

Syllabus

Descrizione corso

Titolo insegnamento	Web and Internet Engineering with Project
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Codice insegnamento	76447
Titolo aggiuntivo	
Settore Scientifico- Disciplinare	INF/01
Lingua	Tedesco
Corso di Studio	Corso di laurea in Informatica e Management delle Aziende digitali
Altri Corsi di Studio (mutuati)	Bachelor in Computer Science
Docenti	prof. dr. Markus Zanker, Markus.Zanker@unibz.it https://www.unibz.it/en/faculties/engineering/academic- staff/person/3466
Assistente	
Semestre	Secondo semestre
Anno/i di corso	1
CFU	6
Ore didattica frontale	40
Ore di laboratorio	20
Ore di studio individuale	90
Ore di ricevimento previste	12
Sintesi contenuti	 Basics of computer networks, web protocols and markup languages Development of web applications: basics of usability, accessibility and responsive design Client-side dynamicity and web scripting languages Client-side GUI frameworks Web application design and web services Languages and frameworks for server-side web development
Argomenti	The basics of computer networks, web protocols, and markup

dell'insegnamento	languages form the foundation for the development of modern web applications. Key concepts such as communication via the Internet using HTTP/HTTPS, the structure of IP networks, and the use of HTML for structuring web pages are covered. In web development, the focus is on usability, accessibility, and responsive design to ensure a barrier-free user interface that can be used on various end devices. Client-side dynamics are implemented using the web scripting language JavaScript in combination with CSS and frameworks like Bootstrap. The design of web applications and web services also includes the planning and modeling of functionalities, data flows, and interfaces. JavaScript (Node.js) is also used for server-side web development, which, together with the Express framework and a database system, enables the processing of user requests and the implementation of basic business logic.
Parole chiave	Web development, client technologies, server technologies
Prerequisiti	Knowledge of at least one programming language.
Insegnamenti propedeutici	
Modalità di insegnamento	LecturesSmall exercises and regular assignmentsWork in teams
Obbligo di frequenza	Not compulsory, but recommended.
Obiettivi formativi specifici e risultati di apprendimento attesi	The course belongs to the type "attività formative caratterizzanti – discipline informatiche". It deals with the design and development of web-based applications providing practical knowledge and skills required for
	designing and building them. The principles for the design and development of the client-side and server-side parts of an application will be illustrated.
	 Knowledge and understanding: D1.3 - Know the basic principles of programming. D1.8 - Know the basics of designing and building web applications. Applying knowledge and understanding: D2.2 - Ability to solve algorithmic problems using programming methods.



	D2.8 - Ability to develop applications in the web area. D3.17
	D2.17 - Know how to manage small projects for the development of information systems and how coordinate small
	working groups.
	Communication skills
	D4.4 - Ability to structure and prepare technical documentation
	D4.5 - Ability to collaborate in interdisciplinary teams to
	achieve IT objectives.
	Learning skills
	 D5.3 - Ability to follow rapid technological developments and to
	learn about innovative aspects of the latest generation of
	information technology and systems.
Objettivi formativi aposifici o	
Obiettivi formativi specifici e risultati di apprendimento	
attesi (ulteriori info.)	
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Modalità di esame	The assignments aim at ensuring a continuous interaction with the
	course content and will be assessed according to correctness and
	completeness.
	The project activity aims at assessing how students approach the
	development of a web-based application and how they interact
	with each other in order to achieve a common goal.
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	The written exam assesses the acquisition and the understanding
	of the theoretical knowledge presented during lectures.
Criteri di valutazione	Written exam [50%], assignments [25%] and a project [25%].
	The project and the assignments are valid for the 3 regular exam
	sessions within the same academic year.
	The assignments must be submitted during the semester, and the
	project can be presented before the written exam of the first exam
	session or before the second regular exam session on the dates
	announced at the beginning of the semester.
	Further details will be provided during the lectures and on the
	course web page.
Bibliografia obbligatoria	Lecture materials on the course page.
Bibliografia facoltativa	Links to mainly online resources will be provided in the course web

	page.
Altre informazioni	Software used: HTML5 (https://www.w3schools.com/html/) CSS (https://www.w3schools.com/css/) Bootstrap (https://getbootstrap.com/) JavaScript (https://www.w3schools.com/js/) Node (https://nodejs.org) Apache HTTP Server (https://httpd.apache.org) nginx (https://nginx.org)
Obiettivi di Sviluppo Sostenibile (SDGs)	Istruzione di qualità