

COURSE DESCRIPTION – ACADEMIC YEAR 2015/2016

Course title	Advanced Internet Technologies
Course code	72008
Scientific sector	INF/01
Degree	Master in Computer Science (LM-18)
Semester	2
Year	1
Credits	8
Modular	No
Total lecturing hours	48
Total lab hours	24
Total exercise hours	--
Attendance	Not Required
Prerequisites	Basic understanding of common procedural and object-oriented programming languages for the Internet such as Java or JavaScript. Basic knowledge of the structure and the protocols used on the Internet.
Course page	ole.unibz.it
Specific educational objectives	<p>The course belongs to the type "caratterizzanti – discipline informatiche" in the curriculum "Data and Knowledge Engineering" and in the curriculum "Software Engineering and IT Management".</p> <p>The objective of this course is to provide a comprehensive knowledge regarding Internet Technologies, including Web, Applications, etc. The orientation of the course includes a significant study on design and development of web applications as well as mobile web applications.</p>
Lecturer	Claus Pahl
Contact	Piazza Domenicani 3 , Office 1.11, Claus.Pahl@unibz.it , +39 0471 016 177
Scientific sector of lecturer	INF/01
Teaching language	English
Office hours	During the lecture times, and Monday 14:00-16:00. Faculty of CS, Piazza Domenicani 3 , Office 1.11
Lecturing Assistant (if any)	--
Contact LA	--
Office hours LA	--
List of topics	<ul style="list-style-type: none"> • Web application design and development • J2EE • Ajax • Web services • Mobile application frameworks • Reliability and scalability • Security and privacy • Grid computing
Teaching format	Frontal lectures, exercises, labs, projects.

<p>Learning outcomes</p>	<p>Knowledge and understanding</p> <ul style="list-style-type: none"> • Know the most up-to-date development architectures for systems based on web and mobile technologies. • Know the main methods and techniques for designing, creating, and maintaining software products and services. <p>Applying knowledge and understanding</p> <ul style="list-style-type: none"> • Be able to design and implement information systems in vertical sectors of applications according to technical, functional and organizational requirements. • Be able to design and execute experimental analyses on information systems or their components. • Be able to apply innovative methods for management and improvement of development processes in different application domains such web or mobile. • Be able to identify new needs and business opportunities in the field of software technology and services. <p>Making judgments</p> <ul style="list-style-type: none"> • Be able to identify reasonable work goals and estimate the resources required to achieve the objectives. <p>Communication skills</p> <ul style="list-style-type: none"> • Be able to structure and prepare scientific and technical documentation describing project activities. <p>Ability to learn</p> <ul style="list-style-type: none"> • Be able to independently keep up to date with developments in the most important areas of Computer Science.
<p>Assessment</p>	<ul style="list-style-type: none"> • Written and project work: written exam with verification questions and written project report done in small groups
<p>Assessment language</p>	<p>English</p>
<p>Evaluation criteria and criteria for awarding marks</p>	<p>The final grade is the average of the written exam (50%) and the project assessment (50%). Both parts must be individually passed.</p> <p>The project documentation needs to be submitted before the end of May and will be followed by a short presentation/discussion during the last week of the teaching period.</p> <p>The project is valid for the 3 regular exam sessions of the academic year. It can be presented before the end the first exam session or during one of the following 2 regular exam sessions.</p> <ul style="list-style-type: none"> • Relevant points for written exam: clarity of answers, mastery of language ability to summarize, evaluate, and establish relationships between topics; • Relevant for project assessment: ability to apply the concepts and technologies covered in the course, creativity, skills in critical thinking.
<p>Required readings</p>	<p>The course will be based on lecture notes</p>
<p>Supplementary readings</p>	<p>None.</p>



Fakultät für Informatik

Facoltà di Scienze e Tecnologie informatiche

Faculty of Computer Science

Software used	Apache Server, Apache Tomcat, PostgreSQL, MySQL/mariadb, J2EE JDK, Apache Cordova, PhoneGap, jQuery, Bootstrap (All required software is Open Source, freely available in Internet).
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