



Universitat de Lleida

# DEGREE CURRICULUM

# **WEB TECHNOLOGIES**

Coordination: TEIXIDÓ CAIROL, MERCÈ

Academic year 2020-21

## Subject's general information

|   |   |        |           |                  |
|---|---|--------|-----------|------------------|
| <b>Subject name</b>                             | WEB TECHNOLOGIES  |        |           |                  |
| <b>Code</b>                                     | 102176  |        |           |                  |
| <b>Semester</b>                                 | 2nd Q(SEMESTER) CONTINUED EVALUATION                    |        |           |                  |
| <b>Typology</b>                                 | Degree  | Course | Character | Modality         |
|   | Bachelor's Degree in Design and Creative Technologies   | 1      | COMMON    | Attendance-based |
| <b>Course number of credits (ECTS)</b>          | 6   |        |           |                  |
| <b>Type of activity, credits, and groups</b>    | <b>Activity type</b>                                    | PRALAB | TEORIA    |                  |
|   | <b>Number of credits</b>                                | 3      | 3         |                  |
|   | <b>Number of groups</b>                                 | 2      | 1         |                  |
| <b>Coordination</b>                             | TEIXIDÓ CAIROL, MERCÈ                                   |        |           |                  |
| <b>Department</b>                               | COMPUTER SCIENCE AND INDUSTRIAL ENGINEERING             |        |           |                  |
| <b>Important information on data processing</b> | Consult <a href="#">this link</a> for more information. |        |           |                  |
| <b>Language</b>                                 | The classes will be done in catalan                     |        |           |                  |

| Teaching staff        | E-mail addresses      | Credits taught by teacher | Office and hour of attention |
|-----------------------|-----------------------|---------------------------|------------------------------|
| TEIXIDÓ CAIROL, MERCÈ | merce.teixido@udl.cat | 9                         |                              |

## Learning objectives

The objectives of the course are:

- Be able to get to know basic concepts related to Information and Communication Technologies. (ICT)
- Be able to identify the main characteristics and the basic components of the computers and the main devices.
- Be able to identify the main characteristics of the operating systems and the software applications.
- Be able to know the parameters of configuration more important of the networks of communication.
- Be able to configure and use different basic services of Internet.
- Be able to develop students' autonomy in using Information and Communication Technologies.
- Aprender las técnicas básicas de desarrollo de pequeñas aplicaciones hipermedia.
- Identificar y analizar los aspectos relacionados con el análisis y diseño de pequeñas aplicaciones hipermedia.

## Significant competences

### Basic and transversal competences:

- CB1. Show an ability to dominate the concepts in its area of study. It goes from general secondary education, based in advanced books, but also in some aspects, that involves knowledge of the current and new fields of study.
- CT3. Acquire a significant proficiency in the use of the new technologies and in the Information and Communication Technologies. (ICT)

### General competences:

- CG1. Skill to create and develop answers to problems of communication for the different digital contents.
- CG4. Apply the concepts and own methods of the digital technologies.
- CG10. Use tools and digital means in its professional development.

### Specific competences:

- CE9. Get to know the methodologies, programs, technical, rules and standard. Moreover, be able to use the base of knowledge purchased with specific elements of development web.

## Subject contents

**Part 1: INFORMATION IN THE WEB****TOPIC 1: Structure of the information in the web**

1. Information and contents in the web vs in paper
  - Advantages and problems of each support
2. Hypertext
3. Multimedia
4. Interaction
5. customer- server model
6. Systems of management of projects in the web (Trello, Sharepoint, Google Drive, Dropbox)

**TOPIC 2: Presentation of the information in the web:**

1. Semantic web
2. HTML Language
  - Characteristics of the language
  - Labels in HTML
  - Accessibility
  - Standards in HTML
  - Styles (CSS)
  - Templates
3. Information managers
  - Information structure
  - Information query
  - Information applications

**PART 2: WEB DESIGN****TOPIC 3: Model of development in the web**

1. Agents of contents
  - Utility
  - Market content managers
  - Installing and using a Content Manager (Wordpress)

## Methodology

Students are expected to attend classes regularly, to do the exercises and to contribute with their answers, doubts, opinions, etc. to the development of the classes.

All students are expected to attend to 3 hours classes with the whole group and 3 hours with split group. The sessions with split group will be carried out in the laboratory.

**Whole group: Theory and Problems Classes (3 credits)**

- Theoretical part: supported classes with digital information and/or with notes.
- Practical application part: work of application of concepts more practical.

**Split groups: Laboratory Classes (3 credits)**

- Conducted Classes and personalised monitoring for practical groups.

**Development plan**

| Week    | Description                                | Attendance activity<br>WG (Whole group)                                  |
|---------|--|--|
| 1st     | Structure of the information in the web    | web vs paper, hipertext and multimedia                                   |
| 3rd     | Structure of the information in the web    | Interaction, Customer-server model server, project management in the web |
| 5th     | Presentation of the information in the web | HTML language  |
| 6th     | Presentation of the information in the web | Style sheet  |
| 8th     | Presentation of the information in the web | Style sheet / Application of web templates                               |
| 9th     |  | Mid Term Exam  |
| 10th    | Presentation of the information in the web | Information management   |
| 12th    | Model of development in the web            | Content management systems, Explanation and installation                 |
| 13th    | Model of development in the web            | Content management systems   |
| 14th    | Model of development in the web            | Content management systems   |
| 16-17th | Final exam                                 | Final exam   |
| 19th    | Resitting exam                             | Resitting exam   |

**Evaluation**


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| Acronym  | Activities of Evaluation | Grade % | Minimum note | In grup  | Compulsary | Recoverable |
|--|--------------------------|---------|--------------|----------|------------|-------------|
| EX1  | Exercise 1               | 15%     |              | YES(<=4) | YES        | NO          |
| PRA1   | Practice 1               | 20%     |              | YES(<=2) | YES        | NO          |
| P1   | 1st exam or practice     | 20%     | 4            | NO       | YES        | YES         |
| PRA2   | Practice 2               | 25%     |              | YES(<=2) | YES        | NO          |
| P2   | 2nd exam or practice     | 20%     | 4            | NO       | YES        | YES         |
| All students are expected to sit for and have a grade above 4 in the exams (P1 and P2) in order to be able to pass the course. However, the final grade must be >=5. |                          |         |              |          |            |             |
| <b>Final note = 0,15*EX1 + 0,20*PRA1 + 0,20*P1 + 0,25*PRA2 + 0,20*P2</b>   |                          |         |              |          |            |             |

## Bibliography

### Webgraphy:

W3C: <https://www.w3c.es>

Templates: <https://templated.co/>

XPATH Tester: <https://www.freeformatter.com/xpath-tester.html>

XSLT Tester: <https://www.freeformatter.com/xsl-transformer.html>

### Bibliography:

- MacDonald, M., Creación y diseño Web. Edición 2016. Editorial ANAYA, 2015
- Gauchat, J.D., El gran libro de HTML5, CSS3 y JavaScript 3ª Edición, Ediciones técnicas Marcombo, 2019
- Aubry, C., HTML5 Y CSS3: PARA SITIOS CON DISEÑO WEB RESPONSIVE. Editorial ENI, 2014
- Lopez, M., Programación Web en Entorno Servidor. Editorial Ra-Ma, 2016
- Lopez, M., Sanchez, D., Programación Web en Entorno Cliente. Editorial Ra-Ma, 2016