

SYDE543 Weekly Breakdown Winter 2023

SYDE543 Weekly Breakdown Winter 2023

Week	Dates	Unit	Topics	Readings		Assignments	Deliverables
				Book	Other sources		
1	Jan 9 - 13	Introduction to Cognitive Ergonomics	Course Introduction 1. What is cognitive ergonomics 2. Technology applications and industry Tutorial: design thinker profiles	1. Wickens, Ch 1 2. Parasuraman, Ch V	Design thinker profile		
2	Jan 16 – 20		Human errors Tutorial: Identify and Mitigate Errors	Forsythe et al Ch 6			Tutorial Report I
3	Jan 23 - 27		Cognition fundamentals 1. Brain myths and perception) 2. Memory 3. Attention Tutorial: brain mapping (NeuroVRLab)	2. Wickens, Ch 7 3. Wickens, Ch 3	1. Myths		Tutorial Report II
4	Jan 30 – Feb 3		Human performance 1. Mental workload 2. Situation awareness 3. Stress 4. Engagement and Flow Tutorial: UX specialist visit, Library Office	Wickens, Ch 11 Parasuman, Ch IV		First Assignment: Description	
5	Feb 6 – Feb 10		Cognitive processing 1. Signal detection theory 2. Decision making 3. Reaction and control Tutorial: Define, ideate and select. Poster design				First assignment: Poster, report and public presentation
6	Feb 13 – 17		Visit to: ALSIM AL250 flight simulator (242 of the Environment 1)				Lab Visit Report
7	Feb 20 - 24	Research Methods & Accessibility	Reading Week				
8	Feb 27 – Mar 3		Research methods in Cognitive Ergonomics 1. Experiment: working with human subjects 2. Statistics involving human subjects 3. Neuroergonomics Methods Tutorial: Ethics TCPS2 and ERB. Use Cases.	1. Lazar, Ch 15 2. Lazar, Ch 4 3. Parasuraman, Ch. II			

SYDE543 Weekly Breakdown Winter 2023

9	Mar 6 – Mar 10		Test <u>Tutorial:</u> Ethics case presentation				Ethics video and presentation
10	Mar 13 – Mar 17		User Centered Design 1. User modeling 2. UX Metrics and Biometrics <u>Tutorial:</u> Prototyping			Case study (working with human subjects): Description	
11	Mar 20 – Mar 24		Neurotechnology and Accessibility 1. Accessibility by design 2. Neurotechnology <u>Tutorial:</u> Case study presentation	1. Gilbert Ch1, 6 2. Forsythe, ch 10			Case study: Presentation
12	Mar 27 – Mar 31		Final project <u>Tutorial:</u> Prototype Clinic				First milestone
13	Apr 3 – Apr 7	Final Project	Final project (online) <u>Tutorial:</u> Prototype Clinic				Second milestone
14	Apr 10 – Apr 14		Final project presentation, In-person				Final public event