



Course guides

330059 - ES - Statistics

Last modified: 05/05/2020

Unit in charge: Manresa School of Engineering
Teaching unit: 749 - MAT - Department of Mathematics.

Degree: BACHELOR'S DEGREE IN ELECTRICAL ENGINEERING (Syllabus 2009). (Compulsory subject).
BACHELOR'S DEGREE IN INDUSTRIAL ELECTRONICS AND AUTOMATIC CONTROL ENGINEERING (Syllabus 2009). (Compulsory subject).
BACHELOR'S DEGREE IN MECHANICAL ENGINEERING (Syllabus 2009). (Compulsory subject).
BACHELOR'S DEGREE IN CHEMICAL ENGINEERING (Syllabus 2009). (Compulsory subject).
BACHELOR'S DEGREE IN ENERGY AND MINING RESOURCE ENGINEERING (Syllabus 2012). (Compulsory subject).
BACHELOR'S DEGREE IN INDUSTRIAL ELECTRONICS AND AUTOMATIC CONTROL ENGINEERING (Syllabus 2016). (Compulsory subject).
BACHELOR'S DEGREE IN MECHANICAL ENGINEERING (Syllabus 2016). (Compulsory subject).
BACHELOR'S DEGREE IN CHEMICAL ENGINEERING (Syllabus 2016). (Compulsory subject).

Academic year: 2020 **ECTS Credits:** 6.0 **Languages:** Catalan

LECTURER

Coordinating lecturer: JOSEP RUBIÓ MASSEGÚ

Others: Alsina Aubach, Montserrat
Cors Iglesias, Josep M.
Domenech Blazquez, Margarita
Freixas Bosch, Josep
Gimenez Pradales, Jose Miguel
Palacios Quiñonero, Francisco
Pons Valles, Montserrat
Puente Del Campo, M. Albina
Rossell Garriga, Josep Maria
Ventura Capell, Enric
Blasi Babot, Daniel
Samaniego Vidal, Daniel

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.

TEACHING METHODOLOGY



LEARNING OBJECTIVES OF THE SUBJECT

STUDY LOAD

Type	Hours	Percentage
Hours large group	30,0	20.00
Hours small group	30,0	20.00
Self study	90,0	60.00

Total learning time: 150 h

CONTENTS

(ENG) 1. ESTADÍSTICA DESCRIPTIVA

Full-or-part-time: 30h

Theory classes: 6h

Laboratory classes: 6h

Self study : 18h

(ENG) 2. PROBABILITAT I VARIABLES ALEATÒRIES

Full-or-part-time: 30h

Theory classes: 6h

Laboratory classes: 6h

Self study : 18h

(ENG) 3. DISTRIBUCIONS NOTABLES

Full-or-part-time: 30h

Theory classes: 6h

Laboratory classes: 6h

Self study : 18h

(ENG) 4. FONAMENTS D'INFERÈNCIA ESTADÍSTICA

Full-or-part-time: 40h

Theory classes: 8h

Guided activities: 8h

Self study : 24h

(ENG) 5. CONTROL DE QUALITAT I COMPONENTS PRINCIPALS

Full-or-part-time: 20h

Theory classes: 4h

Laboratory classes: 4h

Self study : 12h



ACTIVITIES

(ENG) A1: ESTADÍSTICA DESCRIPTIVA

Full-or-part-time: 4h
Laboratory classes: 1h
Self study: 3h

(ENG) A2: PROBABILITAT, VARIABLES ALEATÒRIES I DISTRIBUCIONS NOTABLES

Full-or-part-time: 4h
Laboratory classes: 1h
Self study: 3h

(ENG) A3: INFERÈNCIA ESTADÍSTICA I CONTROL DE QUALITAT

Full-or-part-time: 4h
Laboratory classes: 1h
Self study: 3h

(ENG) E1 I E2: PROVES ESCRITES

Full-or-part-time: 16h
Theory classes: 4h
Self study: 12h

GRADING SYSTEM

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.