Course guides
300478 - ABC-OA - Aircrafts: Communication Buses

Unit in charge: Castelldefels School of Telecommunications and Aerospace Engineering
Teaching unit: 744 - ENTEL - Department of Network Engineering.
Degree: BACHELOR'S DEGREE IN AEROSPACE SYSTEMS ENGINEERING (Syllabus 2015). (Optional subject).
Academic year: 2021 ECTS Credits: 6.0 Languages: Catalan, Spanish, English

LECTURER

Coordinating lecturer: Definit a la infoweb de l'assignatura.
Others: Definit a la infoweb de l'assignatura.

PRIOR SKILLS

REQUIREMENTS
Fundamental of communications. Aviónics

TEACHING METHODOLOGY
Lectures, problems, group activities and laboratory projetcs.

LEARNING OBJECTIVES OF THE SUBJECT
To know the communications that are used in the aircraft. Commercial and real products that are to be found in the market, to be able to evaluate its characteristics. Students have to know at the end of the course which solution is the best for each type of aircraft. They should know how to fit the communications chosen within the complete aircraft project.

STUDY LOAD

<table>
<thead>
<tr>
<th>Type</th>
<th>Hours</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hours large group</td>
<td>33,0</td>
<td>22.00</td>
</tr>
<tr>
<td>Hours small group</td>
<td>33,0</td>
<td>22.00</td>
</tr>
<tr>
<td>Self study</td>
<td>84,0</td>
<td>56.00</td>
</tr>
</tbody>
</table>

Total learning time: 150 h
## CONTENTS

### Introduction

**Description:**

**Related activities:**
Lectures. Problem resolution.

**Full-or-part-time:** 8h 38m
- Theory classes: 4h
- Self study: 4h 38m

### Standard buses: basic concepts

**Description:**
Basic concepts. ARINC 429 and AFDX

**Related activities:**
Lectures and lab.

**Full-or-part-time:** 41h 48m
- Theory classes: 4h
- Laboratory classes: 15h
- Self study: 22h 48m

### CAN

**Description:**
CAN basic concepts. Practical example. implementations and versions.

**Related activities:**
Lectures and lab. Group project.

**Full-or-part-time:** 36h 50m
- Theory classes: 8h 30m
- Laboratory classes: 5h
- Guided activities: 2h 30m
- Self study: 20h 50m

### Time-Triggered solutions

**Description:**
Time-Triggered concept. Examples: TTCAN, TTP, TTEthernet.

**Related activities:**
Lectures, group project and lab.

**Full-or-part-time:** 62h 44m
- Theory classes: 11h 30m
- Practical classes: 13h
- Guided activities: 2h 30m
- Self study: 35h 44m
GRADING SYSTEM

EXAMINATION RULES.

Evaluation of group work. Problem resolution. Lab