

BACHELOR
BIOLOGY
2ND YEAR OF STUDY, 2ND SEMESTER

COURSE TITLE	GENERAL ANIMAL PHYSIOLOGY
COURSE CODE	BC01*
COURSE TYPE	full attendance
COURSE LEVEL	1 st cycle (bachelor degree)
YEAR OF STUDY, SEMESTER	2 nd year of study, 2 nd semester
NUMBER OF ECTS CREDITS	5
NUMBER OF HOURS PER WEEK	4 (2 lecture hours + 2 seminar hours)
NAME OF LECTURE HOLDER	Lucian Hritcu
NAME OF SEMINAR HOLDER	Gabriela Dumitru
PREREQUISITES	Advanced level of English
A	GENERAL AND COURSE-SPECIFIC COMPETENCES
	<p>General competences:</p> <ul style="list-style-type: none"> → Developing documentation reports on the analysis of the biological systems characteristics in terms of organization and functioning principles of the living world. → Critical evaluation of the interpretation of scientific information from the perspective of the principles of organization and functioning of the living world. → Developing the capacity for critical-constructive reflection on one's own level of professional training in relation to the standards of the profession. <p>Course-specific competences:</p> <ul style="list-style-type: none"> → to prepare reports on the organization and functioning of the living world; → to identify notions, principles, usual methods necessary for the morphological, structural and physiological characterization of living organisms; → to interpret the specialized scientific information from the perspective of the principles of organization and functioning of the living world; → to interpret the specialized scientific information from the perspective of the principles of organization and functioning of the living world; → to explain the use of models and algorithms in the knowledge of biological systems.
B	LEARNING OUTCOMES
	<ul style="list-style-type: none"> → Developing documentation reports on the analysis of the biological systems characteristics in terms of organization and functioning principles of the living world. → Critical evaluation of the scientific information interpretation from the perspective of the principles of organization and functioning of the living world. → Explaining the characteristics of biological systems from the perspective of the principles of organization and functioning of living matter. → Interpretation of specialized scientific information from the perspective of the principles of organization and functioning of the living world. → Explaining the use of equipments/ tools, techniques / working methods for investigating biological systems.
C	LECTURE CONTENT
	<p>Bioelectric activity. Membrane potentials Muscle physiology Somesthesia Auditory sensitivity Sense organs for balance Optical sensitivity Taste sensitivity Olfactory sensitivity Physiology of the endocrine system Nutrition functions</p>

	Physiology of male and female reproductive systems	
D	RECOMMENDED READING FOR LECTURES	
	<ol style="list-style-type: none"> 1. L. Hrițcu, V.Hefco, Elemente de fiziologia animalelor și a omului. Funcții de relație, Ed. PIM (acreditată CNCSIS, cod CNCSIS 66), 2007 2. L. Hrițcu. Fiziologia animalelor și a omului – sistemul endocrin, reproducerea și funcțiile de nutriție. Editura Tehnopress (acreditată CNCSIS, cod CNCSIS 89), Iasi, 2008, ISBN 978-973-702-580-1, 392 pagini 3. Hefco V, Fiziologia animalelor si a omului, Ed. Didactica si Pedagogica, Bucuresti, 1998 4. Guyton, A.C., Textbook of Medical Physiology. W.B. Saunders Comp., Philadelphia, London, Toronto, Tokyo, 2006. 5. Smith, C.U.M., Elements of molecular neurobiology. John Wiley & Sons, LTD., West Sussex, England, Third edition, 2002. 6. Hritcu L. 2011, Neurofiziologie – Rolul unor neurotransmițători și zone nervoase în modularea proceselor cognitive și imunitare, Editura Universității "Alexandru Ioan Cuza" din Iași, ISBN 978-973-640-670-6, 231 pagini. 	
E	SEMINAR CONTENT	
	<p>Labor protection norms in the animal physiology laboratory</p> <p>Muscle extensibility and elasticity</p> <p>Recording and analysis of gastrocnemius muscle shake. Tetanic contractions</p> <p>Demonstration of bioelectrical phenomena in animal tissues: contraction without metal; secondary tetanus</p> <p>Determining the reflex time. The laws of medullary exteroceptive reflexes</p> <p>Mechanoreceptive, thermal, painful, gustatory, auditory, visual sensitivity</p> <p>Functional properties of the heart muscle: contractility, excitability, cardiac automatism</p> <p>Perfusion of the frog heart and the influence of electrolytes and hormones on the activity of the heart</p> <p>Blood pressure and pulse in humans</p>	
F	RECOMMENDED READING FOR SEMINARS	
	<ol style="list-style-type: none"> 1. Hefco, V., 1976, Fiziologie experimentală; funcțiile de relație (culegere de lucrări practice), Univ."Alexandru Ioan Cuza" Iași, 183 pag.; 2. Hefco, V., 1977, Fiziologie experimentală: Respirația; Digestia; Metabolismul; Excreția; Sistemul endocrin Culegere de lucrări practice), Univ."Al. I. Cuza" Iași 3. Hritcu L. 2012, Fiziologie animală experimentală, , Editura Universității „Alexandru Ioan Cuza” din Iași, ISBN: 978-973-703-849-4, 130 p. 4. Misăilă, C., Dumitru, Gabriela, 2010, Fiziologia animalelor și a omului – Lucrări practice, Ed. Tehnopress Iași, 210 p 5. Melnic, B., Crivoi, A., 1991, Compendiu de lucrări practice de fiziologia omului și a animalelor, Ed. Lumina, Chișinău 	
G	EDUCATION STYLE	
	LEARNING AND TEACHING METHODS	systematic exposure; conversation; didactic demonstration
	ASSESSMENT METHODS	Exam
	LANGUAGE OF INSTRUCTION	English