

[MMA102] TISSUE ENGINEERING AND REGENERATIVE MEDICINE

GENERAL INFORMATION

Studies	MASTER'S DEGREE IN BIOMEDICAL TECHNOLOGIES		Subject	?
Semester	1	Course	1	Mention / Field of specialisation
Character	COMPULSORY		Language	ENGLISH
Plan	2023	Modality	Face-to-face	Total hours 70.6 class hours + 41.9 non-class hours = 112.5 total hours
Credits	4,5	Hours/week	3.92	

PROFESSORS

ZABALA EGUREN, ALAITZ
 AGINAGALDE UNANUE, MAIALEN
 BURUAGA LAMARAIN, LOREA

REQUIRED PREVIOUS KNOWLEDGE

Subjects	Knowledge
FUNDAMENTALS OF MEDICINE AND BIOMATERIALS	(No previous knowledge required)

LEARNING RESULTS

LEARNING RESULTS	KC	SK	AB	ECTS
MMRA18 - Understanding the techniques and uses of tissue engineering and regenerative medicine in accordance with the professional codes and ethics of engineering			x	3,16
MMRA26 - To apply the knowledge acquired and your problem-solving skills in new, little-known or changing environments within broader (or multidisciplinary) contexts related to your area of study		x		1,08
MMRA28 - To communicate your conclusions and the knowledge and ultimate reasons that support them to specialized and non-specialized audiences in a clear and unambiguous way		x		0,26
Total:				4,5

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

CONTENTS

TISSUE ENGINEERING

- L1 Tissue Engineering: Introduction
- L2 Scaffolds: Introduction
- L3 Biomaterials for tissue engineering
- L4 Scaffolds: Fabrication techniques
- L5 Ethical issues
- L6 Case studies

REGENERATIVE MEDICINE

- 1.GENERAL CONCEPTS
 - 1.1. Introduction to stem cells

1.2. Cell types

• Therapeutic clonation

• Cellular plasticity

1.3. Tissue sources of stem cells

2. CELLULAR THERAPY

LEARNING RESOURCES AND BIBLIOGRAPHY

Learning resources	Bibliography
Subject notes	https://ebookcentral.proquest.com/lib/mondragon/detail.action?docID=428772
Technical articles	
Video projections	https://www.sciencedirect.com/book/9780123983589/principles-of-tissue-engineering