COURSE DESCRIPTION – ACADEMIC YEAR 2024/2025

Course title	**Human-Computer Interaction**
Course code	76095
Scientific sector	INF/01
Degree	Master Software Engineering (LM-18)
Semester	2
Year	1
Credits	6
Modular	No

Total lecturing hours	40
Total lab hours	20
Attendance	Attendance (over 75%) is compulsory for students wanting to engage in the course work-based assessment. Non-attending students instead have to contact the lecturer at the start of the course (or at least one month before the exam they want to take) to agree on the modalities of the independent study and application.
Prerequisites	None
Course page	Team is used as platform for exchanging material and information

Specific educational objectives	The course belongs to the type "caratterizzanti – discipline informatiche". The course is designed to give students **first-hand experience of the deign process of graphical interfaces.** It follows the basic steps of requirements elicitation, design and evaluation. During the semester, students will be provided with a general overview of research in User-Centered Design of graphical interfaces. In parallel, they will work on an interaction design project, from ideation to mid fidelity prototype of a Graphical User Interface for a computing system. After successful attendance and engagement with the key study, the students are expected to acquire substantial professional skills and knowledge to move from conceptual design to a medium fidelity prototype. Non attending students will cover the same scientific content and will be given a set of structured exercises to support the individual elaboration of professional skills.

Lecturer	Antonella De Angeli
Contact	Via Bruno Buozzi 1, Room B1.3.24, antonella.deangeli@unibz.it, +39 0471 016041
Scientific sector of lecturer	INF/01
Teaching language	English
Office hours	Upon e-mail appointment
Lecturing Assistant (if any)	--

Contact LA	--
Office hours LA	--
List of topics	Methods and Frameworks - User-Centred Design - Quality metrics - PACT analysis - Design Principles for GUI Graphical User Interfaces - WIMP elements - Design Patterns - Visual Aesthetics - Multimedia Interaction The human-information processor - Visual Attention - Visual Perception - Visual Memory Evaluation - User requirements - Formative evaluation - Summative evaluation - Heuristics evaluation -
Teaching format	Service Learning with a mix of frontal lectures, hands-on activities, invited presentations, students' active engagement.
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Learning outcomes	**Knowledge and understanding** ∉ D1.1 - possess solid knowledge of both the fundamentals and the application aspects of the various fundamental areas of Human-computer interaction ∉ D1.2 - Understanding of the skills, tools and techniques required for an effective use of data science ∉ D1.9 - Knowledge of the challenges in the field of man-machine interface and of the methods and techniques for overcoming these challenges ∉ **Making judgments** ∉ D3.1 - ability to independently select documentation from various sources, including technical books, digital libraries, technical scientific journals, web portals or open source software and hardware tools; **Communication skills**

	∉ D4.1 - ability to present the contents of a scientific/technical report in a set time in front of an audience, including non-specialists; ∉ D4.2 - ability to structure and draft scientific and technical descriptive documentation of project activities; ∉ D4.3 - ability to co-ordinate the work of a project team and to identify activities aimed at achieving the project objectives; ∉ D4.5 - ability to interact and collaborate in the realisation of a project or research with peers and experts; **Learning skills** ∉ D5.1 - ability to independently extend the knowledge acquired during the course of study by reading and understanding scientific and technical documentation in English

Assessment	The course is heavily project based and attendance is strongly recommended. Assessment for Attending students **Group project work** • Written project report elaborated in groups (Max 10 page) to be delivered two weeks before the group sits the oral examination (50%). • Individual oral examination with presentation of the final prototype to evaluate the results of the project, test knowledge acquisition, and verify individual contribution to the group work (50%). Assessment for Non attending students • **Individual examination** • Course-work: the students will be given a design topic and required to develop a user-centred methodology for it, engage in conceptual design, low to mid-fidelity prototyping (50%) • Oral exam with evaluation of the written exam files, to test knowledge acquisition, and verify individual contribution to the group work (50%).
Assessment language	English
Assessment Typology	Monocratic
Evaluation criteria and criteria for awarding marks	• Medium fidelity Prototype and Project report: ability to work in a team, creativity, skills in critical thinking, ability to summarize in own words, methodological rigor. • Oral examination: clarity of answers, mastery of technical language, ability to summarize, evaluate, and establish relationships between topics; • Written report: methodological rigor, creativity, skills in critical thinking, ability to summarize in own words, clarity of answers, mastery of language (also with respect to teaching

	language), ability to summarize, evaluate, and establish relationships between topics;

Required readings	Jennifer Preece, Yvonne Rogers, Helen Sharp (2023). Interaction Design: Beyond human-computer interaction. New York: John Wiley & Sons, Inc. . 6th Edition. Subject Librarian: David Gebhardi, David.Gebhardi@unibz.it
Supplementary readings	Selected papers will be suggested after each lecture.
Software used	--