

Course Unit	Web Development II		Field of study	Computer Science	
Bachelor in	Multimedia		School	School of Public Management, Communication and Tourism	
Academic Year	2021/2022	Year of study	2	Level	1-2
Type	Semestral	Semester	2	ECTS credits	6.0
Workload (hours)			162	Contact hours	
			T	-	TP
			60	PL	-
			TC	-	S
			E	-	OT
			O	-	
Code 9213-656-2201-00-21					

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. Implement the principles of design of web interfaces and web application programming technologies.
2. Understand the process of project management in development of web applications.
3. Evaluate the issues related to the accessibility, usability, productivity, responsive design, hosting and security in web application development.
4. Demonstrate the ability to develop professional web applications from the perspective of the web developer.

### Prerequisites

Before the course unit the learner is expected to be able to:

1. Know markup languages, programming languages client-side.
2. Know technical English.

### Course contents

Web project management, web models and protocols, Server side programming languages

### Course contents (extended version)

1. Web project management
  - From planning to maintenance
  - Accessibility and usability
  - Development philosophies
  - Content Management Systems (CMS)
  - Responsive design
2. Web models and protocols
  - Web services
  - Mashup
  - AJAX
  - Model View Controller
  - Web 1.0, 2.0, X.0
  - Semantic Web
  - Frameworks
3. Server side programming languages - PHP
  - Concepts and fundamental elements
  - Syntax of the language
  - Object oriented programming
  - Interaction with forms
  - Administration of sessions and cookies
  - Data base access
  - File Manipulation: PDF, images, XML, XSLT, Feeds
  - Implementation of web models and protocols.
  - Rapid Application Development - PHP Framework

### Recommended reading

1. Remoaldo, P. (2010). O Guia Prático do Dreamweaver CS5. Centro Atlântico. ISBN: 9789896150983.
2. Welling, L. & Thomson, L. (2016). PHP and MySQL Web Development (5th ed. ). Addison-Wesley Professional. ISBN: 978-0321833891.
3. Serrao, C. (2009). Programação com PHP5. FCA. ISBN: 9789727225491.
4. Abreu, L. (2012). HTML5 - 2ª Edição Atualizada e Aumentada, FCA. ISBN: 9789727227396.
5. Nielsen, J. (2006). Projetando Websites. Editora Campus. ISBN: 9788535206562.

### Teaching and learning methods

Contact hours: Exhibition of theoretical concepts, demonstrating its applicability in the context of degree, and support for student projects. Non-contact hours: Implementation of the project group that contributes to the understanding and application of knowledge as well as for making judgments.

### Assessment methods

1. Distributed evaluation - (Regular, Student Worker) (Final, Supplementary, Special)
  - Projects - 50% (Development of a multimedia product - website)
  - Final Written Exam - 50% (Written examination)
2. Exchange students - (Regular, Student Worker) (Final, Supplementary, Special)
  - Projects - 50% (Development of a multimedia product - website)
  - Final Written Exam - 50% (Written examination)

### Language of instruction

Portuguese

## Electronic validation

Martinho Fradeira Goncalves	Ana Lucia Jesus Pinto	Elisabete da Anunciacao Paulo Morais	Luisa Margarida Barata Lopes
03-03-2022	27-04-2022	27-04-2022	04-05-2022