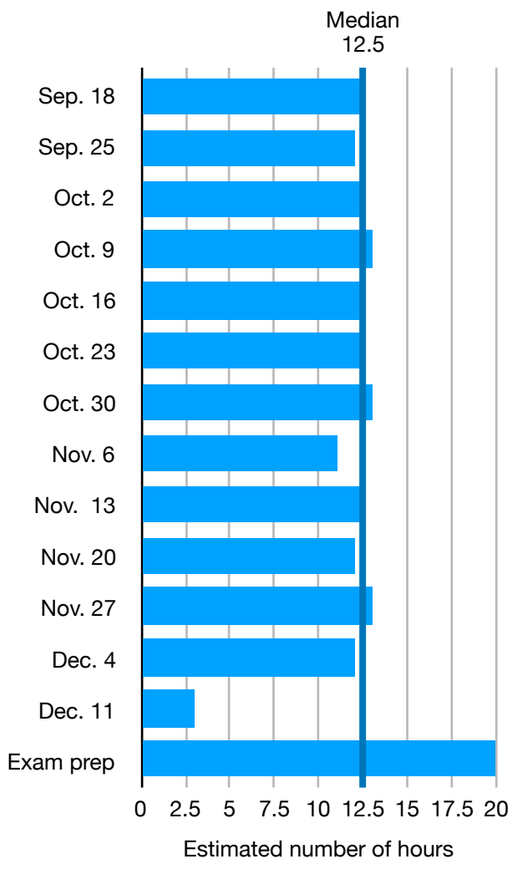
HCI HS 2018: Course plan

Date	Topical block	Classroom activity	Lecture video	Project activity (in- and outside the classroom)	Reading assignment	Estimated student workload (hours)				
						C	V	P	R	∑
Sep. 18	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 • Principles in contextual inquiry • Problematic interview questions			R1: Norman: Human-centered design R2: Contextual design: • Chapter 3: Principles of contextual inquiry	2			3	
Sep. 19		Hands-on 1: Interviewing • Interview and observing interviews from a given interview protocol • 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	R3: Contextual design: • Chapter 4: Interpretation session • Chapter 6: The affinity diagram	1	2	1	3.5	12.5
Sep. 25		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 protocol	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 protocol	R4: Contextual design: • Chapter 17: Validating the Design	1	2.5	2	3	
Sep. 26		Hands-on 3: Ideation and prototyping • Practice: brainstorming • Storyboarding existing situation • Paper-prototyping given UI • Q&A about prototyping		Interviewing		1.5		2		12
Oct. 2		Lecture 4: Testing • Principles • Usability test setup • Think-aloud protocol • Wizard-of-oz • Heuristic evaluation		Transcription and coding		2		3		
Oct. 3		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	Data analysis Further interviews and research	R5: The Design of Everyday Things • Fundamental principles of interaction		2	3	2.5	12.5
Oct. 9	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		2		4		
Oct. 10		Project work slot (unsupervised) • Further interpretation session and affinity analysis • Prepare the presentation		Further data analysis Prepare the presentation and the mid-term report	R6: Contextual Design • Chapter 19: Project planning and execution			4	3	13
Oct. 16		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	R7: The Humane interface • GOMS-KLM • Information-theoretic efficiency	1	2.5	3	4	
Oct. 17		Presentation: understanding status-quo (8 minutes/team)		Mid-project submission deadline, 18:00		1		1		12.5
Oct. 23		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			2.5	5		
Oct. 24		Project work slot (unsupervised) • Brainstorming and prototyping		Brainstorm the design directions and create initial prototypes				5		12.5

Abbreviations:
C: In-class (including reviewing at home)
V: Lecture video (including reviewing)
P: Project activities
R: Reading assignment
∑: Total

Workload summary

Week	Hours
Sep. 18	12.5
Sep. 25	12
Oct. 2	12.5
Oct. 9	13
Oct. 16	12.5
Oct. 23	12.5
Oct. 30	13
Nov. 6	11
Nov. 13	12.5
Nov. 20	12
Nov. 27	13
Dec. 4	12
Dec. 11	3
Exam prep	20
Total	**171.5**
6 ECTS × 30	**180**



Oct. 30		Presentation: initial prototype (8 minutes/team)		Further prototyping and testing with users				3		
Oct. 31		Lecture 9: Visual perception • Preattentive processing • Gestalt principles • Practice: case study analysis • Heuristic evaluation • Practice: case study discussion		Further prototyping and testing with users	R8: Interaction design (pp. 686–702) • Heuristic evaluation	2		5	3	13
Nov. 6		Panel: HCI and UX in practice • Daniel Felix (Founder, UX Schweiz) • Yves Bilgerig (User Experience Designer, AdNovum) • Martina Rakaric (BSG)		Further prototyping and testing with users		1.5		4		
Nov. 7		(Buffer lecture) • Mid-term Q&A • Additional explanations of the previous lectures Project coaching slot (on-demand)		Further prototyping and testing with users		1.5		4		11
Nov. 13	Interactions	Lecture 10: Interaction styles • Definitions • Benefits and problems • Seminal works for each interaction style • Frontiers of interaction design		Further prototyping and testing with users		1.5		5		
Nov. 14		Project coaching slot (on-demand)		Further prototyping and testing with users			2	4		12.5
Nov. 20		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. 21		Project work slot (unsupervised)		Implement final prototype				4		12
Nov. 27	Research	Project coaching slot (on-demand)	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. 28		Project work slot (unsupervised)		Implement final prototype Prepare the project video and the poster				5		13
Dec. 4		Exam preparation lecture • Q&A HCI Research • Exam examples • Filling course evaluation questionnaire • Project meeting and coaching		Prepare the project video and the poster Prepare the presentation and the report		2		5		
Dec. 5		• Free slot for project work (unsupervised)		Prepare the presentation and the report				5		12
Dec. 11	Wrap-up	Project presentation 1				1.5				
Dec. 12		Project presentation 2 (+ discuss course evaluation)		Final project submission deadline, 18:00		1.5				3
Dec. 18	Exam	(no lecture; exam preparation at home)								
Dec. 19		(no lecture; exam preparation at home)								20
Jan. 8		Exam at 1.B.01								
Feb. 5		Exam viewing at 1.D.29								
Total						**23**	**18.5**	**88**	**22**	**171.5**

History:
18.09.18 Initial public version