

Course Name : Web Programming							
Course Code	Course Type	Regular Semester	Lecture (hours/week)	Seminar (hours/week)	Lab. (hours/week)	Credits	ECTS
EMS 219	B	Fall	3.00	0.00	0.00	3.00	5.00
Lecturer		Grasiela Baçellari, Msc					
Assistant							
Course language		English					
Course level		Bachelor					
Description		This course is an overview of modern Web technologies. Fundamentals of developing web pages using a comprehensive web development life cycle. Learn to design and code practical real-world homepage programs and earn adequate experience with current web design techniques such as HTML5 and cascading style sheets. Some of the main topics include: History of the Web, how the Web works, the client-server model of the Web, key concepts of web page development, Hypertext Markup Language (HTML), Cascading Style Sheets (CSS), JavaScript and the JQuery library, etc.					
Objectives		This course aims for students to: 1. Understand the functioning of the web as well as the main roles necessary for its construction. 2. Make the right difference on front-end and back-end web development. 3. Know how to mark up a text in the HTML language. 4. To be able to build a web page with all the necessary front-end elements with the HTML and CSS languages.					
Core Concepts		1. HTTP 2. WWW, W3C 3. URL 4. Front-end and Back-end development 5. Client-Server Model 6. HTML, CSS, JavaScript					
Course Outline							
Week	Topic						
1	The history of the web. How the Web works, the difference between the Internet and the Web, URL addresses and its components, the client-server model in searching for information on the Web. (Learning Web Design O'Reilly pg.21-40)						
2	Website builders, what each role involves in building a site. Handling of the basic concepts as well as the main roles of developing a website such as Content Strategist, Information Architect, UX and UI developer, website diagrams, visual designer, Front-end and Back-end development of a website. HTML structure, what is an HTML document, tags and their types, dividing the document into certain parts such as head, body, paragraph, etc. (Learning Web Design O'Reilly pg.4-12 and pg.49-60)						
3	How to mark up text, different HTML elements. Images and how to implement them on a web page, adjusting them through additional attributes and adding image borders. changing the size as well as positioning them in some basic positions. (Learning Web Design O'Reilly pg.79-105; HTML & CSS John Duckett pg.41-58)						
4	Links. Moving from one page to another through links, as well as moving from one part of the web page to another, their practical use within a web page. (HTML & CSS John Duckett pg.74-93; Learning Web Design O'Reilly pg.113-128)						
5	Tables, implementation of tables, and their adjustment according to the needs of the web page. (HTML & CSS John Duckett pg.27-143; Learning Web Design O'Reilly pg.163-173)						
6	Lists and forms. Ordered and unordered lists, their implementation as well as the different types of forms, and the specific use of each type. (HTML & CSS John Duckett pg.62-73 and pg.144-175; Learning Web Design O'Reilly pp.177-206)						

7	Introduction to CSS3 (Cascading Style Sheets). In this topic, the syntax of CSS and its comparison with HTML will be treated; types of CSS and the application of each of them; selectors, and their use. (HTML & CSS John Duckett pg.226-245; Learning Web Design O'Reilly pg.239-259)
8	Midterm Exam
9	The hierarchy of CSS, as well as the order of application of the rules. Colors and background (color mode, selection of colors, and their use through the hexadecimal code). (HTML & CSS John Duckett pg.246-263; Learning Web Design O'Reilly pg.303-351)
10	Measurement units in CSS. Text, and its formatting using all possible CSS attributes. (HTML & CSS John Duckett pg.264-299)
11	The box model, how the model is applied to the relevant elements of a web page. Formatting images in CSS (HTML & CSS John Duckett pg.300-329 and pg.407-427)
12	Layout and navigation. Orientation of the preparation of a web page. (HTML & CSS John Duckett pg.358-405; Learning Web Design O'Reilly pg.419-482)
13	Introduction to JavaScript Some basic JavaScript functions and their usage. (Learning Web Design O'Reilly pg.593-619)
14	JavaScript and the DOM-Document Object Model system. Explore DOM scripting, which allows us to manipulate the elements, attributes, and text on a page.(Learning Web Design O'Reilly pg.621-632)
15	Project: Presentation of projects.
16	Final Exam
Prerequisites	The student must attend the course at a minimum rate of 75%.
Literature	• "Learning Web Design: A Beginner's Guide to HTML, CSS, JavaScript, and Web Graphics" by Jennifer Robbins, O'Reilly 2018
References	• "HTML, CSS & JavaScript in easy steps" by Mike McGrath, In Easy Steps 2020 • "HTML and CSS Design and Build Websites" by Jon Duckett, O'Reilly 2011
Course Outcome	
1	Students will be able to understand the basics and concepts of web technology.
2	Students will be able to build a website consisting of several web pages designed with Style sheet and JavaScript.
3	Students will be able to understand web applications from the client and server side.

Course Evaluation			
In-term Studies	Quantity	Percentage	
Midterms	1	30	
Quizzes	0	0	
Projects	1	20	
Term Projects	0	0	
Laboratory	0	0	
Class Participation	1	10	
Total in-term evaluation percent			60
Final exam percent			40
Total			100
ECTS Workload (Based on Student Workload)			
Activities	Quantity	Duration (hours)	Total (hours)
Course duration (Including the exam week: 16x Total hours of the course)	16	3	48
Study hours outside the classroom (Preparation, Practice, etc.)	14	4	56
Duties	1	7	7
Midterms	1	6	6
Final Exam	1	8	8
Other	0	0	0
Total Work Load			125
Total Work Load / 25 (hours)			5.00
ECTS			5.00