Syllabus

Course Description

Course Title	Web and Internet Engineering with Project
Course Code	76216
Course Title Additional	
Scientific-Disciplinary Sector	INFO-01/A
Language	German
Degree Course	Bachelor in Computer Science
Other Degree Courses (Loaned)	
Lecturers	Prof. Dr. Markus Zanker, Markus.Zanker@unibz.it https://www.unibz.it/en/faculties/engineering/academic-staff/person/3466
Teaching Assistant	
Semester	Second semester
Course Year/s	1
CP	6
Teaching Hours	30
Lab Hours	20
Individual Study Hours	100
Planned Office Hours	
Contents Summary	This course belongs to the type "Attività formative caratterizzanti" and the subject area is "Scientifico-Tecnologico". The course 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.
Course Topics	• 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
Keywords	Web protocols, client-side and server-side web application development
Recommended Prerequisites	The course requires knowledge of at least one programming language.
Propaedeutic Courses	
Teaching Format	The course includes lectures, small exercises and regular assignments, and team-based work.
Mandatory Attendance	Not compulsory, but recommended
Specific Educational Objectives and Learning Outcomes	Knowledge and Understanding - D1.9: Know the principles of computer networks - D1.13: Know the basics of designing and building of web applications - D1.21: Know of both the fundamentals and the application aspects of the various areas of Human-computer interaction Applying knowledge and understanding - D2.3: Be able to solve problems using programming methodologies. - D2.11: Be able to develop Web applications. - D2.18: Be able to apply interactive design principles and patterns fo smart objects and we applications. Ability to make judgments - D3.1: Be able to collect and interpret useful data and to judge information systems and their applicability. - D3.2: Be able to work autonomously according to the own level of knowledge and understanding. Communication skills - D4.1: Be able to use one of the three languages English, Italian and German, and be able to use technical terms and communication appropriately.

	- D4.3: Be able to structure and write technical documentation. - D4.4: Be able to work in teams for the realization of IT systems. Learning skills - D5.1: Have developed learning capabilities to pursue further studies with a high degree of autonomy. - D5.3: Be able to follow the fast technological evolution and to learn cutting edge IT technologies and innovative aspects of last generation information systems.
Specific Educational Objectives and Learning Outcomes (additional info.)	
Assessment	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. The written exam assesses the acquisition and the understanding of the theoretical knowledge presented during lectures.
Evaluation Criteria	The final grade is composed of a written exam (50%), assignments (25%), and a project (25%). The project and assignments are valid for all three regular exam sessions within the same academic year. Assignments must be submitted during the semester, while the project can be presented either before the written exam in the first exam session or on an announced date before the second exam session. Further details will be provided during the lectures and on the course web page.
Required Readings	Lecture materials are available on the course web page.
Supplementary Readings	Links to primarily online resources will be provided on the course web page.
Further Information	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)

Sustainable Development Goals (SDGs)	Quality education