

SYLLABUS COURSE DESCRIPTION

COURSE TITLE	Human-Centered GUI Design
COURSE CODE	76229
SCIENTIFIC SECTOR	INF/01
DEGREE	Bachelor's in Computer Science
SEMESTER	1st
YEAR	3rd
CREDITS	6
TOTAL LECTURING HOURS	40
TOTAL LAB HOURS	20
ATTENDANCE	<p>Attendance (70%) is compulsory for students wanting to engage in the group-work based evaluation assessment (Modality 1).</p> <p>Non-attending students shall contact the lecturer at the beginning of the course to agree on the modalities of independent study (Modality 2)</p>
PREREQUISITES	None
COURSE PAGE	https://ole.unibz.it/
SPECIFIC EDUCATIONAL OBJECTIVES	<p>Type of course: caratterizzanti Scientific area: discipline informatiche</p> <p>The course is designed to give students first-hand experience of an interaction design project following the three basic steps of requirements elicitation, prototyping and evaluation. Students will be provided with a general overview of Human-Computer Interaction, Design thinking and User-Centred Design.</p> <p>During the course, they will work on a design project, systematically applying the lecture topics in group exercises and individual work. After successful attendance, the students are expected to acquire substantial professional skills and knowledge of interaction design.</p> <p>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.</p>

LECTURER	Antonella De Angeli
SCIENTIFIC SECTOR OF THE LECTURER	INF/01
TEACHING LANGUAGE	English
OFFICE HOURS	Before or after the lesson. Please, set first an appointment by email. Office POS 1.04, first floor, Faculty of Computer Science, piazza Domenicani 3
TEACHING ASSISTANT	Antonella De Angeli Maria Menendez Blanco
OFFICE HOURS	Before or after the lab. Please, set first an appointment by email. office POS 1.04, first floor, Faculty of Computer Science, piazza Domenicani 3
LIST OF TOPICS COVERED	<ul style="list-style-type: none"> • Introduction to the history of Human Computer Interaction (HCI) • User-centered design (UCD) approach and Design Thinking • Design approaches and methods: formal, informal • Psychology of interaction: essentials, with a focus on attention, visual perception, and memory • GUIs design principles and patterns • Introduction to evaluation methods: ethical concerns, expert-based evaluation and user-based evaluation
TEACHING FORMAT	<p>Lectures and lab workshops.</p> <p>The course follows a learning-by-doing approach with formative feedback both during theoretical lectures and lab hours.</p>

LEARNING OUTCOMES	<p>Knowledge and understanding:</p> <ul style="list-style-type: none"> • Gain a solid knowledge of the theoretical foundations of computer science • Develop a deep knowledge of key principles, techniques and methodology for software design, development, and maintenance <p>Applying knowledge and understanding:</p> <ul style="list-style-type: none"> • Ability to apply knowledge to the analysis, design, development and evaluation of hardware and software systems which satisfy set requirements • Ability to select and use innovative technologies and apply sound methodologies to the application context and problem <p>Making judgments:</p> <ul style="list-style-type: none"> • Ability to collect and interpret useful data for autonomous judgement of information systems and their usage • Ability to engage in reflection on ethical and socioeconomic issues connected to information system <p>Communication skills:</p> <ul style="list-style-type: none"> • Ability to structure and write technical documentation • Ability to work in group for designing computing systems
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	<p>Learning skills:</p> <ul style="list-style-type: none"> • Acquiring abilities necessary for autonomous study • Acquiring abilities necessary to develop projects in companies, institutions or development communities, including distributed ones.
<p>ASSESSMENT</p>	<p>The assessment will be based on 2 outputs:</p> <p>A group-project: students will be working on a project to address a design problem and offer a solution through the prototype of a graphical user interface. Two deliverables are expected and will be marked:</p> <ul style="list-style-type: none"> • 1) interactive GUI prototype • 2) design report describing each phase of the work, explaining design choices, and evaluation results For attending students, the project will be a group work, whereas for not attending students will be an individual work. <p>This part accounts for 50% of the overall mark</p> <p>An oral examination including a group presentation of the project results and individual Q&A</p> <p>This part accounts for 50% of the overall mark</p> <p>Assessment for non-attending students Non-attending students will follow the same assessment procedure but will conduct the project individually.</p>
<p>ASSESSMENT LANGUAGE</p>	<p>English</p>
<p>EVALUATION CRITERIA AND CRITERIA FOR AWARDING MARKS</p>	<p>The evaluation criteria for project work are:</p> <ul style="list-style-type: none"> • Conceptual quality of the content, including the level of the critical reflection in relation to the topics presented during the lessons • Clarity of the explanation of the design choices • Originality, creativity, and innovation of the proposed solution • Complexity and coherence of the interactive prototype in relation to the theoretical aspects presented during the lessons • Clarity of the text, in terms of content (appropriation of specific technical terms), layout (including figures, tables), ability to summarize in own words. <p>The evaluation criteria for the oral exam are:</p> <ul style="list-style-type: none"> • Conceptual quality of the content, including the level of the critical reflection in relation to the topics presented during the lessons • Clarity of the explanations, appropriation of specific technical terms, ability to summarize in own words. <p>The final mark is the average between the written exam mark and the project report mark.</p> <p>Students must take a sufficient mark in both the report and the written exam.</p>

REQUIRED READINGS	Benyon, D. (2019). Designing User Experience: a guide to HCI, UX and interaction design. Pearson UK.
SUPPLEMENTARY READINGS	Further recommended readings will be assigned weekly during classes.
SOFTWARE USED	Students will learn to master a mix of digital and non-digital tools to build interfaces.