

## COURSE DESCRIPTION – ACADEMIC YEAR 2017/2018

<b>Course title</b>	<b>Advanced Internet Technologies</b>
<b>Course code</b>	72008
<b>Scientific sector</b>	INF/01
<b>Degree</b>	Master in Computer Science (LM-18)
<b>Semester</b>	2
<b>Year</b>	1
<b>Credits</b>	8
<b>Modular</b>	No
<b>Total lecturing hours</b>	48
<b>Total lab hours</b>	24
<b>Total exercise hours</b>	--
<b>Attendance</b>	Not Required
<b>Prerequisites</b>	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.
<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 "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>
<b>Lecturer</b>	<a href="#">Guohui Xiao</a>
<b>Contact</b>	<a href="#">Piazza Domenicani 3</a> , Room 2.05, <a href="mailto:xiao@inf.unibz.it">xiao@inf.unibz.it</a> , 0471-016266
<b>Scientific sector of lecturer</b>	ING-INF/05
<b>Teaching language</b>	English
<b>Office hours</b>	Anytime, by previous appointment by email
<b>Lecturing Assistant (if any)</b>	---
<b>Contact LA</b>	---
<b>Office hours LA</b>	---
<b>List of topics</b>	<ul style="list-style-type: none"> <li>• Web application design and development</li> <li>• J2EE</li> <li>• Ajax</li> <li>• Web services</li> <li>• Mobile application frameworks</li> <li>• Reliability and scalability</li> <li>• Security and privacy</li> <li>• Cloud computing</li> </ul>
<b>Teaching format</b>	Frontal classroom lecture plus lab sessions, exercises, and projects.
<b>Learning outcomes</b>	<ul style="list-style-type: none"> <li>• Knowledge and understanding</li> </ul>

	<ul style="list-style-type: none"> <li>• Know the most up-to-date development architectures for systems based on web and mobile technologies.</li> <li>• Know the main methods and techniques for designing, creating, and maintaining software products and services.</li> <li>• Applying knowledge and understanding       <ul style="list-style-type: none"> <li>• Be able to design and implement information systems in vertical sectors of applications according to technical, functional and organizational requirements.</li> <li>• Be able to design and execute experimental analyses on information systems or their components.</li> <li>• Be able to apply innovative methods for management and improvement of development processes in different application domains such web or mobile.</li> <li>• Be able to identify new needs and business opportunities in the field of software technology and services.</li> </ul> </li> <li>• Making judgments       <ul style="list-style-type: none"> <li>• Be able to identify reasonable work goals and estimate the resources required to achieve the objectives.</li> </ul> </li> <li>• Communication skills       <ul style="list-style-type: none"> <li>• Be able to structure and prepare scientific and technical documentation describing project activities.</li> </ul> </li> <li>• Ability to learn       <ul style="list-style-type: none"> <li>• Be able to independently keep up to date with developments in the most important areas of Computer Science.</li> </ul> </li> </ul>
<b>Assessment</b>	<ul style="list-style-type: none"> <li>• Project work to test knowledge application skills and communication skills, done in small groups who present their work orally</li> <li>• Written exam with verification questions and questions to test knowledge application skills</li> </ul>
<b>Assessment language</b>	English
<b>Evaluation criteria and criteria for awarding marks</b>	<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"> <li>• Relevant points for written exam: clarity of answers, mastery of language ability to summarize, evaluate, and establish relationships between topics;</li> <li>• Relevant for project assessment: ability to apply the concepts and technologies covered in the course, creativity, skills in critical thinking.</li> </ul>
<b>Required readings</b>	The course will be based on lecture notes.
<b>Supplementary readings</b>	None.



Fakultät für Informatik

Facoltà di Scienze e Tecnologie informatiche

Faculty of Computer Science

**Software used**

Java EE, Apache Server, Apache Tomcat, PostgreSQL, MySQL, J2EE  
JDK, PHP, Apache Cordova, PhoneGap, jQuery, Bootstrap (All Open  
Source, freely available in Internet).