

330123 - EGR - Engineering Graphics

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| 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 Compulsory) BACHELOR'S DEGREE IN MECHANICAL ENGINEERING (Syllabus 2009). (Teaching unit Compulsory) | | |
| ECTS credits: | 6 | Teaching languages: | Catalan, Spanish |

Teaching staff

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| Coordinator: | Romero Rodriguez, Jose Antonio |
| Others: | Lopez Martinez, Joan Antoni |

Degree competences to which the subject contributes

Specific:

- (ENG) Adquisició del llenguatge gràfic propi dels mecanismes, màquines i instal·lacions a l'àmbit de l'enginyeria industrial.
- (ENG) Capacitació per resoldre problemes de concepció gràfica, tridimensional i bidimensional.
- (ENG) Introducció a l'ús de les aplicacions de l'enginyeria gràfica i el disseny assistit per ordinador.

Transversal:

- 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.
- 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.
- 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.

Learning objectives of the subject

Study load

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

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Content

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| (ENG) 1.- TIPUS DE DIBUIXOS TÈCNICS I CONTINGUTS | Learning time: 9h Theory classes: 1h Laboratory classes: 3h Self study : 5h |
| (ENG) 2.- ESTATS SUPERFICIALS I SIGNES | Learning time: 9h Theory classes: 1h Laboratory classes: 3h Self study : 5h |
| (ENG) 3.- TOLERÀNCIES DIMENSIONALS I AJUSTOS | Learning time: 18h Theory classes: 2h Laboratory classes: 6h Self study : 10h |
| (ENG) 4.- TOLERÀNCIES GEOMÈTRIQUES | Learning time: 14h Theory classes: 1h Laboratory classes: 3h Self study : 10h |
| (ENG) 5.- ELEMENTS NORMALITZATS DE LES UNIONS ROSCADES | Learning time: 9h Theory classes: 1h Laboratory classes: 3h Self study : 5h |
| (ENG) 6.- ELEMENTS NORMALITZATS DE LES UNIONS NO ROSCADES | Learning time: 9h Theory classes: 1h Laboratory classes: 3h Self study : 5h |

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| (ENG) 7.- EIXOS I ARBRES DE TRANSMISSIÓ | Learning time: 9h Theory classes: 1h Laboratory classes: 3h Self study : 5h |
| (ENG) 8.- MOLLES | Learning time: 9h Theory classes: 1h Laboratory classes: 3h Self study : 5h |
| (ENG) 9.- COIXINETS DE FRICCIÓ (VIROLLES) I DE RODADURA (RODAMENTS) | Learning time: 9h Theory classes: 1h Laboratory classes: 3h Self study : 5h |
| (ENG) 10.- TRANSMISSIONS PER ENGRANATGES | Learning time: 9h Theory classes: 1h Laboratory classes: 3h Self study : 5h |
| (ENG) 11.- TRANSMISSIONS PER CADENA, CABLE I CORRETJA | Learning time: 9h Theory classes: 1h Laboratory classes: 3h Self study : 5h |
| (ENG) 12.- LLEVES I EXCÈNTRIQVES | Learning time: 9h Theory classes: 1h Laboratory classes: 3h Self study : 5h |

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| (ENG) 13.- SOLDADURA | Learning time: 9h Theory classes: 1h Laboratory classes: 3h Self study : 5h |
| (ENG) 14.- REPRESENTACIONS EN LA CONFORMACIÓ DE PECES DE XAPA | Learning time: 9h Theory classes: 1h Laboratory classes: 3h Self study : 5h |

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Planning of activities

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| (ENG) 1.- PRÀCTICA DE LABORATORI: L'EINA DE CAD | Hours: 11h Laboratory classes: 3h Practical classes: 8h |
| (ENG) 2.- PRÀCTICA DE LABORATORI: ESTATS SUPERFICIALS, AJUSTOS, TOLERÀNCIES DIMENSIONALS I GEOMÈTRIQUES | Hours: 35h Laboratory classes: 15h Self study: 20h |
| (ENG) 3.- PRÀCTICA DE LABORATORI: ENGRANATGES, LLEVES, EXCÈNTRIQÜES, RODAMENTS, VIROLLES, CADENES, CABLES, CORRETGES | Hours: 41h Laboratory classes: 18h Self study: 23h |
| (ENG) 4.- PRÀCTICA DE LABORATORI: XAPA, CALDERERIA I SOLDADURA | Hours: 28h Laboratory classes: 9h Practical classes: 19h |
| (ENG) 5.- LLIURABLES | Hours: 10h Self study: 10h |
| (ENG) 6.- PROVA FINAL | Hours: 13h Theory classes: 3h Self study: 10h |
| (ENG) 7.- PRUEBA FINAL | Hours: 13h Theory classes: 3h Self study: 10h |

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Bibliography

Basic:

Hernández Abad, F., et al. Ingeniería gráfica : introducción a la normalización. 2ª ed. Terrassa: ETSEIAT, Departamento de Expresión Gráfica en la Ingeniería, 2006. ISBN 8460946592.

Complementary:

Félez, J. ; Martínez, M. L. Dibujo industrial. 3ª ed. Madrid: Síntesis, 1999. ISBN 8477383316.

Félez, J. ; Martínez, M. L. Ingeniería gráfica y diseño. Madrid: Síntesis, 2008. ISBN 9788497564991.

Others resources: