Course guide
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: 2022 ECTS Credits: 6.0 Languages: Catalan, Spanish

LECTURER
Coordinating lecturer: Fernandez Duran, Pablo
Others:

REQUIREMENTS
Programming in Javascript (ES6)

DEGREE COMPETENCES TO WHICH THE SUBJECT CONTRIBUTES

Specific:
1. Analyse the evolution of web applications, the state of the art and associated devices in state-of-the-art web applications. Related to CET19.
2. Apply new theoretical and practical knowledge related to the technologies used in the development of state-of-the-art web applications.
3. Apply theoretical and practical knowledge related to user-centred design, ease of use and accessibility to the development of state-of-the-art web applications. Related to 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.
Tutoring sessions about the project.
Trabajo autónomo de realización de tareas y proyecto.
LEARNING OBJECTIVES OF THE SUBJECT

1. Plan a mobile app using web APIs.
2. Apply Art Direction concepts to the visual style of an app.
3. Produce a working prototype of the app with a visual designer.
4. Develop a mobile app 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 Figma.
User Testing: planning, testing and reporting.

Related activities:
Deliverable 1: App Design (working 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

### Ejercicio sobre Dirección de Arte

**Delivery:**
- Document

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

### Partial Implementation

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

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

### Full Implementation

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

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

### Final Exam

**Description:**
- Exam about programming in React Native

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

The grade is computed with the following weights:
- 5%: Preparation Exercises.
- 15%: Delivery 1: App Design.
- 20%: Delivery 2: Partial Implementation.
- 30%: Delivery 3: Final Implementation.
- 20%: Final Exam.
- 10%: Attitude and Participation (attendance and tasks).

EXAMINATION RULES.

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

BIBLIOGRAPHY

Basic: