Course guides
804127 - AWUGIII - Latest Generation Web Applications III

Unit in charge: Image Processing and Multimedia Technology Centre
Teaching unit: 804 - CITM - Image Processing and Multimedia Technology Centre.
Degree: BACHELOR’S DEGREE IN MULTIMEDIA STUDIES (Syllabus 2009), (Compulsory subject).
Academic year: 2021  ECTS Credits: 6.0  Languages: Catalan, Spanish

LECTURER

Coordinating lecturer: Fernandez Duran, Pablo

Others:

DEGREE COMPETENCES TO WHICH THE SUBJECT CONTRIBUTES

Specific:
2. (ENG) Aplicar nous coneixements teòrics i pràctics, relacionats amb les tecnologies utilitzades en el desenvolupament d’aplicacions web d’última generació.
3. (ENG) Aplicar els coneixements teòrics i pràctics relacionats amb el disseny centrat en l’usuari, la facilitat d’ús i l’accessibilitat en el desenvolupament d’aplicacions web d’última generació. Relacionada amb CET21.

Transversal:
4. EFFICIENT ORAL AND WRITTEN COMMUNICATION. Communicating verbally and in writing about learning outcomes, thought-building and decision-making. Taking part in debates about issues related to the own field of specialization.
5. ENTREPRENEURSHIP AND INNOVATION: Knowing about and understanding how businesses are run and the sciences that govern their activity. Having the ability to understand labor laws and how planning, industrial and marketing strategies, quality and profits relate to each other.
6. SUSTAINABILITY AND SOCIAL COMMITMENT. Being aware of and understanding the complexity of social and economic phenomena that characterize the welfare society. Having the ability to relate welfare to globalization and sustainability. Being able to make a balanced use of techniques, technology, the economy and sustainability.
7. EFFECTIVE USE OF INFORMATION RESOURCES. Managing the acquisition, structure, analysis and display of information from the own field of specialization. Taking a critical stance with regard to the results obtained.
8. SELF-DIRECTED LEARNING. Detecting gaps in one’s knowledge and overcoming them through critical self-appraisal. Choosing the best path for broadening one’s knowledge.

TEACHING METHODOLOGY

Lectures by the professors.
Development of a project in groups with several deliverables.
Testing sessions with the project prototype.
Tutoring sessions about the project.
Presentation of the project to your peers.

LEARNING OBJECTIVES OF THE SUBJECT

1. Plan and develop an application for mobile phones (app) using web APIs.
2. Learn the basics of app design.
3. Conceptualize apps and produce a conceptualization document.
4. Produce a prototype of an app and plan and carry out a testing session.
5. Develop mobile applications using React Native.
STUDY LOAD

<table>
<thead>
<tr>
<th>Type</th>
<th>Hours</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hours medium group</td>
<td>60,0</td>
<td>40.00</td>
</tr>
<tr>
<td>Self study</td>
<td>90,0</td>
<td>60.00</td>
</tr>
</tbody>
</table>

Total learning time: 150 h

CONTENTS

Web APIs

Description:
What is a web API?
Authentication: using tokens.
Connection from Js.

Related activities:
Deliverable: choose one or more web APIs for the project and write a program in Js that makes use of them.

Full-or-part-time: 6h
Theory classes: 4h
Self study: 2h

Graphic Design of Mobile Applications

Description:
Fundamentals of graphic design.
Material Design.

Full-or-part-time: 12h
Theory classes: 4h
Self study: 8h

User Experience Design (UXD)

Description:
Conceptualization of an application.
Prototyping with Axure.
User Testing: planning, testing and reporting.

Related activities:
Deliverable 1: Conceptualization document and Prototype.

Full-or-part-time: 44h
Theory classes: 16h
Guided activities: 12h
Self study: 16h
Mobile Application Development with React Native

**Description:**
Introduction
Layouts
Interaction
Routes
Lists
Firestore
Camera
State Management

**Full-or-part-time:** 88h
Theory classes: 28h
Guided activities: 40h
Self study: 20h

### ACTIVITIES

**Deliverable 0: Conceptualization**

**Description:**
Conceptualization document

**Full-or-part-time:** 4h
Guided activities: 4h

**Deliverable 3: Partial Implementation**

**Description:**
Partial implementation of the application.

**Full-or-part-time:** 16h
Guided activities: 16h

**Deliverable 3: Full Implementation**

**Description:**
Full implementation of the project.

**Full-or-part-time:** 20h
Theory classes: 20h

**Partial Exam**

**Description:**
Written exam covering the whole course

**Full-or-part-time:** 2h
Theory classes: 2h
GRADING SYSTEM

The grade of the continuous assessment is calculated as follows:
- 10%: Disposition and participation.
- 10%: Deliverable 0: Conceptualization.
- 10%: Deliverable 1: Prototype and Test Report.
- 20%: Partial Exam.
- 5%: Presentation.

EXAMINATION RULES.

Re-evaluation includes only the Partial Exam (20%).

BIBLIOGRAPHY

Basic: