![ipb INSTITUTO POLITÉCNICO DE BRAGANÇA]

Course Unit	Web Development II			Field of study	Computer Science	
Bachelor in	Informatics and Communications			School	School of Public Management, Communication and Tourism	
Academic Year	2023/2024	Year of study	2	Level	1-2	ECTS credits	6.0
Type	Semestral	Semester	1	Code	9188-320-2103-00-23	

| Workload (hours) | 162 | Contact hours | T | - | TP | 15 | PL | 45 | TC | - | S | - | E | - | OT | 20 | 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. Implement the principles of design of web interfaces and technologies of web application programming.
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 in perspective web developer.

Prerequisites

Before the course unit the learner is expected to be able to:
1. Know markup languages and 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
    - Database access
    - File manipulation: pdf, images, XML, XSLT and Feeds
    - Implementation of web models and protocols
    - Rapid application development - PHP Framework

Recommended reading

1. Nielsen, J. (2006). Projetando Websites. Editora Campus. ISBN: 9788535206562.
2. Abreu, L. (2015). HTML5 - 4ª Edição Atualizada e Aumentada. FCA. ISBN: 9789727228218.
3. Serrao, C. & Marques, J. (2009). Programação com PHP 5. 3. FCA. ISBN: 9789727223411.
4. Welling, L. & Thomson, L. (2016). PHP and MySQL Web Development (5th ed.). Addison-Wesley Professional. ISBN: 9780321833891
5. Suehring, Steve; Valade, Janet (2013). PHP, MYSQL, JavaScript & HTML5. John Wiley & Sons.

Teaching and learning methods

- Lectures: where are exposed the theoretical concepts. - Laboratory classes: lessons, which is shown through simulation and testing the concepts already learned. - Worksheet: implementation of individual sheets that contribute to the understanding and application of knowledge and to formulate opinions.

Assessment methods

- Final Avaliation - (Regular, Student Worker) (Final, Supplementary, Special)
    - Projects - 50% (Minimum grade: 7 values.)
    - Final Written Exam - 50% (Minimum grade: 7 values.)

Language of instruction

Portuguese

Electronic validation

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13-10-2023	13-10-2023	13-10-2023	16-10-2023

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