

205216 - AW - Web Applications

Coordinating unit:	205 - ESEIAAT - Terrassa School of Industrial, Aerospace and Audiovisual Engineering
Teaching unit:	723 - CS - Department of Computer Science
Academic year:	2019
Degree:	BACHELOR'S DEGREE IN INDUSTRIAL ELECTRONICS AND AUTOMATIC CONTROL ENGINEERING (Syllabus 2009). (Teaching unit Optional) BACHELOR'S DEGREE IN ELECTRICAL ENGINEERING (Syllabus 2009). (Teaching unit Optional) BACHELOR'S DEGREE IN MECHANICAL ENGINEERING (Syllabus 2009). (Teaching unit Optional) BACHELOR'S DEGREE IN CHEMICAL ENGINEERING (Syllabus 2009). (Teaching unit Optional) BACHELOR'S DEGREE IN AUDIOVISUAL SYSTEMS ENGINEERING (Syllabus 2009). (Teaching unit Optional) BACHELOR'S DEGREE IN TEXTILE TECHNOLOGY AND DESIGN ENGINEERING (Syllabus 2009). (Teaching unit Optional) BACHELOR'S DEGREE IN INDUSTRIAL DESIGN AND PRODUCT DEVELOPMENT ENGINEERING (Syllabus 2010). (Teaching unit Optional) BACHELOR'S DEGREE IN INDUSTRIAL TECHNOLOGY ENGINEERING (Syllabus 2010). (Teaching unit Optional) BACHELOR'S DEGREE IN AEROSPACE TECHNOLOGY ENGINEERING (Syllabus 2010). (Teaching unit Optional) BACHELOR'S DEGREE IN AEROSPACE VEHICLE ENGINEERING (Syllabus 2010). (Teaching unit Optional)
ECTS credits:	3
Teaching languages:	English

Teaching staff

Coordinator: Pau Fernández

Prior skills

It is very important that students know a programming language like C++ or Java well.

Teaching methodology

The material will be taught through practical classes, alternating a presentation with slides with practical demonstrations in the form of tutorials. It is recommended that students bring their own laptops.

Learning objectives of the subject

The aim of the course is to introduce the student to the technologies behind web applications and make him able to develop small-scale web apps. The course touches all required concepts in a simplified way to enable students to understand the technology. It teaches HTML, CSS, , NodeJS and SQLite at a basic level so that a complete project can be built.



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Study load

Total learning time: 75h	Hours large group:	0h	0.00%
	Hours medium group:	0h	0.00%
	Hours small group:	30h	40.00%
	Guided activities:	0h	0.00%
	Self study:	45h	60.00%

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Content

<p>Module 1: Introduction to Web Apps</p>	<p>Learning time: 4h Laboratory classes: 2h Self study : 2h</p>
<p>Description: Components of a Web App. The HTML Protocol.</p>	
<p>Module 2: The Frontend</p>	<p>Learning time: 20h Laboratory classes: 10h Self study : 10h</p>
<p>Description: Creating pages with HTML, the Hyper-Text Markup Language. Styling pages with CSS (Cascading Style-Sheets). in the browser.</p> <p>Related activities: Quiz</p>	
<p>Module 3: The Backend 1: NodeJS</p>	<p>Learning time: 16h Laboratory classes: 8h Self study : 8h</p>
<p>Description: Entering commands on the command line and accessing remote computers. Install NodeJS. in the server. Express: programming handlers for web URLs. Generation of pages through templates.</p> <p>Related activities: Quiz</p>	

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<p>Module 4: The Backend 2: SQLite</p>	<p>Learning time: 8h Laboratory classes: 4h Self study : 4h</p>
<p>Description: The Relational data model. Creating a database with SQLite. Inserting, Updating and Deleting records. Using an SQLite database from .</p> <p>Related activities: Project Design</p>	
<p>Module 5: Complete Web Apps</p>	<p>Learning time: 27h Laboratory classes: 6h Self study : 21h</p>
<p>Description: Mini-Wordpress, a simple blog web application.</p> <p>Related activities: Web App Project</p>	

Qualification system

- 25% - Tasks (exercises during the course)
- 10% - Quizzes
- 15% - Project Design (a document describing the planning for a web app project)
- 50% - Web App Project (a working web app project)

Bibliography

Complementary:

- Flanagan, David. JavaScript: the definitive guide. 6th ed. Sebastopol: O' Reilly, 2011. ISBN 9780596805524.
- McFarland, David S. CSS: the missing manual. Sebastopol: O' Reilly, 2015. ISBN 9781491918050.
- Syed, Basarat Ali. Beginning node.js. Berkeley, CA: Apress, 2014. ISBN 9781484201886.
- Kreibich, Jay A. Using SQLite. Sebastopol: O' Reilly Media, 2010. ISBN 9780596521189.