

COURSE DESCRIPTION – ACADEMIC YEAR 2023/2024

Course title	User research for AI
Course code	71054
Scientific sector	INF-01/ING-INF05
Degree	PhD in Computer Science
Semester	1
Year	2023-2024
Credits	6 credits for the entire course, consisting of an introduction and 4 seminars (s1 Epistemology and Theory, s2 Qualitative Research, s3 Quantitative Research and s4 Integrity and Ethics). The Ethics seminar (s4) can be taken independently by all students at the University and successful completion will be awarded with 1 credit .
Modular	

Total lecturing hours	40 hours total for the user research module Introduction: 3 hours, Seminar 1: Epistemology and Theory 8 hours Seminar 2: Qualitative Research 12 hours Seminar 3: Quantitative Research 11 hours Seminar 4 Ethics 6 hours It includes 6 hours for the Ethics seminar which is open and strongly recommended to all Phd students willing to apply for project approval to the Unibz Research Ethics Committee –
Attendance	Compulsory attendance of at least 75% of the lecture hours. The course will be delivered in presence, with no remote connection available.
Prerequisites	This course is open to all PhD students at the University of Bolzano , interested in understanding how user research can contribute to technology development. Students willing to attend the entire modules are required to have a general knowledge of HCI, as provided by having passed an introductory MSc module or read a handbook. Recommended reading: Interaction Design: Beyond Human-Computer Interaction by Rogers, Sharp and Preece (2023) 6 th Edition. Please note that this book is constantly updated as the field develops; we strongly recommend studying the last edition. No requirements are set for the ethical seminar (s4).
Specific educational objectives	User research is an interdisciplinary field of study and a practice which has gained increasing relevance in the field of computing and engineering. It is broadly recognized that acceptance is a core determinant of adoption, but how can we understand what users

	<p>need, want, and can use? How can this knowledge inform technology design?</p> <p>This course introduces the foundations of user research from a Human-Computer Interaction (HCI) perspective and questions similarities and differences when the object of study is Artificial Intelligence.</p> <p>The learning objectives includes academics knowledge and practical skills. After attending the course, reading related work, and engaging in the formative exercises proposed in the seminars, students will learn how to plan and conduct valid, reliable and rigorous research when interactive systems are not only tools controlled by the user but also agents who directly affect user's behaviour, decision making, and experiences alongside societal politics.</p> <p>The course provides a scholar overview of the</p> <ol style="list-style-type: none"> 1. Historical development of HCI 2. Epistemology and Theories in user research (seminar 1) 3. Qualitative research methods (seminar 2) 4. Quantitative research methods (seminar 3) 5. Integrity and ethics in user research (seminar 4) <p>It provides operational suggestions on</p> <ol style="list-style-type: none"> 1. How to conduct reliable, trustworthy, and ethical research 2. How to translate this knowledge in design choices 3. How to evaluate the design quality.
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Lecturer(s)	<i>Prof. Antonella De Angeli and Dr. Maria Menendez-Blanco</i>
Contact	<i>Antonella.deangeli@unibz.it maria.menendezblanco@unibz.it</i>
Scientific sector of lecturer(s)	INF01
Teaching language	English
Office hours	<i>Arrange beforehand by email.</i>
Lecturing Assistant (if any)	
Contact LA	
List of topics	<ul style="list-style-type: none"> • Historical development of HCI • Epistemology and Theories in user research (seminar 1) • Qualitative research methods (seminar 2) • Quantitative research methods (seminar 3) • Integrity and ethics in user research (seminar 4)
Teaching format	<p><i>Frontal lectures, interactive workshops, project-based learning, students presentations and peer review.</i></p> <p><i>Students are expected to participate actively by providing examples from their research topics, including theories and data.</i></p>
Learning outcomes	<p>Knowledge and understanding:</p> <ul style="list-style-type: none"> • Understanding of the skills, tools and techniques required for effective user research.

	<ul style="list-style-type: none"> • Knowledge of the challenges in the field of user research and of the methods and techniques for overcoming these challenges. <p>Applying knowledge and understanding:</p> <ul style="list-style-type: none"> • Design, execution and evaluation of a user research protocol relevant to the student topic <p>Making judgments:</p> <ul style="list-style-type: none"> • Ability to autonomously select the documentation (in the form of books, web, magazines, etc.) needed to keep up to date in a given sector • Ability to understand validity and reliability of user research <p>Communication skills:</p> <ul style="list-style-type: none"> • Ability to present one's work in a clear and comprehensible way in front of an audience, including non-specialists • Ability to structure and draft scientific and technical documentation <p>Learning skills:</p> <ul style="list-style-type: none"> • Ability to autonomously keep oneself up to date with the developments of the most important areas of data science
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Learning outcomes

<p>Assessment</p>	<ul style="list-style-type: none"> • <i>The students attending the User Research Module will deliver at the end of the course a draft paper to be submitted to CHI2024 including</i> <ul style="list-style-type: none"> • <i>Introduction</i> • <i>Related work</i> • <i>Methodology</i> • <i>Results</i> • <i>All the students will have to deliver a draft of their ethical submission to the unibz research ethics Committee.</i>
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<p>Assessment language</p>	<p>English</p>
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<p>Assessment Typology</p>	<p>Monocratic and peer review</p>
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<p>Evaluation criteria and criteria for awarding marks</p>	<p>The course is Pass or Fail. For the students' attending the entire module, evaluation will be based on</p> <ol style="list-style-type: none"> 1) Participation and contribution to class activities (30%), as awarded by the lecturers 2) Quality of paper draft (40%) following the ACM CHI review criteria 3) Quality of the ethical proposal (30%) following the unibz evaluation standard <p>For the students' attending only the Integrity and Ethics seminar, evaluation will be based on point 3 of the previous list.</p>
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<p>Required readings</p>	<p><i>Required reading will be communicated to the students before each seminar according to their own research interests.</i></p> <p>For the introduction session, students have to read two of these papers:</p> <p>livari, J., & livari, N. (2011). Varieties of user-centredness: An analysis of four systems development methods. <i>Information Systems Journal</i>, 21(2), 125-153.</p> <p>De Angeli, A., Sutcliffe, A., Hartmann, J. (2006). Interaction, Usability and Aesthetics: What Influences Users' Preferences? Proceedings of DIS 2006. Penn State, PA, USA. New York: ACM, pp. 271-280</p> <p>Bødker, S. (2006). When second wave HCI meets third wave challenges. In <i>Proceedings of the 4th Nordic conference on Human-computer interaction: changing roles</i> (pp. 1-8).</p>
<p>Supplementary readings</p>	<p>will be provided during the course</p>
<p>Software used</p>	<p>N/A</p>