UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

SYLLABUS DEL CORSO

Strumenti e Applicazioni del Web

2122-1-F9201P025

Aims

The educational objectives of this teaching are practical-applicative and conceptual-theoretical in nature.

Knowledge and understanding

- Introduction to computer networks and network protocols (basic concepts, local networks, geographical networks, the Internet)
- The Web and introduction to Web standards and languages (difference between Internet and Web, the graph structure of the Web, static Web / dynamic Web, semantic Web, main languages)
- Web Browser, role, and history
- Main Web applications and services, introduction to social media (and social Web)
- Current online content creation tools (blogs, content management systems, automation tools, data analysis, and infographic generation tools)

Ability to apply knowledge and understanding

- Use of core Web applications and services, social media
- Use of WordPress and main plugins for creating a thematic blog
- Use (at entry-level) of automation tools, data analysis tools, infographic generation

Contents

This course presents an overview of the evolution of the tools and applications of the Web, since its creation and until the most recent developments. The technological aspects will be discussed at a basic level, to support more conscious usage of the web tools and applications, whereas functional aspects and the market dynamics of the web ecosystem will be more central. Particular attention will be paid to the most diffused social media and the recent developments of the “mobile Web”.

Detailed program

- **Introduction to computer networks and network protocols**
    - Basic concepts
    - Local networks
    - Geographical networks
    - The Internet
    - Network protocols
- **The Web and introduction to Web standards and languages**
    - Difference between Internet and Web
    - The graph structure of the Web
    - Static Web / Dynamic Web
    - Semantic Web
    - Main languages for the Web
- **Web Browser, role, and history**
- **Main Web applications and services, introduction to social media (and social Web)**
- **Current tools for online content creation**
    - Blogs
    - Content management systems
    - Automation tools
    - Data analysis and infographic generation tools

Prerequisites

The course assumes that the students have a certain familiarity with main web access tools (browsers and search engines). It is also useful some level of experience with the most diffused social media (Facebook, Twitter, Youtube).

Teaching form

Theoretical and methodological aspects will be presented along with practical examples and case studies, employed to exemplify the introduced topics. The course has a partly laboratory approach: students are asked to experiment several online applications, among the most diffused, and to build a personal presence on different social media.

Lessons will be held in presence, unless further COVID-19 related restrictions are imposed.

Textbook and teaching resource

Slides of the frontal lessons, including links to additional suggested material (papers, articles, blogs).

Semester

First semester

Assessment method

The final evaluation is based on an individual written examination and the group implementation of a thematic blog (whose conception, topics, and initial graphical structure will be publicly presented). The evaluation of this project is the same for the group members with the exception of one or more specific contents to be agreed upon (e.g. an individual "featured" post, of greater length than the average, a small web application or an automation mechanism used in the site, a questionnaire and the analysis of gathered data, a series of infographics) that represent an individual contribution to the overall grade.

Office hours

By appointment