

Syllabus

Descrizione corso

Titolo insegnamento	Engineering of Mobile Systems
Codice insegnamento	76416
Titolo aggiuntivo	
Settore Scientifico-Disciplinare	INFO-01/A
Lingua	Inglese
Corso di Studio	Corso di laurea in Informatica e Management delle Aziende digitali
Altri Corsi di Studio (mutuati)	
Docenti	dr. Muhammad Azfar Yaqub, MuhammadAzfar.Yaqub@unibz.it https://www.unibz.it/en/faculties/engineering/academic-staff/person/47326
Assistente	
Semestre	Secondo semestre
Anno/i di corso	2
CFU	6
Ore didattica frontale	40
Ore di laboratorio	20
Ore di studio individuale	90
Ore di ricevimento previste	16
Sintesi contenuti	<ul style="list-style-type: none"> • Functional and declarative programming • Design of mobile applications • Frameworks and platforms for mobile development • Data and resource management in a mobile context • Mobile device sensors • Internet of Things
Argomenti dell'insegnamento	
Parole chiave	

Prerequisiti	<ul style="list-style-type: none"> • Basic web and programming background • Basic principles of Software engineering
Insegnamenti propedeutici	
Modalità di insegnamento	Frontal lectures, in-class exercises, projects in the lab.
Obbligo di frequenza	Attendance is not compulsory, but is highly recommended, as practical exercises will be done during labs and lectures.
Obiettivi formativi specifici e risultati di apprendimento attesi	<p>The course belongs to the type "caratterizzante - informatica". 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.</p> <ul style="list-style-type: none"> • D1.11 - Know software design and development methodologies with particular regard to the mobile environment. <p>Applying knowledge and understanding:</p> <ul style="list-style-type: none"> • D2.6 - Ability to design, describe and present IT solutions to policy makers. • D2.8 - Ability to develop applications in the web area. <p>Making judgments</p> <ul style="list-style-type: none"> • D3.4 - Ability to assess fundamental economic and business facts on the basis of numerical data. <p>Communication skills</p> <ul style="list-style-type: none"> • D4.4 - Ability to structure and prepare technical documentation. <p>Learning skills</p> <ul style="list-style-type: none"> • D5.3 - Ability to follow rapid technological developments and to learn about innovative aspects of the latest generation of information technology and systems.
Obiettivi formativi specifici e risultati di apprendimento attesi (ulteriori info.)	
Modalità di esame	<ul style="list-style-type: none"> • Oral exam (50%) • Project and assignments (50%)
Criteria di valutazione	The students will implement a mobile application as a project. The

	<p>application should include the topics covered during the lectures and labs.</p> <p>The outputs of the project are:</p> <ul style="list-style-type: none"> • 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 <p>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.</p> <p>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.</p>
Bibliografia obbligatoria	Reading material will be provided on the MS teams of the course.
Bibliografia facoltativa	
Altre informazioni	<p>Software used:</p> <ul style="list-style-type: none"> • React: https://reactjs.org • Native: https://reactnative.dev • Expo: https://expo.io • Visual Studio Code
Obiettivi di Sviluppo Sostenibile (SDGs)	Istruzione di qualità