Syllabus
Course description

Course title	Virtual communication and Human-Computer Interaction
Course code	17324
Scientific sector	ICAR/17 INF/01
Degree	Bachelor in Communication Sciences and Culture
Semester	2nd
Course year	2nd
Credits	6 + 6
Modular	*Yes*

Total lecturing hours	45 + 45
Total lab hours	
Attendance	according to the regulation
Prerequisites	Knowledge of digital prototyping (e.g., Figma)

Specific educational objectives	**Virtual Communication (ICAR/17)** The course aims at the development of theoretical-practical competences in the field of communication, with particular focus on the mastery of analytical and explorative methodologies and tools linked to resources of concrete expendability and intended to extend the range of technical knowledge and professional opportunities related to the media and electronic publishing sector. The necessary theoretical and conceptual foundations will in fact be supplemented by the presence of multiple practical activities and actual development of digitally derived content. **Human-Computer Interaction (INF/01)** The course deepens the students' knowledge on topics related to human-centered perspectives on Computer Science research and development. The focus of the course will go beyond the user-system interface and delve into digital technologies as tools for communicating between teams, groups, and societies. The theoretical competences will include domains that deal with the collaborative (e.g., Computer-Supported Collaborative work) social (e.g., Social Computing), and societal aspects (e.g., Critical Computing) of digital technologies. These theoretical foundations will allow students to develop critical thinking on collaborative (e.g., groupware), and data-rich products (e.g., AI, automatic-decision making systems). The practical competences will be developed through case studies and practical examples presented during the lectures and laboratories.

Module 1	Virtual communication
Lecturer	Francesca Condorelli Francesca.Condorelli@unibz.it

Scientific sector	ICAR/17
Teaching language	English
Office hours	from Monday to Friday on request
List of topics covered	
Teaching format	*Frontal lectures, exercises, labs, projects, etc.*
Total lecturing hours	*45*
Credits	*6*

Module 2	Human-Computer Interaction
Lecturer	Maria Menendez Blanco Maria.MenendezBlanco@unibz.it
Scientific sector	INF/01
Teaching language	English
Office hours	from Monday to Friday on request
List of topics covered	The course will focus on **three main thematic areas**, namely Computer-Supported Collaborative Work, Social Computing, and Critical Computing, each area will be covered in more than one lecture/laboratory. Each lecture will present theories and methods key to acquire foundational knowledge and skills on digital technologies as a communication tool within teams, groups, and societies: - Computer-Supported Collaborative Work: theory on key concepts that are important for developing collaborative technologies in cooperative settings such as articulation work, social translucence, and mutual awareness. - Social Computing: theory social aspects influencing online interactions (e.g., norms) and practical examples that reflect the impact of digitally mediated social interactions. - Critical Computing: concepts, examples, and discussions on how digital technologies shape societies, with an emphasis on data-products (e.g., how do social categorizations impact digital technologies, and vice versa? what are the human, social, and societal aspects behind artificial intelligence?)
Teaching format	Frontal lectures and laboratory exercises. Students will need to engage with interactive prototyping, therefore they are requested to bring a laptop, which may be borrowed by the ICT services before the lecture, if they have no personal laptop. Tablets or smartphones cannot substitute the laptop.
Total lecturing hours	*45 (30 lecture + 15 laboratory)*
Credits	*6*

Learning outcomes	**Virtual Communication** *Knowledge and understanding* Demonstrate a comprehensive understanding of the key concepts and theories related to Artificial Intelligence, the Metaverse, digital environments, virtual tours, and augmented reality, and their applications in virtual communication. *Applying knowledge and understanding*

Apply multi-disciplinary approaches to design, produce, and maintain virtual environments, effectively integrating Artificial Intelligence, Metaverse platforms, and augmented reality to solve complex communication challenges.

Making judgments
Critically evaluate and assess the effectiveness of virtual communication strategies and technologies, considering ethical, cultural, and technical implications when making decisions related to the design and implementation of digital environments.

Communication skills
Communicate complex ideas and findings related to virtual communication technologies and environments effectively to both specialist and non-specialist audiences, using appropriate digital tools and platforms.

Learning skills
Demonstrate the ability to independently acquire new knowledge and skills in the rapidly evolving fields of Artificial Intelligence, Metaverse, and augmented reality, ensuring continuous professional development in virtual communication.

Human-Computer Interaction
Knowledge and understanding
- Describe Human-Computer Interaction as a field of Computer Science that focuses on user, activities, contexts, and technologies
- Describe theories and concepts relevant for the design and evaluation of computer-supported collaboration
- Elaborate on the social and societal impact of digital technologies (e.g. data work, crowdsourcing)

Applying knowledge and understanding
- Ability to discuss how digital platforms (e.g., groupware, social media) shape collaboration and/or collective action
- Ability to discuss how data generation and production shapes digital technologies
- Practical experience on developing interactive prototypes

Making judgments
- Being able to critically reflect on the present and future use of digital platforms as a communication tool within teams and groups
- Being able to critically reflect on how data-rich products shape societies

Communication skills
- Demonstrate the ability to work in groups and establish effective communication and collaboration
- Improve verbal and written presentation skills

Learning skills
- Students will develop their independent learning skills, abilities to work in group, analytical thinking, and ability to shape and

	express personal reflections on complex topics related to digital technologies and their impact on societies.
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Assessment	**Virtual Communication** Students will have to demonstrate a widespread understanding of the topics covered as well as being able to concretely motivate certain operational choices that they will be called upon to make in carrying out the work required for the examination. The practical skills and specific technical competences will be assessed through the analysis of the products developed directly by the students, both during the progression of the teaching activities and following the choice of the final papers to be presented in the examination. 100% - oral - final paper discussion **Human-Computer Interaction** The exam will consist of two parts which will be assessed independently: a written report, and an oral examination. • **Written report:** Students who regularly attend the course (> 60% attendance) will be engaged in a group work, and specific exercises will be introduced in the class. Students who do not attend the lessons will be given a similar exercise to be done individually. Non-attending students are requested to contact the lecturer no later than one month after the starting date of the course. Attending (and non-attending) students need to deliver the group (or individual) report at least two weeks before the exam session the student wish to attend. • **Oral exam:** Students will do a group (or individual, if they have worked individually) presentation of their written report, followed up by individual questions to assess the theoretical knowledge and skills acquired during the course.
Assessment language	English

Evaluation criteria and criteria for awarding marks	**Virtual Communication** Intermediate assessment in itinere, final portfolio (70%) and oral discussion (30%). Oral examination: relevance, clarity of argument, capacity for critical analysis, ability to revise, reflection (30%). Awarding of a single final mark, average of the assessments of the individual modules. **Human-Computer Interaction** **Criteria for the evaluation of the written report:** Relevance to the course topics, methodological rigor, relevance of the results, development of critical reflections, quality of the developed artefacts (e.g., interactive prototype), mastery of language (with respect to the terms, theories, and methods introduced during the course) and general quality of the report (e.g., presentation, clarity, structure, use of language, reference to relevant work) **Criteria for the evaluation of the oral exam:** clarity of answers, skills in critical thinking, mastery of language (with respect to the terms, theories, and methods introduced during the course), ability to summarize, evaluate, and establish relationships between topics. Attendance is encouraged, participation and engagement during the course can add up to 20% of the final mark.

Required readings	**Virtual Communication:** • Due to the vast list of topics treated in the course, and the potential number of readings needed, few bibliography references will be provided by the teacher **Human-Computer Interaction:** Required readings will be allocated before the lectures
Supplementary readings	