



### Programme of Course "Tecnologie del Web"

- Code: F0149
- Type of course unit: Compulsory (Bachelor Degree in Computer Science curriculum General)
- Level of course unit: Undergraduate Degrees
- Semester: 1

Number of ects credits: (Bachelor Degree in Computer Science) 6 (workload 150 hours)

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1	<b>Course objectives</b>	The main objectives is to provide the students with the insights of the Internet programming and how to design and implement complete realistic-scale distributed applications on the web. At the end of the course, the students will be familiar with design-methodologies necessary for managing the problem complexity, client-side programming, server-side programming, database connectivity. Moreover, they will be proficient in using the following languages, systems, and techniques: HTML/CSS, DOM, JavaScript, jQuery, PHP, MySQL, Templating, beContent, etc
2	<b>Course content and learning outcomes (dublin descriptors)</b>	<p>Topics of the module include:</p> <ul style="list-style-type: none"> <li>• Introduction. Three-tier architecture. Graphics and Communication.</li> <li>• Client-side: HTML/CSS, DHTML, JavaScript/ECMAScript, DOM, jQuery.</li> <li>• Server-side: PHP, MySQL, templating and separation of concerns (presentation, business logics, presentation logics).</li> <li>• Sessions and their management. User management: authentication, authorization and permissions.</li> <li>• Modelling and designing web application with beContent.</li> <li>• Case study (eg. ecommerce, news portal)</li> </ul> <p>On successful completion of this module, the student should :</p> <ul style="list-style-type: none"> <li>• Understading the methodologies and the technologies necessary for the development of web applications.</li> <li>• Being able to apply the most recent techniques and technologies to the design and development of web applications including the client and server-side in order to achieve a higher degree of usability and trust.</li> <li>• To evaluate and detect the right technologies and the best interfaces to achieve the design goals.</li> <li>• Continue learning all the evolving technologies related to the development of web applications</li> </ul>
3	<b>Course prerequisites</b>	The main prerequisites for this course are: the ability to program with an object oriented language (eg. Java or C++), how to design a database, entity/relationship diagrams, SQL language, finally a familiarity with the web ecosystem is important.
4	<b>Teaching methods and language</b>	<p>The course is organized around theoretical and practical lectures where the techniques will be first illustrated and then demonstrated.</p> <p><b>Language:</b> Italian</p> <p><b>Reference textbooks</b></p> <ul style="list-style-type: none"> <li>• D Goodman, <i>Dynamic HTML The Definitive Guide</i>. O'Reilly.</li> <li>• D Sklar, <i>Learning PHP 5</i>. O'Reilly.</li> <li>• R Nixon, <i>Learning PHP, MySQL, JavaScript, and CSS: A Step-by-Step Guide to Creating Dynamic Websites</i>. O'Reilly.</li> <li>• S Ceri, P Fraternali et al, <i>Progettazione di Dati e Applicazioni per il Web</i>. McGraw-Hill.</li> <li>• H E Williams, D Lane, <i>Web Database Applications with PHP and MySQL</i>. O'Reilly.</li> </ul>

<b>5</b>	<b>Assessment methods</b>	The exam consists in realizing a project, whose requirements will be distributed during the course and is available in these pages. In some cases, it will be necessary to sustain a written or oral exam.
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