UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

COURSE SYLLABUS

Interaction Design Laboratory

2526-2-F9201P214

Aims

The Interaction Design Workshop prepares students to design interactions with digital systems, services, interactive artefacts, and technology-mediated experiences. The course emphasises creating user experiences that are effective, meaningful, and engaging, moving beyond traditional usability. Students develop a strong foundation in user-centred design, including data collection and interpretation, analysis of design alternatives, prototyping, and solution evaluation.

This course builds on the Cognitive Ergonomics module by revisiting user-centred design fundamentals and expanding them within the context of Interaction Design. It emphasises contemporary interaction paradigms, complex and multi-device systems, the temporal aspects of interactive experiences, and user behaviours shaped by digital systems. The course also addresses emerging Human-AI Interaction, immersive environments, and the ethical, cultural, and social implications of design.

The course introduces the principles of Interaction Design and explores the techniques and methodologies for progressing through the various stages of a design cycle. The course programme combines lectures, practical exercises, and the progressive development of a final group project, with opportunities for discussion, review, and feedback in the classroom.

Contents

This course covers the principles of interaction design and examines key techniques and methodologies for each stage of the design cycle. The main topics include:

• Concepts of interaction design, usability, and user experience
• Contemporary interaction paradigms and emerging forms of technological mediation
• Interaction design as the systemic creation of integrated flows, states, transitions, and environments
• The temporal dimension of experience, including micro-interactions, feedback, onboarding, rhythm, and

engagement
• Behavioral and persuasive interaction, decision architectures, and ethical responsibility
• Interaction design for immersive environments and human–AI interaction
• Critical and speculative design, and the social and cultural impact of interactive systems
• Research methodologies, prototyping, evaluation, accessibility, and design ethics

Detailed program

Lectures
• Introduction to Interaction Design and key course concepts
• Contemporary interaction paradigms: direct, conversational, spatial, pervasive, and ambient
• Interaction Design in systems, interaction structures, and complexity management
• Temporal aspects of experience: micro-interactions, onboarding, feedback, flow, and progression
• Behavioural and persuasive interaction: engagement, sustained use, behavioural guidance, and ethical responsibility
• Interaction Design for immersive environments, including virtual and augmented reality

Practical Exercises
• Methodologies and tools in Interaction Design
• Consent, research ethics, and impact assessment beyond usability
• From concept to design options: generating alternatives, prototyping, and applying methods and tools to practical cases
• Alternative approaches to Interaction Design: ethical design, accessibility, critical and speculative design, co-design, and participatory design
• Design as subtraction, underdesign, and undesign
• Nudging, cognitive forcing, and cognitive friction
• Activities in Human–AI Interaction: user collaboration with intelligent systems, transparency, explainability, trust, accountability, and human control

Prerequisites

None.

Teaching form

- 12 face-to-face sessions of 2–3 hours each, covering theory, exercises, revision and discussion.
- 10 face-to-face practical sessions of 2–3 hours each, to be completed individually and/or in groups.

Textbook and teaching resource

The course materials (slides, articles, videos, etc.) will be provided by the instructors and uploaded to the eLearning platform during the course.

Recommended supplementary reading:

- Norman D (2013), The design of everyday things. Basic Books
- Cooper A, Reimann R, and Cronin D (2007), About Face 3: The Essentials of Interaction Design. John Wiley & Sons, Inc., New York, NY, USA
- Norman D (2004). Emotional Design. Why We Love (or Hate) Everyday Things, Basic Books
- Sharp H., Rogers Y., Preece J. (2023) Interaction Design: Beyond Human-Computer Interaction (6th edition). John Wiley & Sons Inc.

Semester

Second semester

Assessment method

Assessment is based on:

- The quality and conceptual coherence of a group project (2–3 people)
- The ability to integrate the theoretical paradigms covered in the course into the project
- The complexity and innovativeness of the designed interaction
- The ability to present a critical argument
- An oral presentation of the project, including a discussion of the project and any questions on topics covered in lectures and practical sessions.

The group project serves to assess the ability to correctly implement design and evaluation principles and techniques. The group project will be submitted as a short dissertation one week before the examination session. The mark awarded for the project is a single mark for the working group. The oral presentation serves to assess individual preparation on the course content as applied to the project. The outcome of the oral examination, if satisfactory, may therefore result in an increase or decrease in the mark for the group project. In the event of an unsatisfactory oral examination, it will not be necessary to develop a new project, but it will be possible to make changes to the project already completed and sit a subsequent examination session.

Office hours

Appointments are scheduled by email and performed with an online call or in person.

Sustainable Development Goals

GOOD HEALTH AND WELL-BEING | REDUCED INEQUALITIES | SUSTAINABLE CITIES AND COMMUNITIES