

[GCL301] FLUID MECHANICS

GENERAL INFORMATION

Studies	DEGREE IN ENGINEERING IN ECO-TECHNOLOGY IN INDUSTRIAL PROCESS	Subject	THERMAL AND FLUID ENGINEERING
Semester	2	Course	2
Character	COMPULSORY	Mention / Field of specialisation	
Plan	2022	Modality	Face-to-face
Credits	4,5	Hours/week	2.44
		Language	EUSKARA
		Total hours	44 class hours + 68.5 non-class hours = <u>112.5 total hours</u>

PROFESSORS

FERNANDEZ ARROIABE TXAPARTEGI, PERU

REQUIRED PREVIOUS KNOWLEDGE

Subjects	Knowledge
MATHEMATICAL FOUNDATIONS II	(No previous knowledge required)
MATHEMATICS I	
PHYSICS I	

LEARNING RESULTS

LEARNING RESULTS	KC	SK	AB	ECTS
GCR206 - To apply the fundamental principles of fluid mechanics to the analysis of relevant problems in the field of engineering	x			4,02
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			0,24
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: 4,5				

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

SECONDARY LEARNING RESULTS

RGC290 [!] *Proponer los objetivos y la planificación de un proyecto que le permita adquirir y/o reforzar los conocimientos de tecnologías propias de su especialidad,- que en ocasiones llegan a la vanguardia del conocimiento- y definir una estrategia de aprendiz*

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.	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.			

RGC291 [!] *Establecer las responsabilidades de los miembros del equipo utilizando técnicas adecuadas para fomentar la eficiencia del equipo para el desarrollo del proyecto en los plazos establecidos (compartir recursos, aportar ideas, habilidades comunicativas*

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		3 h.	3 h.

individually and/or in teams

EVALUATION SYSTEM

W

Reports on the completion of exercises, case studies, computer exercises, simulation exercises, laboratory exercises, term projects, challenges and problems

MAKE-UP MECHANISMS

(No mechanisms)

CH - Class hours: 0 h.

NCH - Non-class hours: 3 h.

TH - Total hours: 3 h.

RGC293 [!] Redacta y estructura correctamente la memoria del proyecto, haciendo un uso correcto, inclusivo y no discriminatorio del lenguaje. Para ello, busca y hace uso de las fuentes de información adecuadas.

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

Reports on the completion of exercises, case studies, computer exercises, simulation exercises, laboratory exercises, term projects, challenges and problems

MAKE-UP MECHANISMS

(No mechanisms)

CH - Class hours: 0 h.

NCH - Non-class hours: 3 h.

TH - Total hours: 3 h.

RGC294 [!] Realiza una presentación oral del proyecto con argumentos elaborados por sí mismos 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

3 h.

3 h.

EVALUATION SYSTEM

W

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

MAKE-UP MECHANISMS

(No mechanisms)

CH - Class hours: 0 h.

NCH - Non-class hours: 3 h.

TH - Total hours: 3 h.

RGC211 [!] Describir las propiedades de fluidos compresibles e incompresibles e identificar la influencia de estos en el rendimiento de los componentes de los sistemas fluidicos industriales

LEARNING ACTIVITIES

CH

NCH

TH

Personal study and flexible development of concepts and subjects using active dynamics, to foster more meaningful learning

5 h.

5 h.

Conducting tests, giving presentations, presenting defences, taking examinations and/or doing checkpoints

1 h.

1 h.

Presentation by the teacher in the classroom, in participatory classes, of concepts and

8 h.

8 h.

procedures associated with the subjects

Carrying out exercises and solving problems individually and/or in teams

2 h.

4 h.

6 h.

EVALUATION SYSTEM

w

MAKE-UP MECHANISMS

Individual written and/or oral tests or individual coding/programming tests

100%

(No mechanisms)

CH - Class hours: 11 h.

NCH - Non-class hours: 9 h.

TH - Total hours: 20 h.

RGC212 [!] *Conocer los distintos métodos de análisis de la estática de fluidos y aplicar los conceptos básicos para identificar el comportamiento hidrostático*

LEARNING ACTIVITIES

CH

NCH

TH

Personal study and flexible development of concepts and subjects using active dynamics, to foster more meaningful learning

5 h.

Conducting tests, giving presentations, presenting defences, taking examinations and/or doing checkpoints

2 h.

2 h.

Presentation by the teacher in the classroom, in participatory classes, of concepts and procedures associated with the subjects

9 h.

9 h.

Carrying out exercises and solving problems individually and/or in teams

4 h.

5,5 h.

9,5 h.

EVALUATION SYSTEM

w

MAKE-UP MECHANISMS

Individual written and/or oral tests or individual coding/programming tests

100%

(No mechanisms)

CH - Class hours: 15 h.

NCH - Non-class hours: 10,5 h.

TH - Total hours: 25,5 h.

RGC213 [!] *Conocer los distintos métodos de análisis de la dinámica de fluidos y aplicar los conceptos básicos y ecuaciones principales para analizar los componentes de los sistemas fluidicos industriales y optimizar su rendimiento*

LEARNING ACTIVITIES

CH

NCH

TH

Personal study and flexible development of concepts and subjects using active dynamics, to foster more meaningful learning

8 h.

Conducting tests, giving presentations, presenting defences, taking examinations and/or doing checkpoints

2 h.

2 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

22,5 h.

22,5 h.

Presentation by the teacher in the classroom, in participatory classes, of concepts and procedures associated with the subjects

12 h.

12 h.

Carrying out exercises and solving problems individually and/or in teams

4 h.

6,5 h.

10,5 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

67%

(No mechanisms)

Individual written and/or oral tests or individual coding/programming tests

33%

CH - Class hours: 18 h.

NCH - Non-class hours: 37 h.

TH - Total hours: 55 h.

CONTENTS

LEARNING RESOURCES AND BIBLIOGRAPHY

Learning resources	Bibliography
Slides of the subject Moodle Platform Video projections Lab practical training	http://katalogoa.mondragon.edu/janum-bin/janum_login_opac_re_ink.pl?grupo=EKOTEKNOLOGIA22&ejecuta=55&_ST