300228 - AVI-MN2 - Avionics

Coordinating unit: 300 - EETAC - Castelldefels School of Telecommunications and Aerospace Engineering

Teaching unit:
- 710 - EEL - Department of Electronic Engineering
- 701 - AC - Department of Computer Architecture
- 748 - FIS - Department of Physics

Academic year: 2018

Degree:
- BACHELOR'S DEGREE IN AIR NAVIGATION ENGINEERING (Syllabus 2010). (Teaching unit Compulsory)
- BACHELOR'S DEGREE IN AEROSPACE SYSTEMS ENGINEERING (Syllabus 2015). (Teaching unit Optional)
- BACHELOR'S DEGREE IN AEROSPACE SYSTEMS ENGINEERING/BACHELOR'S DEGREE IN TELECOMMUNICATIONS SYSTEMS ENGINEERING (Syllabus 2015). (Teaching unit Optional)
- BACHELOR'S DEGREE IN AEROSPACE SYSTEMS ENGINEERING/BACHELOR'S DEGREE IN NETWORK ENGINEERING (Syllabus 2015). (Teaching unit Optional)

ECTS credits: 7,5

Teaching languages: Catalan, Spanish

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ECTS credits: 7,5

Teaching languages: Catalan, Spanish

Teaching staff

Coordinator: Definit a la infoweb de l'assignatura.
Others: Definit a la infoweb de l'assignatura.

Degree competences to which the subject contributes

Specific:
1. CE 17 AERO. Conocimiento adecuado y aplicado a la ingeniería de: Los elementos fundamentales de los diversos tipos de aeronaves; los elementos funcionales del sistema de navegación aérea y las instalaciones eléctricas y electrónicas asociadas; los fundamentos del diseño y construcción de aeropuertos y sus diversos elementos. (CIN/308/2009, BOE 18.2.2009)

General:
4. PROJECT MANAGEMENT - Level 3: Define the objectives of an extensive project and open, multidisciplinary. Schedule tasks and resources, track and integration of the parties. To evaluate the intermediate and final results, restating the objectives if necessary.
7. EFFICIENT USE OF EQUIPMENT AND INSTRUMENTS - Level 2: Use the correct instruments, equipment and laboratory software for specific or specialized knowledge of their benefits. A critical analysis of the experiments and results. Correctly interpret manuals and catalogs. Working independently, individually or in groups, in the laboratory.

Transversal:
2. SELF-DIRECTED LEARNING - Level 3. Applying the knowledge gained in completing a task according to its relevance and importance. Deciding how to carry out a task, the amount of time to be devoted to it and the most suitable information sources.
3. EFFICIENT ORAL AND WRITTEN COMMUNICATION - Level 3. Communicating clearly and efficiently in oral and written presentations. Adapting to audiences and communication aims by using suitable strategies and means.
5. THIRD LANGUAGE. Learning a third language, preferably English, to a degree of oral and written fluency that fits in with the future needs of the graduates of each course.
6. TEAMWORK - Level 1. Working in a team and making positive contributions once the aims and group and individual responsibilities have been defined. Reaching joint decisions on the strategy to be followed.
8. EFFECTIVE USE OF INFORMATION RESOURCES - Level 3. Planning and using the information necessary for an academic assignment (a final thesis, for example) based on a critical appraisal of the information resources used.
### Learning objectives of the subject

**Study load**

<table>
<thead>
<tr>
<th>Total learning time: 187h 30m</th>
<th>Hours large group: 39h 20.80%</th>
<th>Hours medium group: 13h 6.93%</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Hours small group: 26h 13.87%</td>
<td>Guided activities: 4h 30m 2.40%</td>
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<tr>
<td></td>
<td>Self study: 105h 56.00%</td>
<td></td>
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</tbody>
</table>
## Content

| (ENG) Introducció als sistemes aviònics | Learning time: 3h  
Theory classes: 1h 30m  
Self study: 1h 30m |
|----------------------------------------|--------------------------------------------------|
| (ENG) Instrumentació aviònica de cabina | Learning time: 38h  
Theory classes: 12h  
Guided activities: 2h  
Self study: 24h |
| (ENG) Disseny aviònic. Consideracions industrials i seguretat | Learning time: 41h  
Theory classes: 12h  
Laboratory classes: 4h  
Self study: 25h |
| (ENG) Disseny hardware. Sistemes sensors i d'actuació. Busos de comunicació | Learning time: 40h  
Theory classes: 3h  
Practical classes: 13h  
Self study: 24h |
| (ENG) Disseny software. Arquitectura i sistemes operatius | Learning time: 28h  
Theory classes: 10h 30m  
Self study: 17h 30m |
| (ENG) Projectes | Learning time: 37h 30m  
Laboratory classes: 22h  
Guided activities: 2h 30m  
Self study: 13h |
## Planning of activities

| (ENG) CONTROLS INDIVIDUALS DE CONEIXEMENTS BÀSICS | Hours: 4h  
Theory classes: 4h |
|--------------------------------------------------|-------------------------|
| (ENG) PROBLEMES                                  | Hours: 37h  
Practical classes: 13h  
Self study: 24h |
| (ENG) PROJECTE D'APLICACIÓ                       | Hours: 52h  
Laboratory classes: 26h  
Self study: 26h |
| (ENG) VISITA CABINA AVIÒNICA ILLA DE BANYOLS     | Hours: 4h 30m  
Guided activities: 4h 30m |
| (ENG) TEORIA                                     | Hours: 90h  
Theory classes: 35h  
Self study: 55h |

## Bibliography