

[GBE204] GENERAL PATHOLOGY

GENERAL INFORMATION

Studies	DEGREE IN BIOMEDICAL ENGINEERING		Subject	?
Semester	2	Course	3	Mention / Field of specialisation
Character	COMPULSORY		Language	EUSKARA
Plan	2022	Modality	Face-to-face	Total hours
Credits	6	Hours/week	4.97	89.4 class hours + 60.6 non-class hours = 150 total hours

PROFESSORS

AZPI-MENDIZABAL, LEIRE

REQUIRED PREVIOUS KNOWLEDGE

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

LEARNING RESULTS

LEARNING RESULTS	KC	SK	AB	ECTS
GBR306 - To apply knowledge about the bases of different pathologies to problems in the field of Biomedical Engineering	x	x		5,08
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		0,44
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		0,48
Total:				6

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

SECONDARY LEARNING RESULTS

RGB390 [!] *Definir y gestionar los objetivos y la planificación de un proyecto que le permita adquirir y/o reforzar los conocimientos de tecnologías específicas de su especialidad,- que en ocasiones llegan a la vanguardia del conocimiento- y definir una estrate*

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	2,5 h.	1,5 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%	Observation (technical capacity, attitude and participation)	

CH - Class hours: 2,5 h.

NCH - Non-class hours: 1,5 h.

TH - Total hours: 4 h.

RGB391 [!] *Coordinar el equipo de trabajo, estimulando la cohesión y buen clima para lograr la integración de todas las personas y su contribución para alcanzar un rendimiento apropiado, tanto a nivel individual como grupal, para el desarrollo del proyecto en*

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	2,5 h.	1,5 h.	4 h.
EVALUATION SYSTEM	W	MAKE-UP MECHANISMS	
Self-assessment	25%	(No mechanisms)	
Co-assessment	25%		

Observation (technical capacity, attitude and participation) 50%

CH - Class hours: 2,5 h.

NCH - Non-class hours: 1,5 h.

TH - Total hours: 4 h.

RGB392 [!] *Identificar y argumentar de forma precisa los ODS en los que incide el proyecto realizado, aportando posibles acciones para la mejora.*

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	1,9 h.	1,1 h.	3 h.

EVALUATION SYSTEM

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

W

100%

MAKE-UP MECHANISMS

Observation (technical capacity, attitude and participation)

CH - Class hours: 1,9 h.

NCH - Non-class hours: 1,1 h.

TH - Total hours: 3 h.

RGB393 [!] *Elabora la memoria del proyecto, aportando argumentos elaborados y haciendo un uso correcto, inclusivo y no discriminatorio del lenguaje.*

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	3,75 h.	2,25 h.	6 h.

EVALUATION SYSTEM

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

W

100%

MAKE-UP MECHANISMS

Observation (technical capacity, attitude and participation)

CH - Class hours: 3,75 h.

NCH - Non-class hours: 2,25 h.

TH - Total hours: 6 h.

RGB394 [!] *Realiza una presentación oral del proyecto, justificando las soluciones propuestas con argumentos elaborados y precisos, y haciendo un uso correcto, inclusivo y no discriminatorio del lenguaje.*

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	3,75 h.	2,25 h.	6 h.

EVALUATION SYSTEM

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

W

100%

MAKE-UP MECHANISMS

Observation (technical capacity, attitude and participation)

CH - Class hours: 3,75 h.

NCH - Non-class hours: 2,25 h.

TH - Total hours: 6 h.

RGB315 [!] *Conoce y comprende las causas y mecanismos de la lesión y muerte celular*

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	8 h.	8 h.	16 h.
Conducting tests, giving presentations, presenting defences, taking examinations and/or doing checkpoints		7 h.	7 h.
Presentation by the teacher in the classroom, in participatory classes, of concepts and procedures associated with the subjects	15 h.		15 h.
Tutoring sessions and monitoring of training activities		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	30%	Individual written and/or oral tests or individual coding/programming tests	
Individual written and/or oral tests or individual coding/programming tests	70%		

CH - Class hours: 23 h.
NCH - Non-class hours: 17 h.
TH - Total hours: 40 h.

RGB316 [!] *Conoce las diferentes patologías y trastornos, y es capaz de clasificarlos en base a diferentes parámetros*

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.	8 h.	28 h.
Conducting tests, giving presentations, presenting defences, taking examinations and/or doing checkpoints		7 h.	7 h.
Presentation by the teacher in the classroom, in participatory classes, of concepts and procedures associated with the subjects	32 h.	10 h.	42 h.
Tutoring sessions and monitoring of training activities		10 h.	10 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	30%	Individual written and/or oral tests or individual coding/programming tests	
Individual written and/or oral tests or individual coding/programming tests	70%		

CH - Class hours: 52 h.
NCH - Non-class hours: 35 h.
TH - Total hours: 87 h.

CONTENTS

SECTION 1: Basics

- The concept of disease
- Agents that cause the disease
- Biology and cell (injury and cell death)
- Molecular pathology

SECTION 2: Pathophysiology

- Pathophysiology of fever
- Pathophysiology of inflammation
- Pathophysiology of edema

SECTION 3: Diseases

- Heart disease
- Digestive disorders
- Diseases of the nervous system
- Complex diseases

SECTION 4: Tumor Pathology

- Basic concepts
- Molecular basis
- Angiogenesis and metastasis
- Hereditary cancer

LEARNING RESOURCES AND BIBLIOGRAPHY

Learning resources

Moodle Platform
Subject notes
Class presentations

Bibliography

Sisinio de Castro. Manual de Patología General. Pérez Arellano, J.L. Ed. Elsevier Masson, 7ª edición, 2013.
Robbins y Cotran. Patología estructural y funcional. Kumar, Abbas & Aster. Ed. Elsevier Masson, 9ª ed. 2017.