Course guide  
230256 - RTDSP - Real-Time Digital Signal Processing

Unit in charge: Barcelona School of Telecommunications Engineering  
Teaching unit: 739 - TSC - Department of Signal Theory and Communications.

Degree:  
Academic year: 2019  
ECTS Credits: 6.0  
Languages: Spanish

LECTURER

Coordinating lecturer: Rodriguez Fonollosa, Jose Adrian  
Others: Rodriguez Fonollosa, Jose Adrian  
Valle Alarcon, Rafael

PRIOR SKILLS

Signals and Systems  
Digital Signal Processing

REQUIREMENTS

C Programming Language

TEACHING METHODOLOGY

LEARNING OBJECTIVES OF THE SUBJECT

To enable students to develop real time digital signal processing applications using tools similar to those employed in the development of commercial products. Applications cover real time speech processing and basic digital communication subsystems.

STUDY LOAD

<table>
<thead>
<tr>
<th>Type</th>
<th>Hours</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self study</td>
<td>98,0</td>
<td>65.33</td>
</tr>
<tr>
<td>Hours small group</td>
<td>26,0</td>
<td>17.33</td>
</tr>
<tr>
<td>Hours large group</td>
<td>26,0</td>
<td>17.33</td>
</tr>
</tbody>
</table>

Total learning time: 150 h

CONTENTS

1. Introduction to the working environment: Texas Instruments TMS320C6713 DSK

Description:  
Introduction to the integrated development environment for real time digital signal processing applications.

Full-or-part-time: 10h  
Laboratory classes: 10h
2. Basic signal processing applications

**Description:**
Development of basic signal processing applications

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

3. Signal processing applications

**Description:**
Development of signal processing applications in communications, audio and speech.

**Full-or-part-time:** 30h
Laboratory classes: 30h

**GRADING SYSTEM**
Continuous evaluation based on
- Preparatory assignments, practical reports and classroom performance: 50%
- Individual tests: 50%

**BIBLIOGRAPHY**

**Basic:**

**Complementary:**

**RESOURCES**

Other resources: