



ADVANCED CELLULAR BIOLOGY

Enrollment year	2021/2022
Academic year	2021/2022
Regulations	DM270
Academic discipline	BIO/06 (COMPARATIVE ANATOMY AND CYTOLOGY)
Department	DEPARTMENT OF BIOLOGY AND BIOTECHNOLOGY "LAZZARO SPALLANZANI"
Course	EXPERIMENTAL AND APPLIED BIOLOGY
Curriculum	Scienze biomediche molecolari
Year of study	1°
Period	2nd semester (01/03/2022 - 14/06/2022)
ECTS	6
Lesson hours	48 lesson hours
Language	Italian
Activity type	WRITTEN TEST
Teacher	REBUZZINI PAOLA (titolare) - 6 ECTS
Prerequisites	Knowledge of basic cell biology
Learning outcomes	The main objective of this course is to give students the knowledge to understand those aspects that regulate cell interactions, intracellular and intercellular exchanges. Also, advanced cell culture techniques will be presented and discussed.
Course contents	The course will discuss many aspects concerning the advanced cell biology, such as the nuclear structure, the evolution of the plasmatic membrane models, the intra- and extra-cellular vesicles and the component of the extracellular matrix. Also, the course will discuss the methods to obtain an organoid, introducing the advanced cell culture 3D techniques for its obtaining.
Teaching methods	Oral lessons. Before each new lesson, the teacher will first summarise

	then check whether the previous topics have been well understood through an interactive discussion with the students.
Reccomended or required readings	Molecole, cellule e organismi di E. Ginelli, M. Malcovati. EdiSES Biologia molecolare della cellula di Bruce Alberts, Alexander Johnson, Julian Lewis, David Morgan, Martin Raff, Keith Roberts, Peter Walter. Zanichelli In addition scientific papers.
Assessment methods	Oral exam
Further information	No other content
Sustainable development goals - Agenda 2030	The goals