype interviews (useful for the project next ✔ week)		2.5	5		
Oct. 23		Project work slot (unsupervised) • Brainstorming and prototyping		Brainstorm the design directions and create initial prototypes				5		12.5
Oct. 29		Lecture 9: Visual perception and design • Preattentive processing • Gestalt principles • Practice: case study analysis • Practice: case study discussion		Prototyping and testing	E: DMM-2,3 Visual structure	2				
Oct. 30		Demo Day: initial prototypes (8 minutes/team)		Prototyping and testing				6		8

Abbreviations:

- C: In-class (including reviewing at home)
- V: Lecture video (including reviewing)
- P: Project activities
- R: Reading assignment (compulsory, examable)
- ∑: Total
- E: Extra reading (optional, not in the exam)
- DOET: "The Design of Everyday Things"
- CD-#: "Contextual Design" book (chapter #)
- RCD: "Rapid contextual design" book
- DMM: "Design with the Mind in Mind" book

Workload summary

Week	Hours
Sep. 17	11
Sep. 24	12.5
Oct. 1	13
Oct. 8	10
Oct. 15	12.5
Oct. 22	12.5
Oct. 29	8
Nov. 5	11
Nov. 12	12.5
Nov. 19	12
Nov. 26	13
Dec. 3	12
Dec. 10	3
Exam prep	20
Total	**163**
6 ECTS × 30	**180**



Final grade:

Mid-term report	15%
Final project	35%
Exam	50%

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						C	V	P	R	∑
Nov. 5		Project coaching slot (on-demand)		Prototyping and testing		1.5		4		
Nov. 6		**Guest lecture:** Accessible design (tentative title) By Werner Hänggi (AdNovum)		Prototyping and testing		1.5		4		11
Nov. 7		**IFI Colloquium (voluntary attendance) 17:45–18:30 at BIN 2.A.01** "Building a Better Bicycle for the Mind" by Prof. James Eagan (Telecom ParisTech)								
Nov. 12	Interactions	Lecture 10: Interaction styles • Definitions • Benefits and problems • Seminal works for each interaction style • Frontiers of interaction design		Prototyping and testing		1.5		5		
Nov. 13		Project coaching slot (on-demand)		Prototyping and testing			2	4		12.5
Nov. 19		Project coaching slot (on-demand)	Lecture 11: Input Devices and Interaction Techniques • Text entry • Pointing • Speed and accuracy measures • Transfer function • Control-Display gain • Pointer acceleration	Implement final prototype			3	5		
Nov. 20		Project work slot (unsupervised)		Implement final prototype				4		12
Nov. 26	Research	(date tentative; may swap with project coaching slots in the previous week or this week) **Guest lecture:** Research in virtual reality (tentative title) By Morten Fjeld (Chalmers University of Technology)	Lecture 12: Survey and experimental research: • Survey • Sampling • Correlational knowledge • Practice: interpreting correlational results from research papers • What is true experiments? • Independent, dependent variables • Practice: identify components of experiments from excerpts of research papers	Implement final prototype Prepare the report			2	6		
Nov. 27		Project coaching slot (on-demand)		Implement final prototype				5		13
Dec. 3		Exam preparation lecture • Q&A HCI Research • Exam examples • Filling course evaluation questionnaire • Project meeting and coaching		Prepare the presentation and the report		2		5		
Dec. 4		Project work slot (unsupervised)		Prepare the presentation and the report				5		12
Dec. 10	Wrap-up	Project presentation 1				1.5				
Dec. 11		Project presentation 2 (+ discuss course evaluation)		Final project submission deadline, 18:00		1.5				3
Dec. 17	Exam	(no lecture; exam preparation at home)								
Dec. 18		(no lecture; exam preparation at home)								20
Jan. 7		Exam at **ROOM**								
Jan. 30		Exam viewing at **ROOM**								
Total						**23**	**18.5**	**86**	**15.5**	**163**

Document history:
18.09.19 Preview version