

[GJR101] MECHATRONIC PROJECT

GENERAL INFORMATION

Studies	DEGREE IN MECHATRONICS ENGINEERING	Subject	?
Semester	1	Course	2
Character	OPTIONAL	Mention / Field of specialisation	
Plan	2020	Modality	Face-to-face
Credits	6	Hours/week	5
		Language	CASTELLANO/EUSKARA
		Total hours	90 class hours + 60 non-class hours = 150 total hours

PROFESSORS

ERAÑA LARRAÑAGA, IÑIGO

REQUIRED PREVIOUS KNOWLEDGE

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

SKILLS

VERIFICA SKILLS

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

CROSS

GJCTR2 - To be able to understand and apply knowledge to problem solving in complex work situations or specialised and professional environments calling for creative and innovative ideas, using self-developed arguments and procedures;

BASIC

G_CB3 - To be capable of gathering and interpreting relevant data (normally within their field of study) in order to make judgements, reflecting on relevant matters of a social, scientific or ethical nature

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

G_CB5 - To have developed learning abilities required to embark on subsequent studies with a high level of autonomy.

LEARNING RESULTS

RG201 They coordinate their work with the other members of the team, contribute in their team to the development of the tasks to be carried out and the creation of a good working climate.

LEARNING ACTIVITIES

	CH	NCH	TH
Carrying out/resolving projects/challenges/cases, etc. to provide solutions to problems in interdisciplinary contexts, real and/or simulated, individually and/or in teams	2 h.	2 h.	4 h.

EVALUATION SYSTEM

	W
Self-assessment	30%
Co-assessment	35%
Observation (technical capacity, attitude and participation)	35%

MAKE-UP MECHANISMS

Technical skills, involvement in the project, finished work, obtained results, handed documentation, presentation and technical defence

Comments: With the project of the second semester

CH - Class hours: 2 h.

NCH - Non-class hours: 2 h.

TH - Total hours: 4 h.

RG202 They make decisions and assess the possible consequences of the selected alternative.

LEARNING ACTIVITIES

	CH	NCH	TH
Carrying out/resolving projects/challenges/cases, etc. to provide solutions to problems in interdisciplinary contexts, real and/or simulated, individually and/or in teams	3 h.	1 h.	4 h.

EVALUATION SYSTEM

	W
Observation (technical capacity, attitude and participation)	100%

MAKE-UP MECHANISMS

Technical skills, involvement in the project, finished work, obtained results, handed documentation, presentation and technical defence

Comments: With the project of the second semester

CH - Class hours: 3 h.

NCH - Non-class hours: 1 h.

TH - Total hours: 4 h.

RG204 They define the problem, the development of the solution, as well as the conclusions in an effective way, making a correct use of the language, in writing.

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		2 h.	2 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%	Technical skills, involvement in the project, finished work, obtained results, handed documentation, presentation and technical defence Comments: Revision and correction of the written report of the semester project		

CH - Class hours: 2 h.

NCH - Non-class hours: 2 h.

TH - Total hours: 4 h.

RG205 They define the problem, the development of the solution, as well as the conclusions in an effective way, making a correct use of the language, orally.

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		2 h.	1 h.	3 h.
EVALUATION SYSTEM	W	MAKE-UP MECHANISMS		
Presentation and defence of exercises, case studies, computer practical work, simulation practical work, laboratory practical work, term projects, end of degree project, master's thesis, challenges and problems	100%	Technical skills, involvement in the project, finished work, obtained results, handed documentation, presentation and technical defence Comments: With the oral presentation of the project of the second semester		

CH - Class hours: 2 h.

NCH - Non-class hours: 1 h.

TH - Total hours: 3 h.

RGJ251 They apply Mechatronic Engineering concepts and tools in a practical environment

LEARNING ACTIVITIES		CH	NCH	TH
Carrying out/resolving projects/challenges/cases, etc. to provide solutions to problems in interdisciplinary contexts, real and/or simulated, individually and/or in teams		70 h.	49 h.	119 h.
Presentation by the teacher in the classroom, in participatory classes, of concepts and procedures associated with the subjects		11 h.	5 h.	16 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	40%	(No mechanisms) Comments: Exercises and documentation will be made-up by on-going evaluation.		

Observation (technical capacity, attitude and participation) 60%

CH - Class hours: 81 h.
NCH - Non-class hours: 54 h.
TH - Total hours: 135 h.

CONTENTS

1. POPBL METHODOLOGY: DEFINITION OF OBJECTIVES AND PLANNING
2. TEAMWORK
3. MANAGEMENT OF THE PHASES OF A PROJECT
4. ADVANCED INFORMATION SEARCH
5. ICT TOOLS

LEARNING RESOURCES AND BIBLIOGRAPHY

Learning resources

Presentations by external Lecturers
Class presentations
Topic related web quires
Moodle Platform

Bibliography

http://katalogoa.mondragon.edu/janium-bin/janium_login_opac_re_Ink.pl?grupo=MECATRONICA21&ejecuta=45&_ST