UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

COURSE SYLLABUS

Computer and Graphics for The Web

2425-3-E2004P028

Learning area

1: Study of the means by which communication takes place.

Learning objectives

Knowledge and understanding

Students will learn theoretical methods concerning the design, prototyping, and evaluation of web interfaces. They will acquire basic coding skills in HTML/CSS and gain practical knowledge of widely adopted prototyping tools for web applications. Additionally, students will develop a critical attitude towards the entire development process of web applications and understand the main principles of User-Centered Design, which considers user needs and requirements as central to the whole process

Applying knowledge and understanding

Upon completing this course, students will be able to apply the knowledge, understanding, and practical skills acquired to evaluate the usability of web interfaces. They will be able to design and prototype usable web applications following a user-centered systematic approach.

Contents

The course will cover both theoretical methods and practical tools concerning the design, prototyping, and evaluation of web applications.

Detailed program

• Web usability: principles and evaluation methods (heuristic inspection and user testing)
• User interaction and user experience (UX / UI) design: methods and conceptual models.
• Basic HTML / CSS programming.
• Technological tools for the design and prototyping of web interfaces (e.g., Adobe Photoshop, Figma, Generative AI)

Prerequisites

Basic knowledge of computer use (file creation, folders, file extensions, browser, email).

Teaching methods

Teaching methods include:

- Ex-cathedra lectures
- Classroom discussions and mini-workshops
- Hands-on activities on HTML and CSS coding
- Supervised project activities focused on the usability evaluation of an existing web site and the design a new web site

The lessons are held in English.

Assessment methods

The exam aims to verify that students have understood the methods and tools presented in the course and have learned how to apply them. The assessment is based on the outcome of two project-based activities and their oral discussion.

- Activity 1: Usability evaluation (using heuristic inspection and user testing) of an existing website assigned by the teacher. The assessment will be based on the accuracy and thoroughness of the usability evaluation report. The report can be submitted either at mid-term (optional) or on any official exam date.

- Activity 2: Requirements modeling, conceptual design, and prototyping of a website on a topic assigned by the teacher. The assessment criteria are the correctness and completeness of the design report and the prototype. These two deliverables can be submitted on any exam official date.

The reporting and discussion language can be Italian or English.

Textbooks and Reading Materials

Course material (e.g., slides, HTML and CSS code) - available to all students enrolled in the course

Any HTML & CSS reference guide or online resource. For example:
HTML: http://www.w3schools.com/html/
CSS: http://www.w3schools.com/css/; https://www.codeschool.com/learn/html-css

Additional readings:

- Jennifer Robbins (2018). *Learning Web Design: A Beginner's Guide to HTML, CSS, JavaScript, and Web Graphics.* 5th Edition, O'Reilly Ed.
- Beaird J. Walker A. George J. (2021). *Web design per creativi, grafici, sviluppatori*. Apogeo.
- Beaird J. Walker A. George J. (2020). *The Principles of Beautiful Web Design*. Sitepoint Ed.

Sustainable Development Goals

QUALITY EDUCATION | INDUSTRY, INNOVATION AND INFRASTRUCTURE