



UNIVERSITÀ DI PAVIA

Anno Accademico 2020/2021

WEB AND MULTIMEDIA TECHNOLOGIES

Anno immatricolazione	2019/2020
Anno offerta	2020/2021
Normativa	DM270
SSD	ING-INF/05 (SISTEMI DI ELABORAZIONE DELLE INFORMAZIONI)
Dipartimento	DIPARTIMENTO DI INGEGNERIA INDUSTRIALE E DELL'INFORMAZIONE
Corso di studio	COMPUTER ENGINEERING
Curriculum	Embedded and Control Systems
Anno di corso	2°
Periodo didattico	Primo Semestre (28/09/2020 - 22/01/2021)
Crediti	6
Ore	52 ore di attività frontale
Lingua insegnamento	English
Tipo esame	SCRITTO E ORALE CONGIUNTI
Docente	PORTA MARCO (titolare) - 6 CFU
Prerequisiti	Basic knowledge of Internet technologies (client/server architectures, protocols, etc.).
Obiettivi formativi	<p>The student must be able to:</p> <ul style="list-style-type: none">- Understand the theoretical and practical bases of web technologies and of on-line and off-line multimedia;- Apply web and multimedia technologies to build static, dynamic, and interactive websites;- Critically select the best web and multimedia technologies depending on the application contexts.
Programma e contenuti	<p>- On-line/off-line Multimedia:</p> <p>. Images and graphics: color, bitmap graphics (global/local/pixel-level editing), vector (object-oriented) graphics, overview of graphic formats</p>

(characteristics, use), graphics for the Web (requirements, tools);

- . Digital audio: characteristics, formats, use;
- . Digital animation: bitmap animation, vector animation;
- . Digital video: formats, non-linear editing, requirements for the Web;

- Elements of off-line Multimedia.

- World Wide Web:

- . HTML language;
- . Cascading Style Sheets (CSS);
- . XML technologies;
- . Client-side interaction (JavaScript, Java);
- . Server-side interaction (CGI programs and application servers);
- . Content Management Systems (CMS);
- . Web 2.0;
- . Semantic Web;
- . Some HTML/CSS/JavaScript templates and frameworks;
- . Elements of Web Styling, Usability, Accessibility, and Information Architecture.

- Advanced forms of interaction in Multimedia:

- . Mobile technologies;
- . Elements of (immersive/non-immersive) virtual reality, augmented reality, telepresence, and perceptual interfaces.

Metodi didattici

The course is structured into theory lectures (36 hours) and practical classes (16 hours).

Testi di riferimento

Mainly slides and links to on-line material.

Modalità verifica apprendimento

Written test composed of open questions and exercises (optionally followed by an oral exam) and project (implementation of a dynamic website).

Altre informazioni

Obiettivi Agenda 2030 per lo sviluppo sostenibile

[Gli obiettivi](#)