

330146 - CAI - Industrial Construction and Architecture

Coordinating unit:	330 - EPSEM - Manresa School of Engineering
Teaching unit:	717 - EGE - Department of Engineering Presentation
Academic year:	2019
Degree:	BACHELOR'S DEGREE IN MECHANICAL ENGINEERING (Syllabus 2016). (Teaching unit Optional) BACHELOR'S DEGREE IN MECHANICAL ENGINEERING (Syllabus 2009). (Teaching unit Optional)
ECTS credits:	6
Teaching languages:	Catalan

Teaching staff

Coordinator: Villar Ribera, Alberto

Degree competences to which the subject contributes

Specific:

1. (ENG) Coneixements i capacitats per aplicar les tècniques d'enginyeria gràfica.
2. (ENG) Coneixements i capacitat per al disseny d'estructures i construccions industrials.
3. (ENG) Capacitat per la redacció, firma i desenvolupament de projectes en l'àmbit de l'enginyeria industrial que tinguin per objecte: la construcció, reforma, reparació, conservació, demolició, fabricació, instal·lació, muntatge o explotació de: estructures, equips mecànics, instal·lacions energètiques, instal·lacions elèctriques i electròniques, instal·lacions i plantes industrials i processos de fabricació i automatització.
4. (ENG) Capacitat de resoldre problemes amb iniciativa, presa de decisions, creativitat, raonament crític i de comunicar i transmetre coneixements, habilitats i destreses en el camp de l'enginyeria industrial.
5. (ENG) Capacitat per la gestió d'especificacions, reglaments i normes d'obligat compliment.
6. (ENG) Coneixement, comprensió i capacitat per aplicar la legislació necessària en l'exercici de la professió d'enginyer tècnic industrial.

Transversal:

7. 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.
8. 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.
9. ENTREPRENEURSHIP AND INNOVATION - Level 3. Using knowledge and strategic skills to set up and manage projects. Applying systemic solutions to complex problems. Devising and managing innovation in organizations.
10. 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.
11. 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.
12. 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.
13. 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.

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Learning objectives of the subject

Study load

Total learning time: 150h	Hours large group:	45h	30.00%
	Hours medium group:	0h	0.00%
	Hours small group:	15h	10.00%
	Guided activities:	0h	0.00%
	Self study:	90h	60.00%

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Content

title english	Learning time: 8h Theory classes: 4h Self study : 4h
Description: content english	
title english	Learning time: 4h Theory classes: 2h Self study : 2h
Description: content english	
title english	Learning time: 8h Theory classes: 4h Self study : 4h
Description: content english	
title english	Learning time: 8h Theory classes: 4h Self study : 4h
Description: content english	
title english	Learning time: 12h Theory classes: 6h Self study : 6h
Description: content english	

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title english	Learning time: 12h Theory classes: 6h Self study : 6h
Description: content english	

title english	Learning time: 4h Theory classes: 2h Self study : 2h
Description: content english	

title english	Learning time: 4h Theory classes: 2h Self study : 2h
Description: content english	

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Planning of activities

name english	Hours: 12h Laboratory classes: 4h Self study: 8h
name english	Hours: 18h Laboratory classes: 6h Self study: 12h
name english	Hours: 12h Laboratory classes: 4h Self study: 8h
name english	Hours: 6h Laboratory classes: 2h Self study: 4h
name english	Hours: 6h Laboratory classes: 2h Self study: 4h
name english	Hours: 6h Laboratory classes: 2h Self study: 4h
name english	Hours: 9h Laboratory classes: 3h Self study: 6h
name english	Hours: 12h Laboratory classes: 4h Self study: 8h

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name english	Hours: 9h Laboratory classes: 3h Self study: 6h
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Bibliography

Basic:

Ackerman, Kurt. Building for industry. London: Watermark, 1991. ISBN 1873200192.

Neufert, E. Arte de proyectar en arquitectura. 16a ed. Barcelona: Gustavo Gili, 2013. ISBN 9788425224744.

Complementary:

Calavera, J. Manual de detalles constructivos en obras de hormigón armado. Vizcaya: INTEMAC, 1993. ISBN 8488764006.

Calavera, J. Proyecto y cálculo de estructuras de hormigón armado para edificios. 2a ed. Madrid: INTEMAC, 1984-1985. ISBN 8439840039.

Others resources: