Fakultät für Informatik
Facoltà di Scienze e Tecnologie informatiche
Faculty of Computer Science

SYLLABUS
COURSE DESCRIPTION

COURSE TITLE	Engineering of Mobile Systems
COURSE CODE	76228
SCIENTIFIC SECTOR	INF/01
DEGREE	Bachelor in Computer Science
SEMESTER	2nd
YEAR	3rd
CREDITS	6

TOTAL LECTURING HOURS	40
TOTAL LAB HOURS	20
ATTENDANCE	Attendance is not compulsory, but is highly recommended, as practical exercises will be done during labs and lectures.
PREREQUISITES	-
COURSE PAGE	https://ole.unibz.it/

SPECIFIC EDUCATIONAL OBJECTIVES	- Type of course: caratterizzanti - Scientific area: discipline informatiche Students will learn the key concepts of mobile application development and the internet of things. Practical experience will be gained by using state of the art technologies for the development of mobile applications. Upon completion of the course, students shall have acquired expertise in writing mobile applications that leverage advanced mobile APIs and connect to outside web services, and shall be aware of the various tradeoffs in the development of mobile applications.

LECTURER	Romain Robbes
SCIENTIFIC SECTOR OF THE LECTURER	INF/01
TEACHING LANGUAGE	English

OFFICE HOURS	By previous email appointment: rrobbes@unibz.it Office POS 1.16, first floor, Faculty of Computer Science, l, 39 0471 016025
TEACHING ASSISTANT	Same as lecturer
OFFICE HOURS	
LIST OF TOPICS COVERED	• Functional and declarative programming • Design of mobile applications • Frameworks and platforms for mobile development • Data and resource management in a mobile context • Interacting with Web Services • Mobile device sensors
TEACHING FORMAT	Frontal lectures, in-class exercises, projects in the lab.

LEARNING OUTCOMES	**Knowledge and understanding**: • To have a thorough knowledge of the main fundamentals, techniques and methods of software design, development and maintenance • Possessing knowledge and methodologies of software design and development in a mobile environment **Applying knowledge and understanding:** • To be able to apply one's knowledge to the analysis, design, development and verification of hardware and software systems that meet predefined requirements • Knowing how to develop applications in Web environment and mobile systems • Knowing how to choose and use innovative technologies and methods appropriate to the context and the application problem **Making judgments** • To be able to work autonomously according to one's level of knowledge and understanding, also assuming responsibility for IT development or consultancy projects **Communication skills** • Ability to use the most modern communication tools even at a distance • Ability to structure and draft technical documentation **Learning skills** • Ability to follow the rapid technological evolution and to learn the innovative aspects of the latest generation of technologies and information systems.

ASSESSMENT	The assessment of the course consists of two parts: • Written exam (50%); • Project and assignments (50%)
ASSESSMENT LANGUAGE	English
EVALUATION CRITERIA AND CRITERIA FOR AWARDING MARKS	The students will implement a mobile application as a project. The application should include the topics covered during the lectures and labs. The output of the project are: - a written report describing the application (problem statement, proposed solution, application design and architecture, functionality, development problems/solutions) - a working demo of the application - a project presentation The goal of the project is to assess to which degree students have achieved the following learning outcomes: applying knowledge and understanding, making judgments, communication skills and ability to learn. The aim of the written exam is to assess to which degree students have achieved the learning outcomes concerning applying knowledge and understanding, making judgments, communication skills and ability to learn.

REQUIRED READINGS	Reading material will be provided on the course web page
SUPPLEMENTARY READINGS	-
SOFTWARE USED	-