UNIVERSITÀ DI PAVIA

Anno Accademico 2021/2022

CYTOLOGY AND HISTOLOGY (SURNAMES A-K)

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	BIOLOGICAL SCIENCES
Curriculum	PERCORSO COMUNE
Year of study	1°
Period	(01/10/2021 - 14/01/2022)
ECTS	9
Lesson hours	76 lesson hours
Language	Italian
Activity type	WRITTEN AND ORAL TEST
Teacher	BIGGIOGERA MARCO - 6 ECTS BOTTONE MARIA GRAZIA - 3 ECTS
Prerequisites	Possess sufficient basic knowledge on cell biology and histology
Learning outcomes	The student will assimilate the bases of the biomolecular processes of the cell, and will understand the integreation of the cell in a higher complex as a tissue. This will give the basis for the further courses of Biochemistry, Anatomy, Physiology.
Course contents	The cell, as the structural and functional unit of living organisms. Methods for studying cells and tissues: light and electron microscopy techniques; cytochemical, biochemical and molecular methods; cell cultures. Prokaryotic cells: their structure, size, cell division mechanisms. Eukaryotic cells: the structure and function of organelles in animal and plant cells. Cell cycle in eukaryotes: cell division in somatic and germinal cells. Structure and organization of the genetic material. Basic

	concepts on genetic transmission and evolution in cells, individuals and populations. Proliferation, differentiation and death of cell populations in animal tissues. Cell interactions during differentiation and in the tissues. Microscopic anatomy, histology and cell ultrastructure of animal tissues. The course includes a practical part in which the students will individually examine histological sections at light microscopy.
Teaching methods	lectures and seminars and exercises under the microscope
Reccomended or required readings	Testi utilizzabili per la preparazione dell'esame / The following books may be used to prepare for the exam: - Bottone MG, Biggiogera M “Citologia e Istologia”. Utet Università - Colombo e Olmo (a cura di) Biologia “Cellula e Tessuti” Edi-Ermes, Milano - Zaccheo e Pestarino (a cura di) Citologia, Istologia e Anatomia microscopica. Pearson, Milano-Torino - Gartner e Hiatt: "Istologia" EdiSES, Napoli - Junqueira "Compendio di istologia", Piccin, Padova - Adamo et al.: "Istologia di Monesi", Piccin, Padova - Purves et al.: "Biologia: La cellula" Zanichelli, Bologna - Solomon et al.: "La cellula", EdiSES, Napoli - Taiz e Zeiger: “Fisiologia vegetale", 2a edizione, Piccin, Padova - Pupillo et al.: “Biologia vegetale”, Zanichelli, Bologna Atlanti - Ross et al.: "Atlante di Istologia e Anatomia microscopica", Casa Ed. Ambrosiana, MI - Wheater et al.: "Istologia ed anatomia microscopica", Elsevier S.r.l., MI - Krstic "I tessuti dell'uomo e dei mammiferi", Masson, MI Testi di consultazione generale - Alberts et al. "Biologia molecolare della cellula,", Zanichelli, Bologna - Wolfe "Biologia molecolare e cellulare" EdiSES, Napolitabili per la preparazione dell’esame
Assessment methods	Oral exam on cell and histology.
Further information	=
Sustainable development goals - Agenda 2030	$lbl_legenda_sviluppo_sostenibile