

Bachelor in Communication sciences and culture

Course title:	Elements of Computer Science for Communications
Course year:	1
Semester:	2
Course code:	17239
Scientific sector:	INF/01
Lecturer:	Antonella De Angeli <a href="mailto:andeangeli@unibz.it">andeangeli@unibz.it</a>
Module:	NO
Lecturer other module:	/
Credits:	6
Total lecturing hours:	45 (30 lecture + 15 laboratory)
Total Hours of availability for students and tutoring:	
Office hours:	18
Attendance:	Non-attending student will find the opportunity to participate in educational activities on the course e-learning platform.
Teaching language:	English
Propaedeutic course:	none
Course description:	
Specific educational objectives:	<p>This course unit is designed to give students an overview of Computer Science research and development with a unique focus on the interaction between digital technology and users. The aim is twofold. Firstly, it examines the implications of using groupware technologies to support communication and collaboration between members of a team, a group of friends, or a distributed community. Secondly, it focuses on the user interface conceived as the space for communication between humans and software algorithms.</p> <p>Starting from a short introduction to Computer Science, as an academic discipline and a practice, the course will focus on the fields which have directly addressed the human factor, namely Artificial Intelligence, Human-Computer Interaction and Computer Supported Cooperative work. Then, the course will focus on an interaction design perspective providing students with theoretical and practical knowledge of computer-mediated communication and interaction design qualities.</p>
List of topics covered:	<p>The weekly program is presented below.</p> <ol style="list-style-type: none"> <li>1. Introduction to the course</li> <li>2. What is Computer Science?</li> <li>3. Artificial Intelligence</li> <li>4. Human-Computer Interaction</li> <li>5. Computer-Supported Cooperative Work</li> </ol>

	<ol style="list-style-type: none"> <li>6. Interaction Design</li> <li>7. Computer-mediated communication</li> <li>8. Web-communication</li> <li>9. The Theory of Multimedia Design</li> <li>10. Usability</li> <li>11. Accessibility</li> <li>12. User Experience</li> <li>13. Civic Engagement</li> <li>14. Critical Design</li> <li>15. Revision</li> </ol>
<b>Teaching format:</b>	<p>Frontal lectures and laboratory exercises.</p> <p>Due to the importance of practical experience, students are requested to always 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.</p>
<b>Learning outcomes:</b>	<p><u>Knowledge and understanding:</u></p> <ul style="list-style-type: none"> <li>• Describe the main fields of computer science which have addressed the human factor and be aware of their epistemological positions</li> <li>• Explain key concepts of interaction design applied to the web</li> <li>• Specify quality metrics of human-computer interaction</li> <li>• Demonstrate awareness of critical design</li> </ul> <p><u>Applying knowledge and understanding:</u></p> <ul style="list-style-type: none"> <li>• Critical evaluation of digital platforms including usability, user experience and civic engagement issues</li> <li>• Practical experience on using digital platforms for public engagement</li> </ul> <p><u>Making judgments</u></p> <ul style="list-style-type: none"> <li>• Critical thinking and making judgment about present, current and future use of ICT within communication tasks</li> </ul> <p><u>Learning capabilities</u></p> <p>Students will develop their skills in a variety of areas during the course and will have engaged with the following:</p> <ul style="list-style-type: none"> <li>• Independent learning</li> <li>• Group working</li> <li>• Analytical thinking</li> <li>• Personal reflection</li> </ul> <p><u>Communication capabilities:</u></p> <ul style="list-style-type: none"> <li>• Demonstrate the capability of using groupware in synchronous and asynchronous communication</li> <li>• Improve verbal and written presentation skills</li> </ul>
<b>Evaluation criteria and criteria for awarding marks:</b>	<p>The exam will consist of two parts which will be assessed independently: a written report and an individual oral examination.</p> <p>Written report: Students who regularly attend the course will be engaged in a group work (&gt; 60%), 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.</p> <p>A positive mark for the written report is a pre-requisite to be admitted to the oral exam; there are no other pre-requisites. It has to be delivered at least 2 weeks in advance to the exam session the student wish to attend.</p> <p>Both parts (the oral exam and the written assignments) must be sufficient to pass the exam. The final grade is the average of the written</p>

	<p>mark (50%) and the mark of the oral exam (50%).</p> <p>General criteria for the evaluation of the written assignment: correctness of the solution, proper and efficient use of methodology and tools, presentation of the solution, and critical analysis.</p> <p>Oral exam: correctness of answers and relevance of argument with respect to the contents will be evaluated, together with the ability to synthesis.</p>
<b>Required readings:</b>	<ul style="list-style-type: none"> <li>• Required reading will be allocated on a weekly basis-</li> </ul>
<b>Supplementary readings:</b>	