Syllabus

Course Description

Course Title	Prototyping Interactive Applications
Course Code	76111
Course Title Additional	
Scientific-Disciplinary Sector	INFO-01/A
Language	English
Degree Course	Master in Software Engineering
Other Degree Courses (Loaned)	
Lecturers	dr. Rachele Didero, Rachele.Didero@unibz.it https://www.unibz.it/en/faculties/engineering/academic-staff/person/52730
Teaching Assistant	
Semester	First semester
Course Year/s	2
CP	6
Teaching Hours	40
Lab Hours	20
Individual Study Hours	90
Planned Office Hours	18
Contents Summary	- Prototyping - Front-End Development - 2D Graphics Fundamentals - 3D Graphics Fundamentals - Modern Graphics User Interface and HCI Concepts - User Perception and Visual Communication
Course Topics	Prototyping Interactive Applications introduces methods and practices for designing, developing and evaluating interactive applications and prototypes. The course combines principles of human-computer interaction, human-centred design, visual

	communication with hands-on prototyping activities. Students explore how interaction concepts can be translated into visual and functional prototypes, considering users, contexts, perception, communication, usability and the characteristics of different interactive media.
Keywords	Human-Computer Interaction, Human-Centred Design, Prototyping, Interactive Applications, User Experience, Visual Communication
Recommended Prerequisites	
Propaedeutic Courses	
Teaching Format	Lectures, practical exercises and laboratory activities focused on the process of analysing, designing, developing and refining interactive prototypes.
Mandatory Attendance	Attendance is not mandatory but strongly recommended. Non-attending students should contact the lecturer at the start of the course to agree on the modalities of the independent study.
Specific Educational Objectives and Learning Outcomes	Knoweldge and understanding D1.2 be able to analyse and solve even complex problems in the area of Software Engineering with particular emphasis on the use of empirical evaluation studies, methods, techniques, and technologies. D1.4 have an in-depth knowledge of the principles, structures and use of processing systems for the automation of software systems. D1.8 ability to read, understand, and elaborate on specialist scientific documentation, such as conference proceedings, articles in scientific journals, technical manuals. Applying knowledge and understanding D2.3 ability to apply the principles of software engineering to IT and non-IT domains of varying complexity in which software technology is of great importance. Making judgements D3.1 ability to independently select documentation from various sources, including technical books, digital libraries, technical scientific journals, web portals, or open source software and hardware tools.

	Communication skills D4.5 ability to interact and collaborate in the realisation of a project or research with peers and experts. Learning skills D5.3 ability to extend incomplete knowledge with regard to the final objective of the project, in the context of a problem-solving activity.
Specific Educational Objectives and Learning Outcomes (additional info.)	
Assessment	The assessment is based on three components: - Group Project - Individual in-class work & participation - Individual Assignment
Evaluation Criteria	Students are evaluated on their ability to: understand and apply principles of Human-Computer Interaction and Human-Centred Design; analyse users, contexts and interaction challenges; develop and communicate interaction concepts through prototypes; critically evaluate design solutions and use feedback to support iteration; reflect on the use of contemporary tools; contribute actively in class and to individual and group project work.
Required Readings	Selected readings and reference materials will be provided throughout the course according to the topics and project activities.
Supplementary Readings	
Further Information	
Sustainable Development Goals (SDGs)	Industry, innovation and infrastructure, Quality education