

## 330530 - ASC - Analysis of Systems and Control

Coordinating unit: 330 - EPSEM - Manresa School of Engineering  
Teaching unit: 750 - EMIT - Department of Mining, Industrial and ICT Engineering  
Academic year: 2019  
Degree: BACHELOR'S DEGREE IN AUTOMOTIVE ENGINEERING (Syllabus 2017). (Teaching unit Compulsory)  
ECTS credits: 6 Teaching languages: Catalan, Spanish, English

### Teaching staff

Coordinator: Josep Font Teixidó

### Degree competences to which the subject contributes

Specific:

- CE13. Knowledge and application of production and manufacturing systems.
- CE21. Knowledge of automatic regulation, control techniques and its application to industrial automation.
- CE22. Ability to design control systems and industrial automation.

Transversal:

1. 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.
2. 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.
3. 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.
4. 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.
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.

### Learning objectives of the subject

ENG



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### Study load

Total learning time: 150h	Hours large group:	30h	20.00%
	Hours medium group:	0h	0.00%
	Hours small group:	30h	20.00%
	Guided activities:	0h	0.00%
	Self study:	90h	60.00%

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### Content

<p>1. Introducció als sistemes electrònics de control (ENG)</p>	<p>Learning time: 10h Theory classes: 4h Self study : 6h</p>
<p>Description: ENG</p>	
<p>title english</p>	<p>Learning time: 40h Theory classes: 16h Self study : 24h</p>
<p>Description: content english</p>	
<p>title english</p>	<p>Learning time: 30h Theory classes: 12h Self study : 18h</p>
<p>Description: content english</p>	
<p>title english</p>	<p>Learning time: 20h Theory classes: 8h Self study : 12h</p>
<p>Description: content english</p>	
<p>title english</p>	<p>Learning time: 30h Theory classes: 12h Self study : 18h</p>
<p>Description: content english</p>	

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title english	Learning time: 20h Theory classes: 8h Self study : 12h
Description: content english	

### Planning of activities

name english	Hours: 6h Theory classes: 6h
name english	Hours: 45h Self study: 45h
name english	Hours: 26h Theory classes: 26h
name english	Hours: 28h Theory classes: 28h
name english	Hours: 45h Self study: 45h

### Bibliography

#### Basic:

Bolzern, Paolo; Scattolini, Riccardo; Schiavoni, Nicola. Fundamentos de control automático. 3ª ed. Madrid: McGraw-Hill, cop. 2008. ISBN 9788448166403.

Ogata, Katsuhiko. Modern control engineering. 5th ed. Boston [etc.]: Pearson, cop. 2010. ISBN 9780137133376.

#### Others resources: