



ANIMAL BIOLOGY - MOD.

Enrollment year	2020/2021
Academic year	2020/2021
Regulations	DM270
Academic discipline	BIO/06 (COMPARATIVE ANATOMY AND CYTOLOGY)
Department	DEPARTMENT OF EARTH AND ENVIRONMENTAL SCIENCES
Course	NATURAL SCIENCES AND TECHNOLOGIES
Curriculum	PERCORSO COMUNE
Year of study	1°
Period	1st semester (28/09/2020 - 23/12/2020)
ECTS	6
Lesson hours	52 lesson hours
Language	Italian
Activity type	WRITTEN TEST
Teacher	MERICO VALERIA (titolare) - 6 ECTS
Prerequisites	Basic knowledge of cell biology (general characteristics of animal cell organelles) and biochemistry (general characteristics of the structure and transformations of proteins, nucleic acids, carbohydrates and lipids)
Learning outcomes	To stimulate the study of the cell substructures from morphological, functional and molecular prospective with constant recall of the chemical processes involved.
Course contents	Biological macromolecules: proteins, nucleic acids, carbohydrates, lipids. Role of covalent and non-covalent bonds for macromolecule structure. Structure and function of cellular structures: plasma membrane, endomembrane system (rough and smooth endoplasmic reticulum, ribosomes, Golgi apparatus, endocytosis and exocytosis, lysosomes). Anaerobic and aerobic metabolism: glycolysis, mitochondria, peroxisomes. Cytoskeleton and cell motility (microfilaments, microtubules, intermediate filaments). Eukaryotic cell nucleus (nuclear

	envelope, nuclear lamina, nuclear pores, chromatin, nucleolus). Cell reproduction (mitosis, meiosis). Animal tissues
Teaching methods	Lectures carried out through ppt presentations and practical exercises aimed at acquiring basic skills in the use of the optical microscope and the observation of histological and cellular preparations. The PDFs of the slides will be uploaded to kiro (https://idcd.unipv.it/kiro3/) and available to students
Reccomended or required readings	Colombo e Olmo: BIOLOGIA -CELLULA E TESSUTI. EdiErmes
Assessment methods	<p>The exam will be written. The questions include the full program topics and are organized as followed:</p> <ul style="list-style-type: none"> - three true or false questions (maximum score 2 points/each); - three short answer questions (maximum length of answer: 5 lines) and maximum score: 2 points/each; - two open questions (maximum length of answer: 15 lines). Maximum score: 5 points/each; - one open question (maximum length of answer: 30 lines). Maximum score: 10 points/each. <p>The exam will be passed with a score equal or greater than 18/30. The maximum score is 30/30 cum laude (which will be assigned when the score is greater than 30).</p> <p>The teacher reserves to carry out in itinere tests that are open only to 1st year students (these tests are not mandatory). If they are passed (minimum score 18/30), the topics covered during these tests will no longer be examined in the final test. In this case the final score will be given by the average of the grade achieved in the ongoing tests and the one obtained in the final test.</p>
Further information	none
Sustainable development goals - Agenda 2030	\$lbl_legenda_sviluppo_sostenibile