

[GBL202] MEDICAL TECHNOLOGICAL EQUIPMENT

GENERAL INFORMATION

Studies	DEGREE IN BIOMEDICAL ENGINEERING	Subject	?
Semester	1	Course	3
Character	COMPULSORY	Mention / Field of specialisation	
Plan	2022	Modality	Face-to-face
Credits	4,5	Language	ENGLISH
		Total hours	70.35 class hours + 42.15 non-class hours = 112.5 total hours

PROFESSORS

SAENZ DE ARGANDOÑA FERNANDEZ DE GOROSTIZA, ENEKO
TERMENON CONDE, MAITE

REQUIRED PREVIOUS KNOWLEDGE

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

LEARNING RESULTS

LEARNING RESULTS	KC	SK	AB	ECTS
GBR301 - To analyze the operation and specific characteristics of different medical equipment for diagnosis and treatment			x	3,78
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		0,4
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		0,32
Total:				4,5

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

CONTENTS

VISION BASED DIAGNOSTIC TECHNOLOGIES

- X RAY
- CAT
- MRI
- ULTRASOUND
- PET
- PET-CT
- SWALLOWABLE MEDICAL DEVICES
- ENDOSCOPY (in surgery)

ANALYTICAL BASED DIAGNOSTIC TECHNOLOGIES

- BIOCHEMISTRY
- HEMATOLOGY
- MICROBIOLOGY

OTHER DIAGNOSTIC TECHNOLOGIES

- ELECTROCARDIOGRAPH (ECG)
- ELECTROENCEPHALOGRAPH (EEG)

- ELECTROMYOGRAPHY (EMG)

- CAPNOGRAPH
- BLOOD PRESSURE
- PULSE RESPIRATION RATE
- TEMPERATURE
- PULSE OXIMETRY
- BLOOD GLUCOSE LEVEL

SURGERY

- ELECTROSURGERY
- ENDOSCOPY
- ROBOTIC SURGERY
- ANESTHESIA UNITS
- HEART-LUNG MACHINE
- LASER IN SURGERY

MEDICAL TREATMENT

- RADIOTHERAPY/RADIATION THERAPY (LINAC)
- BRACHYTHERAPY
- CHEMOTHERAPY
- HEMODIALYSIS
- HIGH INTENSITY FOCUSED ULTRASOUND (HIFU)
- THERAPEUTIC ULTRASOUND (LITHOTRIPSY)

INTENSIVE CARE & LIFE SUPPORT

- INTENSIVE THERAPY UNITS
- DEFIBRILLATOR
- PACEMAKER
- INFUSION/PERFUSION PUMP
- CARDIOPULMONARY RESUSCITATION TROLLEY
- INCUBATORS

REHABILITATION and ASSISTIVE TECHNOLOGIES

- ACTIVE/PASSIVE EXERCISER
- STANDING AND BALANCING EQUIPMENT
- BALANCE/EQUILIBRIUM REHABILITATION
- WALKING REHABILITATION
- STATIC AND DYNAMIC POSTURAL CONTROL TRAINER

- ISOKINETIC SYSTEM

- UPPER EXTREMITY REHABILITATION

LEARNING RESOURCES AND BIBLIOGRAPHY

Learning resources	Bibliography
Subject notes	(No bibliography)
Technical articles	
Presentations by external Lecturers	
Topic related web quires	
Moodle Platform	
Class presentations	
Slides of the subject	