Course guide
804473 - DW II - Web Development II

Last modified: 17/07/2024

Unit in charge: Image Processing and Multimedia Technology Centre
Teaching unit: 804 - CITM - Image Processing and Multimedia Technology Centre.

Degree: BACHELOR'S DEGREE IN DIGITAL DESIGN AND MULTIMEDIA TECHNOLOGIES (Syllabus 2023). (Compulsory subject).

Academic year: 2024 **ECTS Credits:** 6.0 **Languages:** Catalan

LECTURER

Coordinating lecturer: Sánchez Carreras, David

Others:

TEACHING METHODOLOGY

LEARNING OBJECTIVES OF THE SUBJECT

Knowledge
Identify the architecture and data structures associated with web and mobile applications.

Skills
Implementing and structuring graphical interfaces for web applications and mobile devices.

STUDY LOAD

Type	Hours	Percentage
Hours medium group	18,0	12.00
Guided activities	12,0	8.00
Self study	90,0	60.00
Hours large group	30,0	20.00

Total learning time: 150 h

CONTENTS

Databases fundamentals

Description:
Database Management Systems
Definitions and examples
DMBS functions
Data models

Full-or-part-time: 10h
Theory classes: 4h
Self study : 6h

E-R model and Normalization

Description:
Stages in database design
Entity-relationship model
Relational languages
Relational Model
Normalization theory

Full-or-part-time: 30h
Theory classes: 3h
Practical classes: 7h
Guided activities: 2h
Self study : 18h

Relational languages â□□â□□and SQL language

Description:
Formal languages
Commercial languages
Relational algebra
Introduction to SQL language
SQL: DDL/DML

Full-or-part-time: 20h
Theory classes: 4h
Practical classes: 3h
Guided activities: 1h
Self study : 12h

Introduction to PHP

Description:
Syntax
Basic data types
Variables and constants, operators, control structures, functions and arrays
HTML and CSS code generation
Pass of parameters

Full-or-part-time: 10h
Theory classes: 2h
Guided activities: 2h
Self study : 6h

DDBB connection and CRUD operations

Description:
PHP-MariaDB connection
Engines and controllers
Connection management
Data management: request, reception and processing
Selection, insertion, modification and deletion of data from a web application

Full-or-part-time: 30h
Theory classes: 4h
Guided activities: 8h
Self study : 18h

Search

Description:
Basic search method
Full-text
· Indexació
· Request
· Search modes

Full-or-part-time: 10h
Theory classes: 1h
Practical classes: 2h
Guided activities: 1h
Self study : 6h

Sessions

Description:
Session variables
Session's management
Use cases

Full-or-part-time: 10h
Theory classes: 1h
Practical classes: 2h
Guided activities: 1h
Self study : 6h

File management

Description:
Server file management.
Generating files from data.

Full-or-part-time: 10h
Theory classes: 2h
Guided activities: 2h
Self study : 6h

Non-relational databases

Description:
Definition and comparison with relational models.
Types and implementations.
Data operations.

Full-or-part-time: 20h
Theory classes: 4h
Practical classes: 2h
Guided activities: 2h
Self study : 12h

GRADING SYSTEM

Practical exercises (35%):
4 practical exercises: 5%, 5%, 10% and 15% of the final grade for the subject

Exams (55%):
A partial exam, 20% of the final grade of the subject.
A final exam, 35% of the final grade of the subject.

Participation and learning attitude (10%):
The assessment of the student's participation in the activities of the subject, and the learning attitude, will be evaluated by monitoring the interventions in class, exercises and practiceal exercises developed and uploaded. This assessment corresponds to 10% of the final grade.

Reassessment test:
Students who do not pass the subject by continuous assessment may take the reassessment exam. To be eligible, they must not have a final grade of NP for the subject. In this exam, only the grades corresponding to the partial exam and the final exam will be reassessed.

Irregular actions that may lead to a significant variation in the grade of one or more students constitute a fraudulent performance of an evaluation act. This action will lead to a descriptive grade of fail and a numerical grade of 0 for the ordinary global assessment of the subject, without the right to re-evaluation.
If the teachers have evidence of the use of AI tools that are not permitted in the assessment tests, they may summon the students involved to an oral test or a meeting to verify the authorship.

BIBLIOGRAPHY

Basic:
- Date, C. J; Ruiz Faudón, Sergio Luis María. Introducción a los sistemas de bases de datos . 7a ed. México [etc.] : Pearson Educación, 2001. ISBN 9684444192.
- Cabezas Granado, Luis Miguel; González Lozano, Francisco José. Desarrollo web con PHP y MySQL . Madrid : Anaya Multimedia, 2017. ISBN 9788441538986.
- Welling, Luke; Thomson, Laura; Gómez Celador, José Luis. Desarrollo web con PHP y MySQL . Quinta edición. Madrid : Ediciones Anaya Multimedia, 2017. ISBN 9788441536913.
- Beati, Hernán. PHP : creación de páginas web dinámicas . 2a ed. Argentina : Barcelona : Alfaomega ; Marcombo, 2016. ISBN 9788426722737.
- Pavón Puertas, Jacobo; Llarena Borges, Ezequiel. Creación de un sitio web con PHP y MySQL . 5ª edición actualizada. Paracuellos del Jarama : Ra-Ma, 2015. ISBN 9788499645674.
- Beaulieu, A. Learning SQLâ□¯: generate, manipulate, and retrieve data. 3. O'Reilly Media, Inc., 2022.
- Lynch, E.. Understanding SQL. 1. Palgrave Macmillan Limited, 1990.

RESOURCES

Hyperlink:
- http://www.php.net/. Resource
- https://mariadb.com/docs/server/ref/. MariaDb documentation