UNIVERSIDAD DE CASTILLA - LA MANCHA

GUÍA DOCENTE

1. General information

Course:	STATISTICS	**Code:**	56307
Type:	BASIC	**ECTS credits:**	6
Degree:	360 - UNDERGRAD. IN INDUSTRIAL ELECTRONICS AND AUTOMAT. ENGINEERING (TO)	**Academic year:**	2021-22
Center:	303 - E.DE INGENIERÍA INDUSTRIAL Y AEROESPOACIAL DE TOLEDO	**Group(s):**	40 41
Year:	1	**Duration:**	C2
Main language:	Spanish	**Second language:**	
Use of additional languages:		**English Friendly:**	Y
Web site:		**Bilingual:**	N

Lecturer: **CARLOS DE LA CALLE ARROYO** - Group(s): **40 41**

Building/Office	Department	Phone number	Email	Office hours
Edificio Sabatini / 1.47	MATEMÁTICAS		Carlos.CalleArroyo@uclm.es	

Lecturer: **LICESIO JESUS RODRIGUEZ ARAGON** - Group(s): **40 41**

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2. Pre-Requisites

Not established

3. Justification in the curriculum, relation to other subjects and to the profession

Not established

4. Degree competences achieved in this course

Course competences

Code	Description
A01	To understand and have knowledge in an area of study that moves on from the general education attained at secondary level and usually found at a level that, while supported in advanced text books, also includes some aspects that include knowledge found at the cutting edge of the field of study.
A02	To know how to apply knowledge to work or vocation in a professional manner and possess the competences that are usually demonstrated by the formulation and defence of arguments and the resolution of problems in the field of study.
A03	To have the capability to gather and interpret relevant data (normally within the area of study) to make judgements that include a reflection on themes of a social, scientific or ethical nature.
A07	Knowledge of Information Technology and Communication (ITC).
A08	Appropriate level of oral and written communication.
A12	Knowledge of basic materials and technologies that assist the learning of new methods and theories and enable versatility to adapt to new situations.
A13	Ability to take the initiative to solve problems, take decisions, creativity, critical reasoning and ability to communicate and transmit knowledge, skills and abilities in Industrial Engineering and Automation.
A17	Ability to apply principles and methods of quality control.
B01	Ability to solve mathematical problems that occur in engineering. Aptitude to apply knowledge of: linear algebra; geometry; differential geometry; differential and integral calculus; differential and partial differential equations; numerical methods; numerical algorithms; statistics and optimization.

5. Objectives or Learning Outcomes

Course learning outcomes

Description

Know and interpret the fundamental measurements of descriptive statistics, approximate bidimensional data through regression adjustment, know the fundamentals of probability, estimate the parameters of statistical models, construct confidence intervals, contrast hypotheses and take decisions.

Be able to express yourself correctly both orally and in writing, and, in particular, to know how to use mathematical language to express with precision quantities and operations that appear in industrial engineering. Become accustomed to working in a team and behaving respectfully.

Additional outcomes

6. Units / Contents

Unit 1:

- **Unit 1.1**
- **Unit 1.2**
- **Unit 1.3**
- **Unit 1.4**
- **Unit 1.5**

Unit 2:

- **Unit 2.1**
- **Unit 2.2**
- **Unit 2.3**

Unit 3:

- **Unit 3.1**
- **Unit 3.2**
- **Unit 3.3**
- **Unit 3.4**
- **Unit 3.5**

7. Activities, Units/Modules and Methodology

Training Activity	Methodology	Related Competences (only degrees before RD 822/2021)	ECTS	Hours	As	Com	Description
Class Attendance (theory) [ON-SITE]	Lectures		0.88	22	Y	N	
Problem solving and/or case studies [ON-SITE]	Problem solving and exercises		0.64	16	Y	N	
Individual tutoring sessions [ON-SITE]	Guided or supervised work		0.08	2	N	-	
Laboratory practice or sessions [ON-SITE]	Problem solving and exercises		0.56	14	Y	N	
Other off-site activity [OFF-SITE]	Self-study		0.8	20	Y	N	
Progress test [ON-SITE]	Assessment tests		0.04	1	Y	N	
Progress test [ON-SITE]	Assessment tests		0.08	2	Y	N	
Study and Exam Preparation [OFF-SITE]	Self-study		2.8	70	N	-	
Final test [ON-SITE]	Problem solving and exercises		0.12	3	Y	N	
Total:			**6**	**150**			
Total credits of in-class work: 2.4			**Total class time hours: 60**				
Total credits of out of class work: 3.6			**Total hours of out of class work: 90**				

As: Assessable training activity
Com: Training activity of compulsory overcoming (It will be essential to overcome both continuous and non-continuous assessment).

8. Evaluation criteria and Grading System

Evaluation System	Continuous assessment	Non-continuous evaluation*	Description
Final test	0.00%	70.00%	
Progress Tests	0.00%	0.00%	
Assessment of problem solving and/or case studies	0.00%	15.00%	
Laboratory sessions	0.00%	15.00%	
Self Evaluation and Co-evaluation	0.00%	0.00%	
Total:	**0.00%**	**100.00%**	

According to art. 4 of the UCLM Student Evaluation Regulations, it must be provided to students who cannot regularly attend face-to-face training activities the passing of the subject, having the right (art. 12.2) to be globally graded, in 2 annual calls per subject , an ordinary and an extraordinary one (evaluating 100% of the competences).

9. Assignments, course calendar and important dates

Not related to the syllabus/contents

Hours	hours
Individual tutoring sessions [PRESENCIAL][Guided or supervised work]	2
Progress test [PRESENCIAL][Assessment tests]	1
Progress test [PRESENCIAL][Assessment tests]	2
Final test [PRESENCIAL][Problem solving and exercises]	3

Unit 1 (de 3):

Activities	Hours
Class Attendance (theory) [PRESENCIAL][Lectures]	8
Problem solving and/or case studies [PRESENCIAL][Problem solving and exercises]	6
Laboratory practice or sessions [PRESENCIAL][Problem solving and exercises]	6
Other off-site activity [AUTÓNOMA][Self-study]	5
Study and Exam Preparation [AUTÓNOMA][Self-study]	16

Unit 2 (de 3):

Activities	Hours
Class Attendance (theory) [PRESENCIAL][Lectures]	6
Problem solving and/or case studies [PRESENCIAL][Problem solving and exercises]	4
Laboratory practice or sessions [PRESENCIAL][Problem solving and exercises]	2
Other off-site activity [AUTÓNOMA][Self-study]	3

Study and Exam Preparation [AUTÓNOMA][Self-study]	27
Unit 3 (de 3):	
Activities	**Hours**
Class Attendance (theory) [PRESENCIAL][Lectures]	8
Problem solving and/or case studies [PRESENCIAL][Problem solving and exercises]	6
Laboratory practice or sessions [PRESENCIAL][Problem solving and exercises]	6
Other off-site activity [AUTÓNOMA][Self-study]	12
Study and Exam Preparation [AUTÓNOMA][Self-study]	27
Global activity	
Activities	**hours**
Problem solving and/or case studies [PRESENCIAL][Problem solving and exercises]	16
Individual tutoring sessions [PRESENCIAL][Guided or supervised work]	2
Laboratory practice or sessions [PRESENCIAL][Problem solving and exercises]	14
Other off-site activity [AUTÓNOMA][Self-study]	20
Class Attendance (theory) [PRESENCIAL][Lectures]	22
Progress test [PRESENCIAL][Assessment tests]	2
Study and Exam Preparation [AUTÓNOMA][Self-study]	70
Final test [PRESENCIAL][Problem solving and exercises]	3
Progress test [PRESENCIAL][Assessment tests]	1
Total horas:	150

10. Bibliography and Sources

Author(s)	Title/Link	Publishing house	Citv	ISBN	Year	Description
M. T. González Manteiga y A. Pérez de Vargas	Estadística aplicada una visión instrumental	Ediciones Díaz de Santos		9788479789138	2009	
	https://ebookcentral.proquest.com/lib/bibliotecauclm-ebooks/detail.action?docID=3189079					
I. Espejo Miranda, F. Fernández Palacín y M.A. López Sánchez	Inferencia estadística: teoría y problemas	Servicio de Publicaciones de la Universidad de Cádiz		9788498285581	2016	
	https://ebookcentral.proquest.com/lib/bibliotecauclm-ebooks/detail.action?docID=4626891					
S. M. Ross y T. Valdés Sánchez	Introducción a la estadística	Editorial Reverté		9788429151916	2014	
	https://ebookcentral.proquest.com/lib/bibliotecauclm-ebooks/detail.action?docID=5635443					
C. M. Cuadras	Problemas de probabilidades y estadística	PPU		84-86130-06-9		Signatura Biblioteca: 519.2 CUA
C. Pérez López	Estadística : problemas resueltos y aplicaciones	Pearson educación		84-205-3780-2	2003	Signatura Biblioteca: 519.2 PER
D. Peña	Fundamentos de estadística	Alianza Editorial		978-84-206-8380-5	2008	Signatura Biblioteca: 519.2 PEÑ
	http://site.ebrary.com/lib/bibliotecauclm/detail.action?adv.x=1&docID=11028686&f00=all&p00=Estad%C3%ADstica					
D. S. Moore	Estadística aplicada básica	Antoni Bosch		978-84-95348-04-3	2009	TEXTO DOCENTE Signatura Biblioteca: 519.2 MOO
	http://site.ebrary.com/lib/bibliotecauclm/docDetail.action?docID=10609557					
A. J. Arriaza Gómez y otros	Estadística Básica con R y R Commander	UCA		978-84-9828-186-6		Libro Libre
	http://knuth.uca.es/ebrcmdr					
E. Gutiérrez González y O. Vladimirovna Panteleeva	Estadística inferencial para ingeniería y ciencias	Grupo Editorial Patria		9786077444879	2016	
	http://site.ebrary.com/lib/bibliotecauclm/detail.action?adv.x=1&docID=11379359&f00=all&p00=Estad%C3%ADstica					
F.J. Martín Pliego López y otros	Problemas de inferencia estadística	Thomson-Paraninfo		84-9732-355-6	2002	Signatura Biblioteca: 519.2(076) MAR
H. A. Quevedo Urías y B. R. Pérez Salvador	Estadística para ingeniería y ciencias	Grupo Editorial Patria		9786074389395	2014	
	http://site.ebrary.com/lib/bibliotecauclm/detail.action?docID=11013660					
I. Espejo Miranda y otros	Estadística descriptiva y probabilidad: teoría y problemas	UCA		978-84-9828-467-6	2009	
	http://site.ebrary.com/lib/bibliotecauclm/detail.action?docID=10844601					
J.L. Devore	Probabilidad y estadística para ingeniería y ciencias.6ª edición.	Thomson		970-686-457-1	2005	Signatura Biblioteca: 519.2 DEV
M. Febrero Bande y otros	Prácticas de Estadística en R	Universidad Santiago de Compostela		978-84-691-0975-1	2008	
	http://eio.usc.es/pub/pateiro/files/pubdocentepracticasestadistica.pdf					
M. H. DeGroot	Probabilidad y estadística	Addison-Wesley Iberoamericana		0-201-64405-3	1988	Signatura Biblioteca: D 10454
R.S. Kenet y S. Zacks	Estadística Industrial Moderna	Thomson		970-686-027-4	2000	Signatura Biblioteca: 519.2 KEN
S. J. Álvarez Contreras	Estadística aplicada	CLAG		84-921847-4-4	2011	Signatura Bibilioteca: 519.2 ALV
W. Mendenhall	Probabilidad y estadística para ingeniería y ciencias	Pretice Hall		968-880-960-8	1997	Signatura Biblioteca: D 519.2(076) MEN