Course Unit	Web Development I			Field of study	Computer Science		
Bachelor in	Multimedia			School	School of Public Management, Communication and Tourism		
Academic Year	2022/2023	Year of study	2	Level	1-2	ECTS credits	6.0
Type	Semestral	Semester	1	Code	9213-656-2105-00-22		

Workload (hours)	162	Contact hours	T	-	TP	60	PL	-	TC	-	S	-	E	-	OT	-	O	-

T - Lectures; TP - Lectures and problem-solving; PL - Problem-solving, project or laboratory; TC - Fieldwork; S - Seminar; E - Placement; OT - Tutorial; O - Other

Name(s) of lecturer(s)	Martinho Fradeira Goncalves

Learning outcomes and competences

At the end of the course unit the learner is expected to be able to:
1. Know the concept of hypertext and hypermedia.
2. Know the history of the World Wide Web.
3. Create and validate documents based on markup languages.
4. Understand the standards of the World Wide Web Consortium (W3C).
5. Be able to program in JavaScript language.
6. Know and apply the language of markup to the specification of the format, structure and content.
7. Know the issues related to web browsers.

Prerequisites

Before the course unit the learner is expected to be able to:
Apply basic knowledge of programming languages

Course contents

1. INTERNET. 2. WORLD WIDE WEB. 3. HTML. 4. CSS. 5. JAVASCRIPT.

Course contents (extended version)

1. INTERNET:
   - Emergence of the Internet,
   - original concepts of the Internet
   - TCP/IP (Transmission Control Protocol / Internet Protocol)
   - Network Interconnection
   - Addresses
   - DNS (Domain Name System)
2. WORLD WIDE WEB:
   - Introduction, WWW (World Wide Web) Model
   - URL (Uniform Resource Locator)
   - Client / Server Communication
   - Hypertext
   - Hypermedia and Multimedia
   - Markup languages
   - Client side and server side programming languages.
3. HTML (HyperText Markup Language):
   - Editors of HTML (HyperText Markup Language)
   - Elements and tags (attributes, symbols and special characters, comments)
   - Basic structure of an HTML (HyperText Markup Language) document
   - Colors
   - Text
   - Tables
   - Images
   - Links
   - Frames
   - Validation of HTML (HyperText Markup Language) and accessibility.
4. CSS (Cascading Style Sheets):
   - Basic Concepts
   - Syntax used in the definition of styles
   - Units of measure
   - Grouping
   - Chaining and inheritance
   - Properties common to several elements
   - Pseudo-classes and pseudo-elements
   - Format Model, Color, Types Font, Text Formatting
   - Lists and Labels
   - Other effects of style, reference queries
5. JavaScript:
   - Introduction and basic concepts
   - Working with Objects
   - Location of scripts,
   - Expressions and operators
   - Functions
   - Flow control structures
   - Objects
   - Properties and methods. Events.
   - Document object model.
   - Interaction with forms.

Recommended reading

1. Responsive Web Design with HTML5 and CSS: Develop future-proof responsive websites using the latest HTML5 and CSS techniques, ISBN-13: 9781803242712
2. W3C. (s. d.). Obtido de World Wide Web Consortium: http: //www. w3. org
3. Head First Javascript Programming A Brain-Friendly Guide, isbn: 9781449340131
4. w3schools. (s. d.). Obtido de w3schools: http: //www. w3schools. com/

Recommended reading

5. Abreu, Luís (2015) HTML 5. Lisboa FCA. ISBN: 9789727228218

Teaching and learning methods

- Lectures: where are exposed the theoretical concepts associated with this curriculum unit. - Laboratory classes: lessons, which is shown through simulation and testing the concepts already developed. - Worksheet: Implementation of individual sheets that contribute to the understanding and application of knowledge and to formulate opinions.

Assessment methods

1. Distributed evaluation - (Regular, Student Worker) (Final, Supplementary, Special)
   - Practical Work - 50% (Project development. Web site development. Minimum grade: 8 values.)
   - Final Written Exam - 50% (Theoretical exam: regarding the lectured content. Minimum grade: 8 values.)
2. Exchange students - (Regular, Student Worker) (Final, Supplementary, Special)
   - Practical Work - 50% (Project development. Web site development. Minimum grade: 8 values.)
   - Final Written Exam - 50% (Theoretical exam: regarding the lectured content. Minimum grade: 8 values.)

Language of instruction

Portuguese, with additional English support for foreign students.

Electronic validation

Martinho Fradeira Goncalves	Ana Lucia Jesus Pinto	Elisabete da Anunciacao Paulo Morais	Luisa Margarida Barata Lopes
18-10-2022	18-10-2022	19-10-2022	30-10-2022

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