

COURSE OUTLINE BASICS OF PHYSIOLOGY AND NEUROPHYSIOLOGY

• GENERAL

SCHOOL	SCHOOL OF PHYSICAL EDUCATION, SPORTS AND OCCUPATIONAL THERAPY		
DEPARTMENT/MSc	OCCUPATIONAL THERAPY		
LEVEL OF STUDY	MSc - LEVEL 6		
COURSE CODE		SEMESTER OF STUDIES	1o
COURSE TITLE	BASIC ELEMENTS OF PHYSIOLOGY AND NEUROPHYSIOLOGY		
INDEPENDENT TEACHING ACTIVITIES <i>in case the credits are awarded to distinct parts of the course, e.g. Lectures, Laboratory Exercises, etc. If the credits are awarded uniformly for the entire course, indicate the weekly teaching hours and the total credits</i>		TEACHING WEEKS	CREDITS
		3	6
<i>Add rows if needed. The organization of teaching and the teaching methods used are described in detail in 4.</i>			
COURSE TYPE <i>Background, General Knowledge, Scientific Area, Skills Development</i>	Background		
PREREQUISITE COURSES:	OXI		
LANGUAGE OF INSTRUCTION AND EXAMINATIONS:	GREEK		
THE COURSE IS OFFERED TO ERASMUS STUDENTS	NO		
ONLINE COURSE PAGE (URL)			

• LEARNING OUTCOMES

<p>Learning Outcomes</p> <p><i>The learning outcomes of the course are described, the specific knowledge, skills and abilities of an appropriate level that students will acquire after the successful completion of the course.</i></p> <p><i>Consult Appendix A</i></p> <ul style="list-style-type: none"> • <i>Description of the Level of Learning Outcomes for each cycle of study according to the European Higher Education Area Qualifications Framework</i> • <i>Descriptive Indicators of Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning</i> <p><i>and Annex B</i></p> <ul style="list-style-type: none"> • <i>Summary Guide to Writing Learning Outcomes</i> <p>The aim of the course is for students to master, the mechanisms of operation of the individual systems of the human body, with particular emphasis on the nervous system, central and peripheral.</p> <p>Upon successful completion of the course, participants will be able to:</p> <ol style="list-style-type: none"> 1. design a typical cell, describe the transport of substances through the membrane and explain the mechanism of creation of the resting potential 2. describe the phases of the action potential and the way the nerve impulse is transmitted

<ol style="list-style-type: none"> 3. functionally classify nerve fibers and name the different types of sensory receptors 4. distinguish the types of muscle contraction and interpret the action potential of heart fibers 5. understand the function of synapses 6. describe the overall organization of the nervous system and report the functions of its individual components 7. report the functions of the circulatory, hematopoietic, respiratory, urinary, digestive and endocrine systems and analyze the most important of them. 8. to conclude that the disorder of the body's normal homeostasis leads to pathology. 	
General Competencies	
<i>Taking into account the general competencies that the graduate must have acquired (as listed in the Diploma Supplement and listed below), which / which of them is the course aimed at?.</i>	
<i>Search, analyze and synthesize data and information, using the necessary technologies</i> <i>Adapting to new situations</i> <i>Decision-making</i> <i>Autonomous work</i> <i>Teamwork</i> <i>Working in an international environment</i> <i>Working in a multidisciplinary environment</i> <i>Generating new research ideas</i>	<i>Project planning and management</i> <i>Respect for diversity and multiculturalism</i> <i>Respect for the natural environment</i> <i>Demonstrate social, professional and ethical responsibility and gender sensitivity</i> <i>Criticism and self-criticism</i> <i>Promoting free, creative and inductive thinking</i>
<ul style="list-style-type: none"> • Search, analyze and synthesize data and information, using the necessary technologies • Autonomous work • Demonstrate social, professional and ethical responsibility • Promoting free, creative and inductive thinking 	

• **COURSE CONTENT**

<ol style="list-style-type: none"> 1. Cell Physiology - Substance Trafficking - Membrane Dynamics 2. Physiology of nerve tissue: neuron - action potential 3. Nerve fibers and sensory receptors 4. Physiology of muscle tissue: striated and smooth muscles - myocardium 5. Nerve and neuromuscular synapse - neurotransmitters 6. Motor mechanism - neural circuits 7. Superior cortical functions - special senses 8. Regulatory motor mechanism - autonomic nervous system 9. Cardiovascular system physiology 10. Hematopoiesis - Coagulation mechanism 11. Physiology of the respiratory system: breathing - gas exchange 12. Urinary tract physiology 13. Physiology of the digestive and endocrine systems

• **TEACHING AND LEARNING METHODS - EVALUATION**

<p>DELIVERY METHOD <i>Face-to-face, Distance learning, etc.</i></p>	<p>Face to face (lectures) Distance Education</p>												
<p>USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES <i>Use of ICT in Teaching, Laboratory Training, Communication with Students</i></p>	<p>Use of ICT in Teaching and Communication with Students</p> <ul style="list-style-type: none"> • Digital slides • video • e-class, webmail 												
<p>TEACHING ORGANIZATION <i>The way and methods of teaching are described in detail.</i> <i>Lectures, Seminars, Laboratory Exercise, Field Exercise, Study & Analysis of Literature, Tutorial, Practice (Placement), Clinical Exercise, Art Workshop, Interactive Teaching, Educational Visits, Project Preparation, Writing a Paper / Paper, Artistic Creation, etc.</i></p> <p><i>The student's study hours for each learning activity as well as the hours of non-guided study are indicated so that the total workload at semester level corresponds to ECTS standards</i></p>	<table border="1" data-bbox="646 646 1300 966"> <thead> <tr> <th>Activity</th> <th>Semester Workload</th> </tr> </thead> <tbody> <tr> <td>Lectures</td> <td>39</td> </tr> <tr> <td>Literature study and analysis</td> <td>138</td> </tr> <tr> <td>Examination</td> <td>3</td> </tr> <tr> <td></td> <td></td> </tr> <tr> <td>Total Course</td> <td>180</td> </tr> </tbody> </table>	Activity	Semester Workload	Lectures	39	Literature study and analysis	138	Examination	3			Total Course	180
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<p>STUDENT EVALUATION <i>Description of the evaluation process</i></p> <p><i>Assessment Language, Assessment Methods, Formative or Conclusive, Multiple Choice Test, Short Answer Questions, Essay Development Questions, Problem Solving, Written Paper, Report/Report, Oral Examination, Public Presentation, Laboratory Work, Clinical Examination of a Patient, Artistic Interpretation, Other/Other</i></p> <p><i>Explicitly defined evaluation criteria and whether and where they are accessible by students are mentioned.</i></p>	<ul style="list-style-type: none"> - Interim exam (short answer, multiple-choice, blank filling, correct error) 30% - Final exam (written development questions) 70% 												

• **RECOMMENDED BIBLIOGRAPHY**

<ol style="list-style-type: none"> 1. Giba - Tsoambiri (1999) The physiology of man. Zygos Publications 2. McGeown, J.G. (2008) Concise Human Physiology. Paschalidis Medical Publications 3. Lauralee Sherwood (2016) Introduction to Human Physiology, Academic Publications 4. Silverthorn Dee Unglaub (2018) Human Physiology, BROKEN HILL PUBLISHERS LTD 5. Linda S. Costanzo (2021) Physiology (6th edition) Dimitrios Rabbit Publications
