

330059 - ES - Statistics

Coordinating unit:	330 - EPSEM - Manresa School of Engineering
Teaching unit:	749 - MAT - Department of Mathematics
Academic year:	2019
Degree:	BACHELOR'S DEGREE IN ENERGY AND MINING RESOURCE ENGINEERING (Syllabus 2012). (Teaching unit Compulsory) BACHELOR'S DEGREE IN INDUSTRIAL ELECTRONICS AND AUTOMATIC CONTROL ENGINEERING (Syllabus 2016). (Teaching unit Compulsory) BACHELOR'S DEGREE IN MECHANICAL ENGINEERING (Syllabus 2016). (Teaching unit Compulsory) BACHELOR'S DEGREE IN CHEMICAL ENGINEERING (Syllabus 2016). (Teaching unit Compulsory) BACHELOR'S DEGREE IN ELECTRICAL ENGINEERING (Syllabus 2009). (Teaching unit Compulsory) BACHELOR'S DEGREE IN INDUSTRIAL ELECTRONICS AND AUTOMATIC CONTROL ENGINEERING (Syllabus 2009). (Teaching unit Compulsory) BACHELOR'S DEGREE IN MECHANICAL ENGINEERING (Syllabus 2009). (Teaching unit Compulsory) BACHELOR'S DEGREE IN CHEMICAL ENGINEERING (Syllabus 2009). (Teaching unit Compulsory)
ECTS credits:	6
Teaching languages:	Catalan

Teaching staff

Coordinator:	JOSEP RUBIÓ MASSEGÚ
Others:	MONTserrat ALSINA AUBACH - JOSEP M. CORS IGLESIAS - MARGARITA DOMENECH BLAZQUEZ - JOSEP FREIXAS BOSCH - JOSE MIGUEL GIMENEZ PRADALES - M. ANTONIA MOLINA HERNANDEZ - XAVIER MOLINERO ALBAREDA - FRANCISCO PALACIOS QUIÑONERO - MONTserrat PONS VALLES - M. ALBINA PUENTE DEL CAMPO - JOSEP MARIA ROSSELL GARRIGA - ENRIC VENTURA CAPELL

Degree competences to which the subject contributes

Specific:

1. (ENG) CE1: Capacitat per la resolució dels problemes matemàtics que puguin sorgir en l'enginyeria. Aptitud per aplicar els coneixements sobre: àlgebra lineal, geometria, geometria diferencial, càlcul diferencial i integral, equacions diferencials i en derivades parcials, mètodes numèrics, algorísmica numèrica, estadística i optimització.

Transversal:

2. EFFICIENT ORAL AND WRITTEN COMMUNICATION - Level 1. Planning oral communication, answering questions properly and writing straightforward texts that are spelt correctly and are grammatically coherent.
3. 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.
4. SELF-DIRECTED LEARNING - Level 1. Completing set tasks within established deadlines. Working with recommended information sources according to the guidelines set by lecturers.

Learning objectives of the subject

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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%

Content

(ENG) 1. ESTADÍSTICA DESCRIPTIVA	Learning time: 30h Theory classes: 6h Laboratory classes: 6h Self study : 18h
(ENG) 2. PROBABILITAT I VARIABLES ALEATÒRIES	Learning time: 30h Theory classes: 6h Laboratory classes: 6h Self study : 18h
(ENG) 3. DISTRIBUCIONS NOTABLES	Learning time: 30h Theory classes: 6h Laboratory classes: 6h Self study : 18h
(ENG) 4. FONAMENTS D'INFERÈNCIA ESTADÍSTICA	Learning time: 40h Theory classes: 8h Guided activities: 8h Self study : 24h
(ENG) 5. CONTROL DE QUALITAT I COMPONENTS PRINCIPALS	Learning time: 20h Theory classes: 4h Laboratory classes: 4h Self study : 12h

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Planning of activities

(ENG) A1: ESTADÍSTICA DESCRIPTIVA	Hours: 4h Laboratory classes: 1h Self study: 3h
(ENG) A2: PROBABILITAT, VARIABLES ALEATÒRIES I DISTRIBUCIONS NOTABLES	Hours: 4h Laboratory classes: 1h Self study: 3h
(ENG) A3: INFERÈNCIA ESTADÍSTICA I CONTROL DE QUALITAT	Hours: 4h Laboratory classes: 1h Self study: 3h
(ENG) E1 I E2: PROVES ESCRITES	Hours: 16h Theory classes: 4h Self study: 12h

Bibliography

Basic:

Forcada, S.; Rubió, J. Elements d'estadística [on line]. Barcelona: Edicions UPC, 2007 [Consultation: 05/03/2018]. Available on: <<http://hdl.handle.net/2099.3/36675>>. ISBN 9788483019269.

Grima, P.; Marco, L.; Tort-Martorell, X. Estadística pràctica con Minitab. Madrid: Pearson Educación, 2004. ISBN 8420543551.

Ryan, B. F.; Joiner, B. L. Minitab handbook. 3rd ed. Belmont, CA: Duxbury Press, 1994. ISBN 0534212409.

Walpole, R. E., i altres. Probabilidad y estadística para ingeniería y ciencias. 9ª ed. México: Pearson Educación, 2012. ISBN 9786073214179.

Complementary:

Devore, Jay L. Probabilidad y estadística para ingeniería y ciencias. 6ª ed. México: Thomson, 2005. ISBN 9706864571.

Lipschutz, S.; Schiller, J. J. Introducción a la probabilidad y estadística. Madrid: McGraw-Hill/Interamericana de España, 2001. ISBN 8448125045.

Mendenhall, W.; Scheaffer, R. L.; Wackerly, D. D. Estadística matemática con aplicaciones. México: Grupo Editorial Iberoamérica, 1986. ISBN 9687270179.

Moore, D. S. Estadística aplicada básica. 2ª ed. Barcelona: Antoni Bosch, 2005. ISBN 8495348047.