

[GJZ003] PRODUCTION EQUIPMENT AND AUTOMATED SYSTEMS ENGINEERING II

GENERAL INFORMATION

Studies	DEGREE IN MECHATRONICS ENGINEERING		Subject	MECHATRONIC DESIGN
Semester	2	Course	3	Mention / Field of specialisation
Character	COMPULSORY		Language	?
Plan	2017	Modality	Face-to-face	Total hours
Credits	12	Hours/week	16.67	300 class hours + 0 non-class hours = 300 total hours

PROFESSORS

ORUNA OTALORA, ANGEL
ERAÑA LARRAÑAGA, IÑIGO
IZQUIERDO ORTIZ DE LANDALUCE, MIKEL
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AGIRREBENGOA ARAÑA, AMAIA

REQUIRED PREVIOUS KNOWLEDGE

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

SKILLS

VERIFICA SKILLS

SPECIFIC

GJCE15 - Understanding, analysing and assessing situations and mechatronic problems in equipment or production processes and automated systems, identifying possible alternatives, participating in different work teams and generating the appropriate technical documentation, interpreting possible solutions and transmitting information, ideas, problems and solutions to specialised and non-specialised publics.

GENERAL

GJCG01 - To be able to take the initiative in problem solving, decision making, creativity, critical thinking, effective communication and the transfer of knowledge and skills in the field of mechatronics engineering

GJCG02 - To be able to do their job in multilingual, multidisciplinary environments.

GJCG03 - Addressing and optimising activities of assembly, commissioning, assistance and maintenance of facilities, machinery, and industrial mechatronic systems

GJCG04 - Managing technically teams and people in activities of assembly, commissioning, assistance and maintenance of facilities, machinery and industrial systems, through the methodology of administration by projects for the effective execution of planning

GJCG06 - Implement and materialize projects of automation and control of equipment, processes and flexible industrial systems, through the integration of hardware and software in order to optimize the operation of the different units that make up the system to meet the needs of the productive sector

CROSS

GJCTR1 - To be able to do their job in cooperative, participatory environments, with awareness of social responsibility.

BASIC

G_CB2 - To be able to apply knowledge to occupational or professional tasks; have the necessary skills to pose and defend arguments, and to solve problems within their field of study

G_CB4 - To be able to communicate information, ideas, problems and solutions to both expert and lay audiences

LEARNING RESULTS

RG301 They assume responsibilities in the team, organizing and planning the tasks to be developed, dealing with contingencies and encouraging the participation of its members.

LEARNING ACTIVITIES

Practices in real environments

CH

30 h.

NCH

TH

30 h.

EVALUATION SYSTEM

Observation of student participation and attitude in the proposed training activities

W

100%

MAKE-UP MECHANISMS

Observation of student participation and attitude in the proposed training activities

Comments: Continuous assessment. Retake is not foreseen.

CH - Class hours: 30 h.

NCH - Non-class hours: 0 h.

TH - Total hours: 30 h.

RG302 They analyze the variables involved in the problem and propose actions for a stable situation.

LEARNING ACTIVITIES		CH	NCH	TH
Practices in real environments		30 h.		30 h.
EVALUATION SYSTEM		W	MAKE-UP MECHANISMS	
Observation of student participation and attitude in the proposed training activities		100%	Observation of student participation and attitude in the proposed training activities Comments: Continuous assessment. Retake is not foreseen.	
<p>CH - Class hours: 30 h. NCH - Non-class hours: 0 h. TH - Total hours: 30 h.</p>				

RG304 They define the problem, the development of the solution, as well as the conclusions in an effective way, arguing and justifying each of them, making a correct use of the language, in writing.

LEARNING ACTIVITIES		CH	NCH	TH
Practices in real environments		30 h.		30 h.
EVALUATION SYSTEM		W	MAKE-UP MECHANISMS	
Reports of solving exercises, case studies, computer practices, simulation practices and laboratory practices		100%	Reports of solving exercises, case studies, computer practices, simulation practices and laboratory practices Comments: Continuous assessment. Retake is not foreseen.	
<p>CH - Class hours: 30 h. NCH - Non-class hours: 0 h. TH - Total hours: 30 h.</p>				

RG305 They define the problem, the development of the solution, as well as the conclusions in an effective way, arguing and justifying each one of them, and making a correct use of the language, orally.

LEARNING ACTIVITIES		CH	NCH	TH
Practices in real environments		30 h.		30 h.
EVALUATION SYSTEM		W	MAKE-UP MECHANISMS	
Reports of solving exercises, case studies, computer practices, simulation practices and laboratory practices		100%	Reports of solving exercises, case studies, computer practices, simulation practices and laboratory practices Comments: Continuous assessment. Retake is not foreseen.	
<p>CH - Class hours: 30 h. NCH - Non-class hours: 0 h. TH - Total hours: 30 h.</p>				

RGJ325 They analyse situations and select and apply methods, techniques, standards, tools, etc. that are specific to the profession of Mechatronic Engineer in a known industrial context.

LEARNING ACTIVITIES		CH	NCH	TH
Practices in real environments		180 h.		180 h.
EVALUATION SYSTEM		W	MAKE-UP MECHANISMS	
Observation of student participation and attitude in the proposed training activities Comments: Technical and learning capacity demonstrated by the student in the practices developed in the company.		100%	Observation of student participation and attitude in the proposed training activities Comments: Continuous assessment. Retake is not foreseen.	
<p>CH - Class hours: 180 h. NCH - Non-class hours: 0 h. TH - Total hours: 180 h.</p>				

CONTENTS

The contents on which the student will develop their activities will be determined by the type and activity of the company and / or the technical department in which the student is located. The contents will be based on one or more of the following areas:

- Assembly techniques for productive equipment: mechanical elements (transmission parts, guiding parts, sealing parts...).
- Manufacturing processes: forming processes, machining processes, welding...
- Automation of lines, equipment or productive processes.
- Programming of productive equipment, manufacturing processes or automated systems.
- Setting-up of productive equipment or productive processes.
- Measurement, testing and verification of components / subassemblies / mechanical assemblies or parameters on production processes: tools, techniques and elements of measurement / monitoring / testing.
- Diagnosis, verification and fixing of productive equipment or automated systems.
- Design of mechatronic systems that contain both mechanical and electronic parts, with the use of specific software.
- Project management and work methods of the company departments.
- Health & safety.

LEARNING RESOURCES AND BIBLIOGRAPHY

Learning resources	Bibliography
Topic related web quires Technical articles Moodle Platform Material and training resources in the company for the development of the internship Workplace in the company for the development of the internship Support from company and the academic tutors of the internship	<i>(No bibliography)</i>