[GBL201] MEDICAL INSTRUMENTATION, PROSTHESES AND IMPLANTS

GENERAL INFORMATION

Studies	DEGREE IN BIOMEDICAL ENGINEERING			**Subject**	MEDICAL ELECTRONICS
Semester	1	**Course**	2	**Mention / Field of specialisation**	
Character	COMPULSORY				
Plan	2022	**Modality**	Face-to-face	**Language**	CASTELLANO
Credits	3	**Hours/week**	2.39	**Total hours**	43.1 class hours + 31.9 non-class hours = **75 total hours**

PROFESSORS

ARISTIMUÑO OSORO, PATXI XABIER
AZPI-MIRANDA SAROBE, IÑIGO

REQUIRED PREVIOUS KNOWLEDGE

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

LEARNING RESULTS

LEARNING RESULTS	KC	SK	AB	ECTS
GBR204 - To identify the medical instruments and implants used in the healthcare field	x			2,6
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		0,16
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:	3

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

SECONDARY LEARNING RESULTS

RGB290 **[!]** ***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 estrategía de aprendiz***

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	1,25 h.	,75 h.	2 h.

EVALUATION SYSTEM	W
Reports on the completion of exercises, case studies, computer exercises, simulation exercises, laboratory exercises, term projects, challenges and problems	100%

MAKE-UP MECHANISMS

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

Observation (technical capacity, attitude and participation)

CH - Class hours: 1,25 h.
NCH - Non-class hours: ,75 h.
TH - Total hours: 2 h.

RGB291 **[!]** ***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 individually and/or in teams	1,25 h.	,75 h.	2 h.

EVALUATION SYSTEM	W	MAKE-UP MECHANISMS
Self-assessment	25%	Observation (technical capacity, attitude and participation)
Co-assessment	25%	
Observation (technical capacity, attitude and participation)	50%	

CH - Class hours: 1,25 h.
NCH - Non-class hours: ,75 h.
TH - Total hours: 2 h.

RGB293 **[!]** ***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	1,8 h.	1,2 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%	Reports on the completion of exercises, case studies, computer exercises, simulation exercises, laboratory exercises, term projects, challenges and problems Observation (technical capacity, attitude and participation)

CH - Class hours: 1,8 h.
NCH - Non-class hours: 1,2 h.
TH - Total hours: 3 h.

RGB294 **[!]** ***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	1,8 h.	1,2 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%	Observation (technical capacity, attitude and participation)

CH - Class hours: 1,8 h.
NCH - Non-class hours: 1,2 h.
TH - Total hours: 3 h.

RGB207 **[!]** ***Clasifica las prótesis e implantes según la función que sustituyen y define las caracteristicas funcionales de las protesis e implantes***

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	4 h.	2 h.	6 h.
Personal study and flexible development of concepts and subjects using active dynamics, to foster more meaningful learning		9 h.	9 h.
Presentation by the teacher in the classroom, in participatory classes, of concepts and	14 h.		14 h.

procedures associated with the subjects			
Carrying out visits and/or learning trips to other university centres, laboratories, companies and/or thermal power plants	1 h.	5 h.	6 h.

EVALUATION SYSTEM	W	MAKE-UP MECHANISMS
Individual written and/or oral tests or individual coding/programming tests	100%	Individual written and/or oral tests or individual coding/programming tests

CH - Class hours: 19 h.
NCH - Non-class hours: 16 h.
TH - Total hours: 35 h.

RGB208 **[!]** ***Identifica y clasifica el instrumental médico en función de su aplicación y conoce el funcionamiento básico del instrumental médico***

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	4 h.	5 h.	9 h.
Personal study and flexible development of concepts and subjects using active dynamics, to foster more meaningful learning		5 h.	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	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	20%	Individual written and/or oral tests or individual coding/programming tests
Individual written and/or oral tests or individual coding/programming tests	80%	

CH - Class hours: 18 h.
NCH - Non-class hours: 12 h.
TH - Total hours: 30 h.

CONTENTS

1. Introduction.2. Hygiene, Asepsis, Antisepsis.3. Anaesthesia.4. Classification of instruments: 4.1 Scissors. 4.2 Scalpel/Electrosurgical units. 4.3 Retracting/Dilating. 4.4 Suturing. 4.5 Periosteum.5. Laparoscopy.6. interventional radiology7. Prosthesis.8. Implants.9. Orthotics.

LEARNING RESOURCES AND BIBLIOGRAPHY

Learning resources

Slides of the subject
Presentations by external Lecturers
Class presentations
Labs
Moodle Platform

Bibliography

Instrumentacion quirurgica. principios y practica. Editorial Medica Panamericana. ISBN 978-950-06-0572-4