[GOA303] BASIC STATISTICS

GENERAL INFORMATION

Studies	DEGREE IN INDUSTRIAL ORGANIZATION ENGINEERING	**Subject**	MATHEMATICS
Semester	2	**Course**	1
Character	BASIC TRAINING	**Mention / Field of specialisation**	
Plan	2022	**Modality**	Face-to-face
Credits	6	**Hours/week**	4.83
Language	EUSKARA		
Total hours	87 class hours + 63 non-class hours = **150 total hours**		

PROFESSORS

ORUNA OTALORA, ZIGOR ALBERTO

REQUIRED PREVIOUS KNOWLEDGE

Subjects	Knowledge
(No specific previous subjects required)	*(No previous knowledge required)*

LEARNING RESULTS

LEARNING RESULTS	KC	SK	AB	ECTS
GOR101 - To analyze systems and processes to continually improve them based on data collected in a scheduled manner for the efficient management of the organization	x			5,4
G-RTR1 - To develop interdisciplinary projects specific to their specialty and of gradual complexity, - becoming aware of respect for human rights and fundamental rights, and analyzing and assessing the impact of the proposed solutions on the SDGs - to acquire and/or apply basic, advanced and /or avant-garde, demonstrating the ability to work in multidisciplinary teams and/or undertake further studies with a high degree of autonomy		x		0,28
G-RTR2 - To express information, ideas and the arguments that support them in an orderly, clear and coherent manner, orally and in writing, based on quality information, self-made or obtained from different sources, using inclusive and non-discriminatory language		x		0,32
			Total:	6

KC: Knowledge or Content / SK: Skills / AB: Abilities

ENAEE LEARNING RESULTS	ECTS
ENAE01 - Knowledge and understanding: Knowledge and understanding of the underlying scientific and mathematical principles in their branch of engineering.	2,16
ENAE04 - Knowledge and understanding: To be aware of the multidisciplinary context of engineering.	0,2
ENAE05 - Analysis in engineering: Ability to apply their knowledge and understanding in identifying, formulating and solving engineering problems using established methods.	0,6
ENAE06 - Analysis in engineering: Ability to apply their knowledge and understanding in analysing product, process and method engineering.	0,2
ENAE08 - Engineering projects: Ability to apply their knowledge in the development and completion of projects which meet specific requirements.	0,68
ENAE12 - Research & innovation: Technical and lab competences.	0,4
ENAE13 - Practical application of engineering: Ability to select and use suitable equipment, tools and methods.	0,4
ENAE17 - Transversal competences: To work effectively, both individually and in a team.	0,68
ENAE18 - Transversal competences: To use different methods to communicate effectively with the engineering community and society in general.	0,68
Total:	6

SECONDARY LEARNING RESULTS

RGO190 **[!]** ***Conocer y aplicar las fases para desarrollar de forma guiada, con los objetivos y la planificación previamente definidos, un proyecto de complejidad técnica acorde con los conocimientos de formación básica de la ingeniería. Reflexiona sobre los cono***

LEARNING ACTIVITIES	CH	NCH	TH
Development and writing of records, reports, presentations, audiovisual material, etc. on projects/work experience/challenges/case studies/experimental investigations carried out individually and/or in teams	4 h.		4 h.

EVALUATION SYSTEM	W
Reports on the completion of exercises, case studies, computer exercises, simulation exercises, laboratory exercises, term projects, challenges and problems	100%

MAKE-UP MECHANISMS

(No mechanisms)

CH - Class hours: 4 h.
NCH - Non-class hours: 0 h.
TH - Total hours: 4 h.

RGO191 **[!]** ***Contribuir en la estrategia de funcionamiento del equipo priorizando los objetivos comunes, fomentando y valorando la participación de todas las personas y responsabilizándose de las tareas individuales, así como del cumplimiento de plazos.***

LEARNING ACTIVITIES	CH	NCH	TH
Development and writing of records, reports, presentations, audiovisual material, etc. on projects/work experience/challenges/case studies/experimental investigations carried out individually and/or in teams	3 h.		3 h.

EVALUATION SYSTEM	W	MAKE-UP MECHANISMS
Reports on the completion of exercises, case studies, computer exercises, simulation exercises, laboratory exercises, term projects, challenges and problems	100%	*(No mechanisms)*

CH - Class hours: 3 h.
NCH - Non-class hours: 0 h.
TH - Total hours: 3 h.

RGO193 **[!]** ***Redacta una memoria de proyecto clara y concisa utilizando las fuentes de información y estructura de memoria facilitadas, y haciendo un uso correcto, inclusivo y no discriminatorio del lenguaje.***

LEARNING ACTIVITIES	CH	NCH	TH
Development and writing of records, reports, presentations, audiovisual material, etc. on projects/work experience/challenges/case studies/experimental investigations carried out individually and/or in teams	4 h.		4 h.

EVALUATION SYSTEM	W	MAKE-UP MECHANISMS
Reports on the completion of exercises, case studies, computer exercises, simulation exercises, laboratory exercises, term projects, challenges and problems	100%	*(No mechanisms)*

CH - Class hours: 4 h.
NCH - Non-class hours: 0 h.
TH - Total hours: 4 h.

RGO194 **[!]** ***Realiza una presentación oral y defensa del proyecto clara y concisa, haciendo uso correcto, inclusivo y no discriminatorio del lenguaje.***

LEARNING ACTIVITIES	CH	NCH	TH
Development and writing of records, reports, presentations, audiovisual material, etc. on projects/work experience/challenges/case studies/experimental investigations carried out individually and/or in teams	4 h.		4 h.

EVALUATION SYSTEM	W	MAKE-UP MECHANISMS
Reports on the completion of exercises, case studies, computer exercises, simulation exercises, laboratory exercises, term projects, challenges and problems	100%	*(No mechanisms)*

CH - Class hours: 4 h.
NCH - Non-class hours: 0 h.

TH - Total hours: 4 h.

RGO123 **[!]** ***Recoge y analiza los datos, para obtener información útil para la toma de decisiones en entornos variables***

LEARNING ACTIVITIES	CH	NCH	TH
Development and writing of records, reports, presentations, audiovisual material, etc. on projects/work experience/challenges/case studies/experimental investigations carried out individually and/or in teams		20 h.	20 h.
Computer simulation exercises, individually and/or in teams	3 h.	4 h.	7 h.
Presentation by the teacher in the classroom, in participatory classes, of concepts and procedures associated with the subjects	3 h.		3 h.

EVALUATION SYSTEM	W	MAKE-UP MECHANISMS
Reports on the completion of exercises, case studies, computer exercises, simulation exercises, laboratory exercises, term projects, challenges and problems	100%	*(No mechanisms)*

CH - Class hours: 6 h.
NCH - Non-class hours: 24 h.
TH - Total hours: 30 h.

RGO124 **[!]** ***Modeliza y analiza problemas utilizando las principales variables discretas y continuas***

LEARNING ACTIVITIES	CH	NCH	TH
Presentation by the teacher in the classroom, in participatory classes, of concepts and procedures associated with the subjects	45 h.	29 h.	74 h.
Carrying out exercises and solving problems individually and/or in teams	21 h.	10 h.	31 h.

EVALUATION SYSTEM	W	MAKE-UP MECHANISMS
Individual written and/or oral tests or individual coding/programming tests	100%	Individual written and/or oral tests or individual coding/programming tests

CH - Class hours: 66 h.
NCH - Non-class hours: 39 h.
TH - Total hours: 105 h.

CONTENTS

- Descriptive statistics- Probability. Conditional probability. Bayes' theorem- Random variables: discrete and continuous.- Discrete distributions.- Continuous distributions.- Inference: Confidence intervals and contrasting hypotheses.- Direct linear regression

LEARNING RESOURCES AND BIBLIOGRAPHY

Learning resources

Moodle Platform

Bibliography

Probabilidad para ingeniería y ciencias Jay L. Devore. Ed Thomson editores

Probabilidad y estadística. Aplicaciones y métodos Georges C. Canavos Ed Mc Graw Hill

Introducción a la estadística y sus aplicaciones R. Cao Abad, M Francisco, S Naya, M. A. Presedo, M Vazquez, J.A. Vilar, J. M. Vilar Ed Pirámide

Curso y ejercicios de estadística V. Quesada, A. Isidro, L.A. Lopez Ed Alhambra Universidad

Estatistikaren Oinarriak, Ariketak Elena Aguirre Udako Euskal Unibertsitatea

Probabilidad y estadistica para ingeniería y ciencias William Mendenhall, Terry Sincich Prentice-Hall

Probabilidad y estadistica para ingeniería y ciencias William Mendenhall, Terry Sincich Prentice-Hall

Estadistica Práctica con minitab Pere Grima, Lluis Marco, Xabier Tort-Martorell Escuela superior de ingeniería Industrial de Barcelona Universitat Politécnica de Catalunya Prentice-Hall

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