[GCB302] PHYSICS II

GENERAL INFORMATION

Studies	DEGREE IN ENGINEERING IN ECO-TECHNOLOGY IN INDUSTRIAL PROCESS			**Subject**	PHYSICS
Semester	2	**Course**	1	**Mention / Field of specialisation**	
Character	BASIC TRAINING				
Plan	2022	**Modality**	Face-to-face	**Language**	EUSKARA
Credits	6	**Hours/week**	4.28	**Total hours**	77 class hours + 73 non-class hours = **150 total hours**

2030 AGENDA GOALS

PROFESSORS

BERISTAIN MUGICA, MAIALEN

REQUIRED PREVIOUS KNOWLEDGE

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

LEARNING RESULTS

LEARNING RESULTS	KC	SK	AB	ECTS
G-RA09 - To understand and master the basic concepts of the general laws of fields and waves; and electromagnetism and its application to solve engineering problems		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		0,36
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		0,24
			Total:	6

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

SECONDARY LEARNING RESULTS

2RGC191 **(2 sem)**

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
Self-assessment	50%
Co-assessment	50%

MAKE-UP MECHANISMS

(No mechanisms)

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

2RGC193 **(2 sem)**

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

2RGC194 **(2 sem)**

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
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%	*(No mechanisms)*

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

2RGC190 **(2 sem)**

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

RGC117 **[!]** ***Identifica, examina y calcula la oscilación y los fenómenos de onda***

LEARNING ACTIVITIES	CH	NCH	TH
Conducting tests, giving presentations, presenting defences, taking examinations and/or doing checkpoints	3 h.	6 h.	9 h.
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.	3 h.
Presentation by the teacher in the classroom, in participatory classes, of concepts and procedures associated with the subjects	6 h.		6 h.
Carrying out exercises and solving problems individually and/or in teams	2 h.	5 h.	7 h.
Practical work in workshops and/or laboratories, individually and/or in teams	2 h.		2 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	10%	Individual written and/or oral tests or individual coding/programming tests
Individual written and/or oral tests or individual coding/programming tests	80%	
Self-assessment	10%	

CH - Class hours: 13 h.
NCH - Non-class hours: 14 h.
TH - Total hours: 27 h.

RGC118 **[!]** ***Resuelve los problemas y las operaciones en el campo del electromagnetismo, relacionando correctamente las magnitudes físicas implicadas***

LEARNING ACTIVITIES	CH	NCH	TH
Conducting tests, giving presentations, presenting defences, taking examinations and/or doing checkpoints	4 h.	9 h.	13 h.
Carrying out/resolving projects/challenges/cases, etc. to provide solutions to problems in interdisciplinary contexts, real and/or simulated, individually and/or in teams		6 h.	6 h.
Presentation by the teacher in the classroom, in participatory classes, of concepts and procedures associated with the subjects	18 h.		18 h.
Carrying out exercises and solving problems individually and/or in teams	8 h.	9 h.	17 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	10%	Individual written and/or oral tests or individual coding/programming tests
Individual written and/or oral tests or individual coding/programming tests	80%	
Self-assessment	10%	

CH - Class hours: 30 h.
NCH - Non-class hours: 24 h.
TH - Total hours: 54 h.

2RGC192 **(2 sem)**

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.	1 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: 2 h.
NCH - Non-class hours: 1 h.
TH - Total hours: 3 h.

RGC119 **[!]** ***Analiza y resuelve los circuitos de corriente directa y la corriente alterna***

LEARNING ACTIVITIES	CH	NCH	TH

Conducting tests, giving presentations, presenting defences, taking examinations and/or doing checkpoints	3 h.	6 h.	9 h.
Carrying out/resolving projects/challenges/cases, etc. to provide solutions to problems in interdisciplinary contexts, real and/or simulated, individually and/or in teams		6 h.	6 h.
Presentation by the teacher in the classroom, in participatory classes, of concepts and procedures associated with the subjects	16 h.		16 h.
Carrying out exercises and solving problems individually and/or in teams	7 h.	10 h.	17 h.
Practical work in workshops and/or laboratories, individually and/or in teams	6 h.		6 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	10%	Individual written and/or oral tests or individual coding/programming tests
Individual written and/or oral tests or individual coding/programming tests	80%	
Self-assessment	10%	

CH - Class hours: 32 h.
NCH - Non-class hours: 22 h.
TH - Total hours: 54 h.

CONTENTS

1. Oscillations and waves2. Electrostatics. Electric charge3. Direct current circuits 4. Electromagnetism 5. Alternating current circuitsPRACTICES1. Assembly and measurement of direct current circuits.2. Assembly and measurement of variable current circuits.

LEARNING RESOURCES AND BIBLIOGRAPHY

Learning resources	Bibliography
[!] *Plataforma Moodle*	https://katalogoa.mondragon.edu/janium-bin/sumario.pl?Id=20210923
[!] *Apuntes de la asignatura*	
[!] *Presentaciones en clase*	
[!] *Realización de prácticas en laboratorio*	