

## Upper Level Computer Science

**Instructors:** Guest Professors

### Course Objectives

#### 1. Web Applications

Run-through the main concepts of Web applications. Database management in web applications.

#### 2. Specifications and design

Concepts of design of information systems and application to Web applications.

#### 3. Drawing in the browser

HTML, the language to create web pages. Canvas, the element to draw. JavaScript, the language to draw.

#### 4. Analysis

Concepts of analysis of information systems and application to Web applications. Analysis of database supporting systems and sessions in Web Applications.

#### 5. Development and launch

The process is completed with the development, testing, integration and launch of the hole system.

### Classes (40 hours)

40 hours of class in which explanations, practices and evaluations with theory tests are carried out.

Optionally, prior to the classes, students have explanations of the theory and exercises with videos and documentation. A test on this content is given at the beginning of each topic.

### Grading:

#### Evaluation test I (20%)

The students will take an exam to demonstrate their knowledge on servlets and JavaScript..

#### Evaluation test II (20%)

The students will take an exam to demonstrate their knowledge on JDBC and web applications with databases.

#### Programming project: Web application development (40%)

The students will work in team/companies to develop a web application with a specific purpose.

#### Final exam (20 %)

The students will take a final exam to demonstrate their knowledge. It will be compulsory to get a minimum mark of 3.5 in this final exam to pass the subject.

**Important:** If the mark achieved in both evaluation tests is equal to or bigger than 7 and the mark in the Deliverable 2 is also equal to or bigger than 7, there is no need to take the final exam. In this case, the mark will be calculated based on the evaluation tests and programming project (20% related to the final exam will be the maximum mark between the programming project and the evaluation tests; Final mark=40% evaluation tests + 40% programming project + 20% (max (evaluation tests, programming project)) ).

If the mark achieved in the final exam is bigger than the ones achieved in the evaluation tests, the final exam mark will count 60% of the final mark.