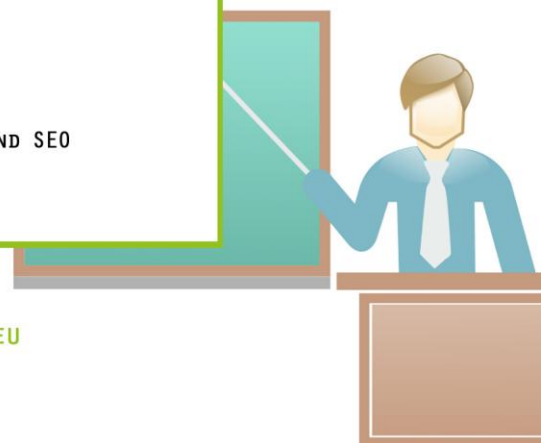


## WEB DESIGN TEACHERS' GUIDE

### PROGRAMME OF THE COURSE

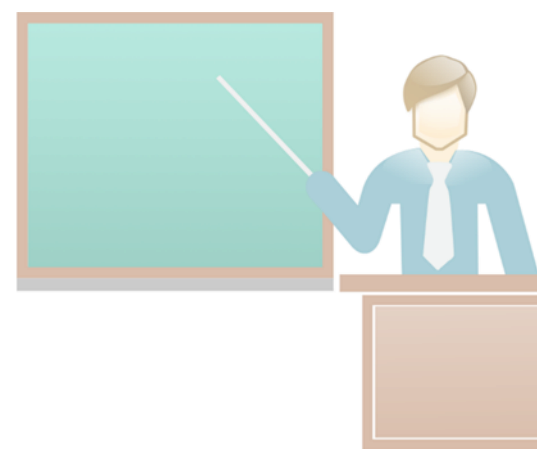
1. INTERNET AND WEB: TECHNICAL, ECONOMIC AND LEGAL ASPECTS
2. CONCEPTS AND TECHNICAL REFERENCES OF MULTIMEDIA IN WEB 2.0
3. PRINCIPLES OF MARKUP LANGUAGES, WEB EDITING, CONTENT MANAGEMENT AND USABILITY IN WEB 2.0
4. IMAGE PROCESSING FOR STATIC WEB PAGES, BASIC THEORY AND EDITING PHOTO FILES
5. IMAGE PROCESSING FOR STATIC WEB PAGES, BRANDING A WEBSITE
6. INTRODUCTION TO PHP AND MYSQL DATABASE: THE CORE FUNCTIONS
7. CONTENT MANAGEMENT SYSTEMS BASED ON XHTML, INTRODUCTION TO CSS
8. WEB DESIGN WORKFLOW. STEPS TO BUILD A MEANINGFUL WEBSITE
9. HOW TO CHOOSE A CMS THAT MEETS YOUR NEEDS: OPEN SOURCE REFERENCES AND SEO
10. EXERCISE AND ONLINE PUBLISHING OF A WEBSITE (EVALUATION)





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## Lesson #1 – Internet and Web: technical, economic and legal aspects

*Duration: 2 hour*

### OBJECTIVE

In lesson #1 the students will focus about the birth and growth of Internet and Web and its technical, economic and legal aspects. They will know about some fundamental concepts as markup languages (HTML), Web Marketing (Online Advertising and E-Commerce), Copyright and File Sharing, Web Browsers, Cookies and Search Engine Optimization (SEO). They develop the necessary knowledge to understand how "Web" may be used to build new "know how" and new work chances.

### TEACHING NOTES

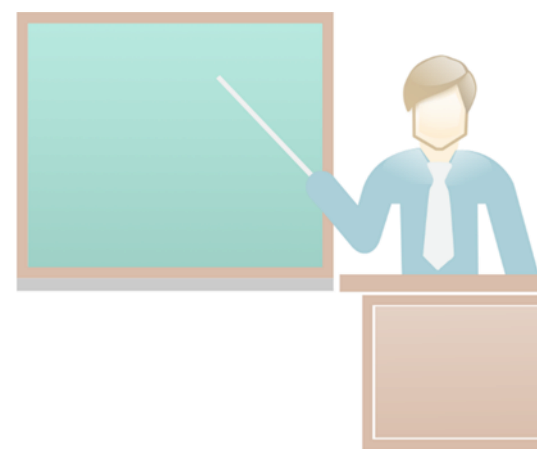
The birth of "World Wide Web" (1989-1991) through the words of one of his creators (Sir Tim Berners-Lee), the story of legalization of trade activities on internet in USA in '90s, the concept of "One to One Web Marketing" as the personalization of interactions between "seller" and "customer" and a new way to satisfy even more specific wishes of a customer, the meaning of SEO ("Search Engine Optimization") as the process of increasing the visibility of a website or a web page in the search results of a "Web Brower" , the meaning of copyright as the legal right created by the law of a country that grants the creator of an original work exclusive rights to its use and distribution.

### CLASSWORK:

Reading excerpts from "The One to One Future" (Don Peppers, Martha Rogers) and "The Great Marketing Turnaround" (Stan Rapp, Thomas L. Collins), watching video-documentary about the birth of "World Wide Web" and web marketing (4 parts documentary of History Channel "Internet Revolution").

### TEACHING AID

- Computer
- Projector
- Speakers
- Internet connection





## Lesson #2 – Concepts and technical references of multimedia in Web 2.0

*Duration: 2 hour*

### OBJECTIVE

In lesson #2 the students will be introduced about the most meaningful concepts and technical references of "multimedia" (text, audio, video, graphic), how those changed from Web 1.0 to Web 2.0 and influenced the "multimedia communication", how Web 2.0 leads the evolution of software and web protocols, how Marketing One to One comes true.

### TEACHING NOTES

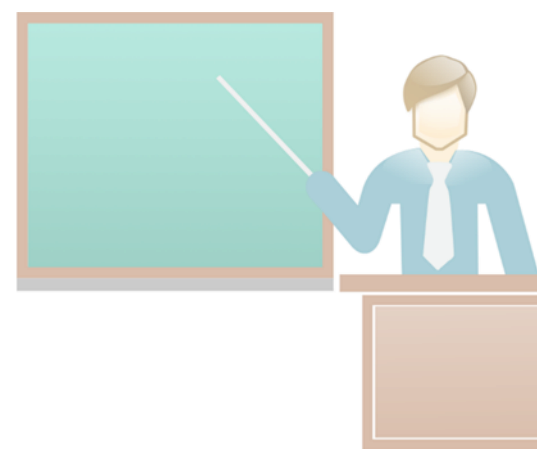
Evolution of hypertext language in Web 2.0: creating a Twitter account and using tweets and hashtags to enhance the visibility of a product. How web browsers and social networks making available tools to refine the web marketing: introduction to Google AdSense (how Google uses its Internet search technology to serve advertisements based on website content), Google Adwords (online advertising service that enables advertisers to compete to display brief advertising copy to web users), Facebook Adverts (a "Facebook for Business" tool targeted adverts to reach different audiences and meet business goals) and how they work, conversion pixel and conversion marketing, pay per click (PPC), cost per thousand impression (CPM), how any user can earn money hosting banners.

### CLASSWORK:

Creating a Twitter account, how to use tweets and hashtags to enhance the visibility of a product, the steps to manage a Twitter profile of a trade activity, how to build a winning relationship with the followers of a Twitter page. Creating the base of a Google and Facebook advertising: choosing images and key words to get a winning communication. Choose the right form of payment (CPM, PPC, conversion) for a specific advertising.

### TEACHING AID

- Computer
- Projector
- Speakers
- Internet connection





## Lesson #3 – Principles of markup languages, web editing, content management and usability in Web 2.0

*Duration: 3 hour*

### OBJECTIVE

In lesson #3 the students will focus about the principles of markup languages, studying history and evolution of HyperText Markup Language (HTML) from 1.0 version to 5.0 version and XHTML 2.0. They'll be introduced in the main components and building of a web page. They will learn about the tools as powerful softwares/CMS (Wordpress) that Internet provides today to build and customize a web page and a web site.

### TEACHING NOTES

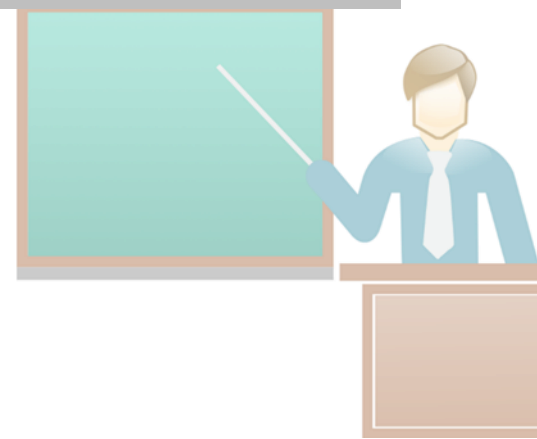
Main parts of a HTML 5 document: line containing HTML version information, declarative HEADER section, BODY (containing contents), secondary elements as FOOTER area and sidebars. General guidelines of Content Management System (CMS) and its main elements: the content management application (CMA) and the content delivery application (CDA). Introduction to the most popular Web 2.0 CMS to realize sites, Wordpress. First approach to the dashboard and its functions: home, posts, media, links, pages, comments, feedbacks, appearance, users, tools and settings.

### CLASSWORK:

Creating a free simple test blog with Wordpress, managing the base functions of the dashboard: inserting and formatting text, publishing and ordering pages and articles, allowing comments and ping on single pages, publishing images and video (media), inserting tags on a page, inserting widget, general administration of a web site and message moderation, introduction to plugins. Consulting official and unofficial guides about Wordpress (<http://www.creativecommons.it/>, <https://interconnectit.com>, "Getting-Started-with-WordPress" E-Book by iThemes Media), consulting the Wordpress official user guide online on <https://codex.wordpress.org/> to deepen how to design a Wordpress site and a website development.

### TEACHING AID

- Computer
- Projector
- Speakers
- Internet connection





## Lesson #4 – Image processing for static web pages, basic theory and editing photo files

*Duration: 3 hour*

### OBJECTIVE

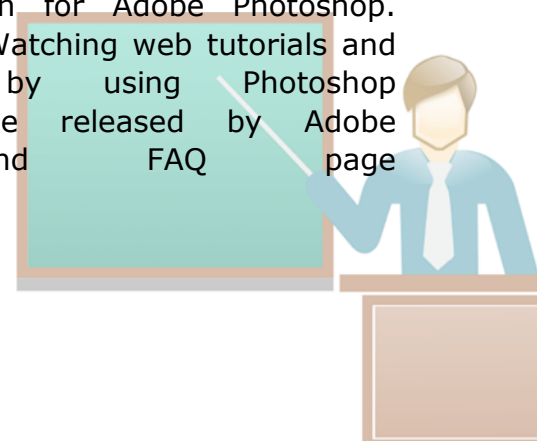
In lesson #4 the students will be introduced to image processing for static web pages and will know about its history, development and applications. They will approach to Adobe Photoshop, the most common software allowing to editing images (pictures and drawings) and they will learn about the meaning of RAW and manipulation of digital photos: processing camera raw image files and editing digital photos by using Adobe Photoshop.

### TEACHING NOTES

Learning about the basic definition of "image" as array of square pixels, the technical elements composing the color of an image (grey scale and models of colour as RGB, CMYK, scale of colour, color lab, multichannel), the size and resolution of an image, groups of images (vector graphics or line art, bitmaps pixel-based), most common file formats (GIF, JPEG, TIFF, PSD, PNG) and their differences. Seeing the colors as a number sequence: RGB decimal value, RGB Hexadecimal Value (HEX, used for HTML Color Shades), CMYK percentages. Free tools converting RGB Decimal - HEX- CMYK. Processing camera raw image files: histogram associated to an image, changing settings of an image, make tonal adjustments using the brightness, contrast, saturation, levels and curves, color balance, applying filters to an image, compression of an image, introduction to the main Photoshop control panels: "color", "swatches", "layers", "channels" and "paths".

### CLASSWORK:

Processing camera raw image files by using Adobe Photoshop, editing a digital photo in high resolution. Downloading "RAW Camera" plugin for Adobe Photoshop. Watching web tutorials and guides about editing digital photos files by using Photoshop (<http://www.digitalartsonline.co.uk/>, official web guide released by Adobe <https://helpx.adobe.com/photoshop/tutorials.html> and FAQ page <http://www.photoshop.com/products/photoshop/help>).





#### TEACHING AID

- Computer with Adobe Photoshop (at least CS 4 version)
- Projector
- Speakers
  
- Digital Photo Camera
- Internet connection

## Lesson #5 – Image processing for static web pages, branding a website

*Duration: 3 hour*

#### OBJECTIVE

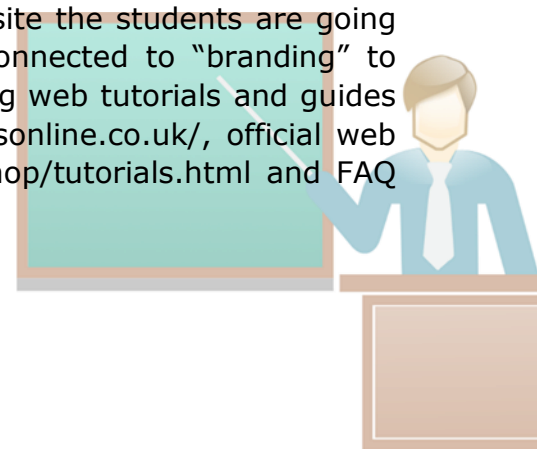
At the end of lesson #5 the students will be able to design bitmaps pixel-based logos, banners, fonts, wallpapers, graphic solutions and everything connected to “branding” a web site by using Adobe Photoshop. They will choose elements, colors, fonts to include in the website they’re going to realize in the following hours. The teacher will introduce the topic of website that the students are going to realize the following lessons and show images as example to inspire them on creating a official logo (bitmaps pixel-based) for their website. He will show them how to design an image starting with selections and layers in Photoshop.

#### TEACHING NOTES

Tools allowing to make selections of parts of a pictures: rectangular, elliptical, single row and single column marquee tool, lasso tool (simple, polygonal and magnetic), crop and slice tools. Load and save a selection. Layer masks and vector masks. Layers and style layers. Inserting a text into a picture, text contro panel: character and format paragraph. Vector shapes. Image tools: resize and rotate images, canvas size. Filters: gallery, lens correction, liquify, vanishing point. Dropdown menu “View”: proof colors, pixel aspect radio, zoom in, zoom out, fit on screen, actual pixels, print size, rulers, snap, guides.

#### CLASSWORK:

Drawing a official logo (bitmaps pixel-based) for the website the students are going to realize, starting to design all other graphic solution connected to “branding” to include in the website (banners, fonts, wallpaper). Watching web tutorials and guides about branding by using Photoshop (<http://www.digitalartsonline.co.uk/>, official web guide released by Adobe <https://helpx.adobe.com/photoshop/tutorials.html> and FAQ





page <http://www.photoshop.com/products/photoshop/help>) and consulting "open space" sites to improve own skills and fix problems.

#### TEACHING AID

- Computer with Adobe Photoshop (at least CS 4 version)
- Projector
- Speakers
  
- Internet connection

## Lesson #6 – Introduction to PHP and MySQL database: the core functions

*Duration: 3 hour*

#### OBJECTIVE

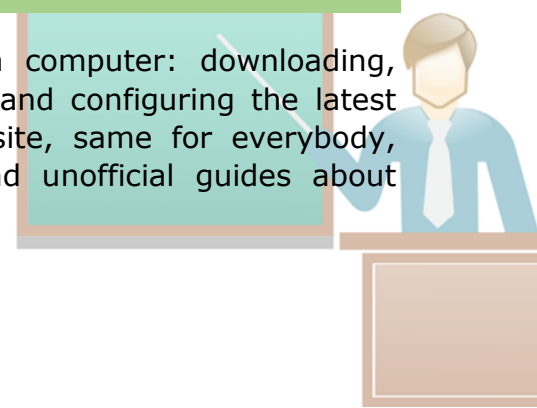
In lesson #6 the students will deepen the main aspects of the scripting language called PHP (Hypertext Preprocessor), learn about the main differences about static and dynamic web pages. They will approach to a free software tool written in PHP, phpMyAdmin, which is intended to handle the administration of MySQL database over the Web and they will learn how to create and administrate a Wordpress database in phpMyAdmin.

#### TEACHING NOTES

Meaning of PHP "dynamic instructions", introduction to templates (.php) in "appearance – editor" section of the dashboard in Wordpress: analyzing and customizing the contents of the basic .php templates - header.php, footer.php, functions.php, comments.php, page.php, sidebar.php, search.php - of a Wordpress theme, inserting elements (text, images) and functions in .php templates using PHP scripts and HTML instructions. Steps for installing WordPress on a locale machine using XXAMP, a free and open source cross-platform web server solution stack package developed by Apache Friends consisting mainly of the Apache HTTP Server, MySQL database, and interpreters for scripts written in PHP.

#### CLASSWORK:

Following the steps to create a free local site on own computer: downloading, installing and configuring XXAMP, downloading, installing and configuring the latest version of Wordpress. Development of a test local website, same for everybody, contents provided by the teacher. Consulting official and unofficial guides about







Wordpress (<http://www.creativecommons.it/>, <https://interconnectit.com>, "Getting-Started-with-WordPress" E-Book by iThemes Media), consulting the Wordpress official user guide online on <https://codex.wordpress.org/> to deepen how to design a Wordpress site and a website development, consulting sites to find out tutorials about PHP scriptings and instructions.

#### TEACHING AID

- Computer
- Projector
- Speakers
  
- Internet connection

## Lesson #7 – Content Management Systems based on XHTML, introduction to CSS

*Duration: 3 hour*

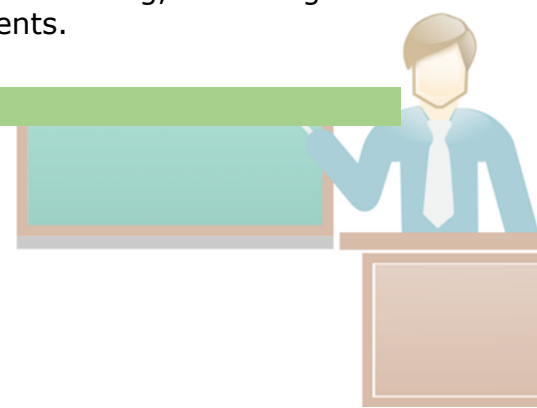
#### OBJECTIVE

In lesson #7 the students will be introduced to the definition of the XHTML markup language - on which the WordPress system with all its internal functions, all themes therefore and most plugins is based - as part of the family of XML markup languages and extension of versions of the widely used Hypertext Markup Language (HTML). They will deepen the main aspects of the scripting language called CSS (Cascading Style Sheets) as a plain text file format used for formatting content on web pages and defining font, size, color, spacing, border and location of HTML information on a web page, introduction to a definition of CMS, using Wordpress as a CMS to administrate complex websites.

#### TEACHING NOTES

Introduction on XHTML tags, attributes and values for Wordpress CMS. Introduction to stylesheets (style.css and rtl.css) in "appearance – editor" section of the dashboard in Wordpress: analysis of the contents of the styles.css - font, size, color, spacing, border and location - of a Wordpress theme, creating and inserting elements through the customization of .php templates and .css styles, downloading, installing and activating plugins to help the customization of graphic elements.

#### CLASSWORK:





Students will continue the development of a test local website (same for everybody) with contents provided by the teacher, customizing CSS elements using a CSS Commands Cheat Sheet. They'll consult the Wordpress official user guide online on <https://codex.wordpress.org/>, official and unofficial guides about Wordpress (<http://www.creativecommons.it/>, <https://interconnectit.com>, "Getting-Started-with-WordPress" E-Book by iThemes Media), web tutorials, forums and "open space" sites.

#### TEACHING AID

- Computer with Adobe Photoshop (at least CS 4 version)
- Projector
- Speakers
- Internet connection

## Lesson #8: Web Design workflow. Steps to build a meaningful website

*Duration: 3 hour*

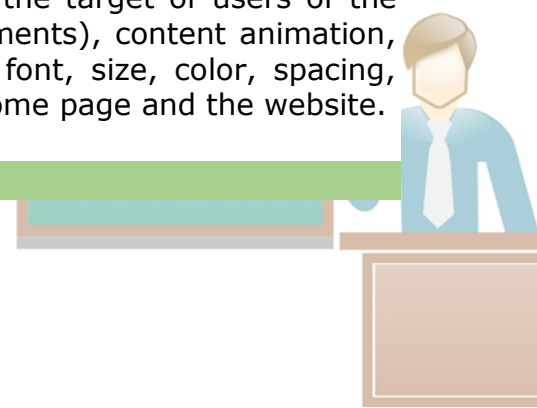
#### OBJECTIVE

In lesson #8 the students will develop a web design workflow based on three different kinds of customer/topic: research centers, shops, historical photos archive. They will choose which one to elaborate and build their own website with topics and contents chosen by themselves. They will use Wordpress as CMS, choose and customize template, build graphic elements (banners, icons, pictures) by using Adobe Photoshop.

#### TEACHING NOTES

How to elaborate a "Project Brief" granting the needs of a customer. Analyzing the text, the pictures, the videos and the other contents to include in a web site, choosing the special elements to put in evidence, knowing what is the target of users of the website, branding (elaborate a logo and other graphic elements), content animation, choosing a template and customizing single elements as font, size, color, spacing, border and location, creating the general structure of the home page and the website.

#### CLASSWORK:





Students will focus about examples of sites regarding research centers, online shops, historical photos archive as inspiration for their work. Development of a test local website based on different topics and contents chosen by the single student. Consulting the Wordpress official user guide online on <https://codex.wordpress.org/> to find out and download plugins, consulting sites to find out tutorials about PHP and CSS scriptings and instructions. Consulting official and unofficial guides about Wordpress (<http://www.creativecommons.it/>, <https://interconnectit.com>, "Getting-Started-with-WordPress" E-Book by iThemes Media) and web tutorials about web design workflow.

#### TEACHING AID

- Computer with Adobe Photoshop (at least CS 4 version)
- Projector
- Speakers
- Internet connection

## Lesson #9: How to choose a CMS that meets your needs: open source references and SEO

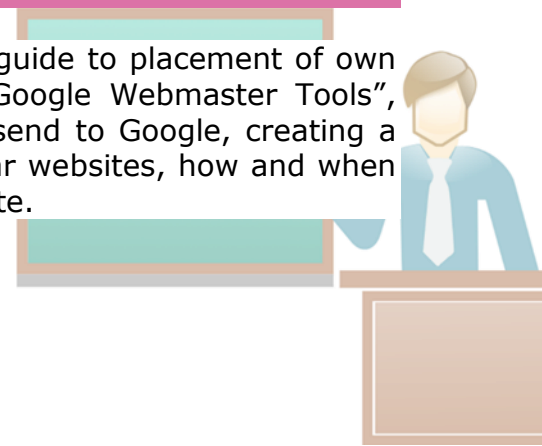
*Duration: 3 hour*

#### OBJECTIVE

In lesson #9 the students will know about the main reasons leading to choose Wordpress as a CMS that meets our needs: easy manage of the dashboard, wide "open source" development (plugins and templates), "SEO-friendly". We will also focus about disadvantages as PHP security, tables and graphics formatting, requirement of knowledge of PHP, CSS and HTML scripts languages, general vulnerability to attacks.

#### TEACHING NOTES

Learning about a correct use of the plugins in Wordpress, guide to placement of own Wordpress site on Google through the dashboard and "Google Webmaster Tools", increase the visibility of the site generating a sitemap to send to Google, creating a client login area and reserved areas, adding links to popular websites, how and when to use pages and articles to updates contents on own website.





## CLASSWORK:

Finding out, choosing, installing and activating plugins to extend and expand the functionality of WordPress. Development of a test local website based on different topics and contents chosen by the single student. Consulting the Wordpress official user guide online on <https://it.wordpress.org/plugins/> to find out and download plugins, consulting the Official "Search Engine Optimization Starter Guide" released by Google on 2010, chapters about improving site structure and optimizing content.

## TEACHING AID

- Computer
- Projector
- Speakers
- Internet connection

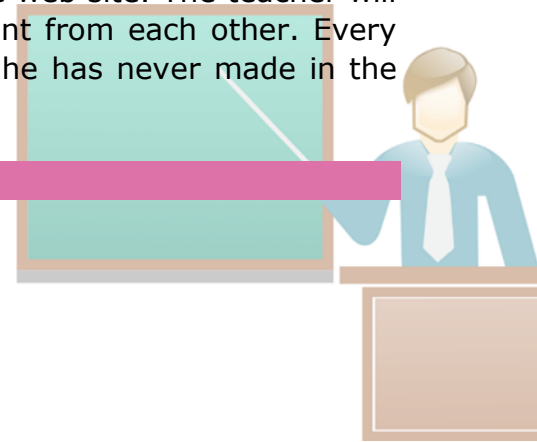
## Lesson #10: Exercise and online publishing of a site (evaluation)

*Duration: 5 hour*

## OBJECTIVE

In lesson #10 each student must elaborate the project of a website granting the needs of a customer by using Wordpress CMS. The teacher will be the customer and will indicate to each one the topic and the general guidelines to build it: the text, the pictures, the videos and the other contents to include in the web site. The teacher will assign to each student a topic for his own website, different from each other. Every single student will make his own project based on a topic he has never made in the previous lessons.

## TEACHING NOTES





Each student must be able to focus the special elements to put in evidence, knowing what is the target of users of the website, how to make "branding" elements (logo and other graphic elements) by using Adobe Photoshop, choose a template and customize single elements as font, size, color, spacing, border and location, create the general structure of the home page and the website. They must index the website on Google by using Google Webmaster Tools and plugins, improving SEO as well as possible.

## REFERENCES:

The students can consult the Wordpress official user guide online on <https://it.wordpress.org/plugins/> to find out and download plugins, and the Official "Search Engine Optimization Starter Guide" released by Google on 2010, chapters about improving site structure and optimizing content.

## TEACHING AID

- Computer
- Projector
- Speakers
- Internet connection

