



ENVIRONMENTAL PHYSIOLOGY	
Enrollment year	2021/2022
Academic year	2021/2022
Regulations	DM270
Academic discipline	BIO/09 (PHYSIOLOGY)
Department	DEPARTMENT OF BIOLOGY AND BIOTECHNOLOGY "LAZZARO SPALLANZANI"
Course	EXPERIMENTAL AND APPLIED BIOLOGY
Curriculum	Biologia ambientale e biodiversità
Year of study	1°
Period	1st semester (01/10/2021 - 14/01/2022)
ECTS	6
Lesson hours	48 lesson hours
Language	Italian
Activity type	ORAL TEST
Teacher	TANZI FRANCO (titolare) - 6 ECTS
Prerequisites	Basic knowledge of biology and general physiology
Learning outcomes	To get a large knowledge of the of the interaction between environment and phenotype, including the evolution process. A few sensory mechanisms are analyzed. A thesis is elaborated by the students on a subject of interest.
Course contents	Environment: stress, resources, and selection; adaptation : basic mechanisms and significance. Problems related to the size and allometric and isometric scale factors; scale factors and metabolism, scale factors and locomotion. Water, ions, osmotic balance and water balance: excretion and osmoregulation in animals. Food and nutrition. Metabolism and energy budget. Introduction to respiratory function. The temperature: terminology and strategies, biochemical and physiological effects, heat exchange with the environment, regulation of production,

	<p>recruitment and heat loss.</p> <p>Part 2. An introduction to Respiration and Circulation. Temperature and its effect. An introduction to the nervous system. Electroreception. Magnetoreception. Mechanoreceptors, Chemoreceptors, Thermoreceptors. The Vision. The fish lateral line. The marine life: respiratory adaptation, marine signaling.</p>
Teaching methods	The course is organized in frontal lectures by presenting slides in Power Point.
Reccomended or required readings	No english textbooks
Assessment methods	Oral examination and discussion of a sintetic research on a specific subject
Further information	No further informations
Sustainable development goals - Agenda 2030	\$lbl_legenda_sviluppo_sostenibile