

300222 - ELECTRO - Electronics

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| Coordinating unit: | 300 - EETAC - Castelldefels School of Telecommunications and Aerospace Engineering |
| Teaching unit: | 710 - EEL - Department of Electronic Engineering |
| 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 Compulsory) |
| ECTS credits: | 6 |
| Teaching languages: | Catalan, Spanish, English |

Teaching staff

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| 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)

Generical:

5. EFFICIENT USE OF EQUIPMENT AND INSTRUMENTATION - Level 3: Design experiments, measurements, subsystems and systems, equipment and tools most appropriate laboratory. Knowing not only benefits but also the limitations of the equipment and resources. Conduct assessments and evaluations critically, making decisions according to the overall system specifications or service.
6. PROJECT MANAGEMENT - Level 2: Define the objectives of a well-defined, narrow scope, and plan development, identifying resources, tasks, shared responsibilities and integration. Use appropriate tools to support project management.

Transversal:

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.
4. TEAMWORK - Level 3. Managing and making work groups effective. Resolving possible conflicts, valuing working with others, assessing the effectiveness of a team and presenting the final results.
7. SUSTAINABILITY AND SOCIAL COMMITMENT - Level 3. Taking social, economic and environmental factors into account in the application of solutions. Undertaking projects that tie in with human development and sustainability.
8. 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.

Learning objectives of the subject

Missing



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Study load

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|---------------------------|---------------------|-----|--------|
| Total learning time: 150h | Hours large group: | 36h | 24.00% |
| | Hours medium group: | 0h | 0.00% |
| | Hours small group: | 24h | 16.00% |
| | Guided activities: | 6h | 4.00% |
| | Self study: | 84h | 56.00% |

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Content

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| <p>(ENG) -Adquisició, condicionament i processat lineal de senyals analògics.</p> | <p>Learning time: 60h Theory classes: 15h Laboratory classes: 12h Self study : 33h</p> |
| <p>(ENG) -Components i circuits electrònics no lineals bàsics</p> | <p>Learning time: 19h 30m Theory classes: 4h 30m Laboratory classes: 2h Self study : 13h</p> |
| <p>Description: ·Díodes. ·Transistors. ·Circuits senzills amb díodes i transistors.</p> | |
| <p>(ENG) -Senyals i sistemes digitals bàsics</p> | <p>Learning time: 39h Theory classes: 15h Laboratory classes: 4h Self study : 20h</p> |
| <p>(ENG) -Introducció als sistemes electrònics programables</p> | <p>Learning time: 31h 30m Theory classes: 1h 30m Laboratory classes: 6h Guided activities: 6h Self study : 18h</p> |
| <p>Description: ·Sistemes amb programació hardware ·Sistemes amb programació software:Microprocessadors i microcontroladors. ·Sistemes amb programació mixta.</p> | |

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Bibliography

Basic:

Storey, N. Electronics: a systems approach. 3rd ed. Edimburgh: Ed. Pearson Education, 2006. ISBN 0131293966.

Carlson, A.B. Teoría de circuitos: ingeniería, conceptos y análisis de circuitos eléctricos lineales. Madrid: Ed. International Thomson, 2002. ISBN 8497320662.

Floyd, Thomas L. Fundamentos de sistemas digitales [on line]. 9ª ed. Madrid: Ed. Prentice Hall, 2006 [Consultation: 04/10/2018]. Available on: <http://www.ingebook.com/ib/NPcd/IB_BooksVis?cod_primaria=1000187&codigo_libro=1295>. ISBN 9788483220856.

Complementary:

Eismin, Thomas K. Aircraft: electricity & electronics. 5th ed. New York: Ed. Glencoe McGraw-Hill, 2001. ISBN 0028018591.

Thomas, Roland E.; Rosa, Albert J.; Toussaint, Gregory J. The analysis and design of linear circuits. 6th ed. Hoboken, NJ: Ed. John Wiley & Sons, 2009. ISBN 9780470383308.

Pallás Areny, R. Sensores y acondicionadores de señal. 4ª ed. Barcelona: Ed. Marcombo Boixareu, 2003. ISBN 8426713440.