205215 - PCP - Creative Programming with Processing

Coordinating unit: 205 - ESEIAAT - Terrassa School of Industrial, Aerospace and Audiovisual Engineering
Teaching unit: 739 - TSC - Department of Signal Theory and Communications
Academic year: 2018

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: IGNASI ESQUERRA LLUCIÀ

Teaching methodology
This is a full practical course taught in a computer laboratory, with an introduction to the new concepts followed by students’ work on the programming exercises.

Learning objectives of the subject
Processing is a programming language that was developed for easy use in creating art performances with real-time audiovisual interaction. This course objective is to introduce and learn to program interactive applications using Processing, from the very basics to building a complete project.

Study load

<table>
<thead>
<tr>
<th>Total learning time: 75h</th>
<th>Hours large group: 30h</th>
<th>40.00%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hours medium group: 0h</td>
<td>0.00%</td>
<td></td>
</tr>
<tr>
<td>Hours small group: 0h</td>
<td>0.00%</td>
<td></td>
</tr>
<tr>
<td>Guided activities: 0h</td>
<td>0.00%</td>
<td></td>
</tr>
<tr>
<td>Self study: 45h</td>
<td>60.00%</td>
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</tbody>
</table>
# Content

## Module 1: BASIC COMMANDS

**Description:**
Introduction to Processing. Basics commands.

**Related activities:**
- Project I

**Learning time:** 12h 30m
- Theory classes: 5h
- Self study: 7h 30m

## Module 2: INTERACTION

**Description:**
Mouse and keyboard interaction.

**Related activities:**
- Project II

**Learning time:** 12h 30m
- Theory classes: 5h
- Self study: 7h 30m

## Module 3: IMAGE AND SOUND

**Description:**
Image, sound and video processing.

**Related activities:**
- Project III

**Learning time:** 12h 30m
- Theory classes: 5h
- Self study: 7h 30m

## Module 4: DATA VISUALIZATION

**Description:**
Data visualization.

**Related activities:**
- Project IV

**Learning time:** 12h 30m
- Theory classes: 5h
- Self study: 7h 30m
Each module is evaluated with programming exercises and projects. Weighs are 15% for units 1 to 5, and 25% for the final project. All works must be done individually.

Qualification system

Bibliography

Complementary:
