

## Course guide

### 300313 - BCA-OA - Aircraft Communication Buses

**Last modified:** 30/01/2017

**Unit in charge:** Castelldefels School of Telecommunications and Aerospace Engineering  
**Teaching unit:** 744 - ENTEL - Department of Network Engineering.

**Degree:** BACHELOR'S DEGREE IN AIR NAVIGATION ENGINEERING (Syllabus 2010). (Optional subject).

**Academic year:** 2016    **ECTS Credits:** 3.0    **Languages:** Catalan, Spanish

#### LECTURER

**Coordinating lecturer:** Jordi Mataix Oltra

**Others:** David Rincón. Rafael Vidal. Jose Yúfera

#### PRIOR SKILLS

Fundamentals of communications. Packet-switching communications networks. Introduction to the Internet. IP networks

#### REQUIREMENTS

Fundamental of communications. Aviónics

#### TEACHING METHODOLOGY

#### 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

Type	Hours	Percentage
Guided activities	11,0	14.67
Self study	42,0	56.00
Hours large group	22,0	29.33

**Total learning time:** 75 h



## CONTENTS

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### Communications buses on aircraft

**Description:**

Introduction. Justification. Standardization. Aircraft. Operation of networks. Temporary requirements in aircraft communications networks. Transmission Problems. Communications buses in aircraft. Standardization. DOG. AFDX. Advanced trends in aircraft communications buses. Time Sensitive Networks. Case studies. Ethernet switched. Delay in a network. CAN / Arduino.

**Related activities:**

Classes of theory. Problem resolution. Group work. Lab practices.

**Full-or-part-time:** 75h

Theory classes: 22h

Guided activities: 11h

Self study : 42h

## GRADING SYSTEM

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## EXAMINATION RULES.

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Exams. Evaluation of group work. Problem resolution. Lab