



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 | Course objectives | 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 | Course content and learning outcomes (dublin descriptors) | <p>Topics of the module include:</p> <ul style="list-style-type: none"> • Introduction. Three-tier architecture. Graphics and Communication. • Client-side: HTML/CSS, DHTML, JavaScript/ECMAScript, DOM, jQuery. • Server-side: PHP, MySQL, templating and separation of concerns (presentation, business logics, presentation logics). • Sessions and their management. User management: authentication, authorization and permissions. • Modelling and designing web application with beContent. • Case study (eg. ecommerce, news portal) <p>On successful completion of this module, the student should :</p> <ul style="list-style-type: none"> • Understading the methodologies and the technologies necessary for the development of web applications. • 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. • To evaluate and detect the right technologies and the best interfaces to achieve the design goals. • Continue learning all the evolving technologies related to the development of web applications |
| 3 | Course prerequisites | 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 | Teaching methods and language | <p>The course is organized around theoretical and practical lectures where the techniques will be first illustrated and then demonstrated.</p> <p>Language: Italian</p> <p>Reference textbooks</p> <ul style="list-style-type: none"> • D Goodman, <i>Dynamic HTML The Definitive Guide</i>. O'Reilly. • D Sklar, <i>Learning PHP 5</i>. O'Reilly. • R Nixon, <i>Learning PHP, MySQL, JavaScript, and CSS: A Step-by-Step Guide to Creating Dynamic Websites</i>. O'Reilly. • S Ceri, P Fraternali et al, <i>Progettazione di Dati e Applicazioni per il Web</i>. McGraw-Hill. • H E Williams, D Lane, <i>Web Database Applications with PHP and MySQL</i>. O'Reilly. |

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| 5 | Assessment methods | 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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