User Experience Design Overview

Introduction *week 1*

Key ideas
Iterative, user-centred, designers' conceptual models, users' mental models.

Questions to consider
System purpose, users, expertise, issues, resolutions, changing assumptions.

Usability and accessibility
Rise of usability, importance of accessibility, dialogue.

Cognition *week 2*

Key ideas
Computational offloading, Norman's seven stages of action.

Types of cognition
Perception, interpretations, attention (selective/focused, divided, sustained).

Memory
Types of memory, Gestalt psychology, recognition vs recall, learning, affordances.

Usability and Accessibility *week 3*

Key ideas
What is measured, benefits.

Heuristics
Norman's design principles, Nielsen's usability heuristics.

User differences
Cultural, situational impairment, accessible design, assistive technology.

Gathering Data *week 9*

Questionnaires
Open/closed questions, question design, common errors, standard questionnaires.

User feedback
Observation, physiological data, performance metrics.

Data Analysis *weeks 10 & 11*

Visualising data
Distributions, averages, spread.

Sampling
Simple random, convenience.

Comparing datasets
Simple difference, Cohen's d, confidence intervals, null hypothesis, p-value, independent variables, parametric/non-parametric tests, t-tests, r value.

Ethics of Human Research *weeks 12*

Principles of research ethics
Informed and voluntary consent, favourable risk-benefit ratio, confidentiality and data protection, independent review process for research, justice and inclusiveness.