

## SYLLABUS

### COURSE DESCRIPTION – ACADEMIC YEAR 2024/2025

<b>Course title</b>	<b>Web and Internet Engineering</b>
<b>Course code</b>	76216
<b>Scientific sector</b>	INF/01
<b>Degree</b>	Bachelor Computer Science (L-31)
<b>Semester</b>	2
<b>Year</b>	1
<b>Credits</b>	6
<b>Modular</b>	No
<b>Total lecturing hours</b>	30
<b>Total lab hours</b>	20
<b>Attendance</b>	Not compulsory, but recommended
<b>Prerequisites</b>	Knowledge of at least one programming language
<b>Course page</b>	<a href="https://ole.unibz.it/">https://ole.unibz.it/</a>
<b>Specific educational objectives</b>	<p>The course belongs to the type "attività formative caratterizzanti – discipline informatiche".</p> <p>It deals with the design and development of web-based applications providing practical knowledge and skills required for designing and building them. The principles for the design and development of the client-side and server-side parts of an application will be illustrated.</p>
<b>Lecturer</b>	<a href="#">Markus Zanker</a>
<b>Contact</b>	Office POS 2.20, <a href="mailto:markus.zanker@unibz.it">markus.zanker@unibz.it</a> , +39 0471 016977
<b>Scientific sector of lecturer</b>	INF/01
<b>Teaching language</b>	German
<b>Office hours</b>	To be announced in OLE, prior appointment by email, office POS 2.20, Faculty of Computer Science.
<b>Lecturing Assistant (if any)</b>	TBD
<b>Contact LA</b>	TBD
<b>Office hours LA</b>	To be announced in OLE, prior appointment by email
<b>List of topics</b>	<ul style="list-style-type: none"> <li>• Development of web applications: basics of usability, accessibility and responsive design</li> <li>• Web protocols and markup languages</li> <li>• Client-side dynamicity and web scripting languages</li> <li>• Client-side GUI frameworks</li> <li>• Web application design and web services</li> <li>• Languages and frameworks for server-side web development</li> </ul>
<b>Teaching format</b>	<ul style="list-style-type: none"> <li>• Lectures</li> <li>• Small exercises and regular assignments</li> <li>• Work in teams</li> </ul>
<b>Learning outcomes</b>	<p>Knowledge and understanding:</p> <ul style="list-style-type: none"> <li>• D1.3 - Know the basic principles of programming.</li> </ul>

	<ul style="list-style-type: none"> <li>• D1.8 - Know the basics of designing and building web applications.</li> </ul> <p>Applying knowledge and understanding:</p> <ul style="list-style-type: none"> <li>• D2.2 - Ability to solve algorithmic problems using programming methods.</li> <li>• D2.8 - Ability to develop applications in the web area.</li> <li>• D2.17 - Know how to manage small projects for the development of information systems and how coordinate small working groups.</li> </ul> <p>Communication skills</p> <ul style="list-style-type: none"> <li>• D4.4 - Ability to structure and prepare technical documentation</li> <li>• D4.5 - Ability to collaborate in interdisciplinary teams to achieve IT objectives.</li> </ul> <p>Learning skills</p> <ul style="list-style-type: none"> <li>• D5.3 - Ability to follow rapid technological developments and to learn about innovative aspects of the latest generation of information technology and systems.</li> </ul>
<p><b>Assessment</b></p>	<p>The assignments aim at ensuring a continuous interaction with the course content and will be assessed according to correctness and completeness.</p> <p>The project activity aims at assessing how students approach the development of a web-based application and how they interact with each other in order to achieve a common goal. The written exam assesses the acquisition and the understanding of the theoretical knowledge presented during lectures.</p>
<p><b>Assessment language</b></p>	<p>German</p>
<p><b>Assessment Typology</b></p>	<p>Monocratic</p>
<p><b>Evaluation criteria and criteria for awarding marks</b></p>	<p>Written exam [50%], assignments [25%] and a project [25%]. The project and the assignments are valid for the 3 regular exam sessions within the same academic year.</p> <p>Assignments need to be submitted during the course of the semester, the project can be presented before the written exam of the first exam session or during one of the following 2 regular exam sessions.</p> <p>More details will be given during the lectures and in the OLE course.</p>
<p><b>Required readings</b></p>	<p>Lecture materials at the course page in OLE.</p>
<p><b>Supplementary readings</b></p>	<p>Links to mainly online resources will be provided in the OLE course.</p>
<p><b>Software used</b></p>	<ul style="list-style-type: none"> <li>• <i>HTML5 and CSS</i></li> <li>• <i>JavaScript, PHP and Python</i></li> <li>• <i>Apache, Tomcat and NGINX</i></li> </ul>