

## COURSE OUTLINE “PHYSIOLOGY”

### 1. GENERAL

<b>SCHOOL</b>	HEALTH SCIENCES		
<b>DEPARTMENT</b>	MOLECULAR BIOLOGY AND GENETICS		
<b>STUDY LEVEL</b>	ISCED LEVEL 6		
<b>COURSE CODE</b>	<b>MBG217</b>	<b>SEMESTER</b>	4 <sup>th</sup>
<b>COURSE TITLE</b>	PHYSIOLOGY		
<b>TEACHING ACTIVITIES</b> <i>In case credits are awarded to individual components of the course eg. Lectures, laboratory practicals, etc. If credit units are awarded for the whole course, indicate the weekly teaching hours and total credits</i>	<b>HOURS/WEEK</b>	<b>ECTS CREDITS</b>	
	4	6	
<b>COURSE TYPE</b> <i>General, Background, Scientific field course, Expertise Course, Skills Development etc</i>	SCIENTIFIC FIELD		
<b>PREREQUISITE COURSES:</b>	NO		
<b>LANGUAGE OF TEACHING AND EXAMINATIONS:</b>	GREEK		
<b>THE COURSE IS OFFERED TO ERASMUS STUDENTS</b>	NO		
<b>COURSE WEBSITE (URL)</b>	<a href="https://eclass.duth.gr/courses/ALEX01193/">https://eclass.duth.gr/courses/ALEX01193/</a>		

### 2. LEARNING OUTCOMES

#### Learning outcomes

Describe the learning outcomes of the course, the specific knowledge, skills and competencies that students will acquire after successfully completing the course. Refer to Appendix A.

- Description of learning outcomes for the course according to the level of study - refer to the European Higher Education Area Qualifications Framework
- Descriptive Indicators of Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and Annex B Curriculum Vitae Summary Guide

Upon successful completion of the course, the students will be able to:

- Know the basic principles of homeostasis that are central to Physiology and the mechanisms that regulate them
- Know and understand the basic mechanisms of cell communication at the intercellular and multicellular level
- Know and understand how molecular mechanisms and cellular functions through clear causal sequences are integrated for the coordinated systems functioning and homeostasis of the organism
- Know and compare the functions of differentiated cell types of the body, as well as link their function to systemic physiology and specialized function
- Know and develop the basic principles of neuronal and hormonal communication
- Know and understand the functions of the mammalian nervous, muscular, cardiovascular, respiratory, renal, digestive and reproductive systems
- Understand and analyze endocrine regulation of metabolism and development
- Compose around the central idea of homeostasis concepts and information from the cellular to the systemic level
- Reflect, analyze and interpret physiological or pathophysiological responses
- Understand, through the introduction of new ideas and modern hypotheses, the rapid progress and dynamic nature of Physiology as a science and propose new methodological approaches based on developments in the field of Molecular Biology

#### General Skills

Which of the general competencies that the student will have acquired on the completion of the studies (see also the Diploma Supplement and below) are relevant to this course?

*Research, analysis and synthesize of data and information, using the necessary technologies*

*Adaptation to new situations*

*Decision making*

*Autonomous work*

*Team work*

*Work in an international environment*

*Work in an interdisciplinary environment*

*Production of new research ideas*

*Project design and management*

*Respect for diversity and multiculturalism*

*Respect for the natural environment*

*Development of social, professional and moral responsibility and gender*

*sensitivity*

*Promotion of free, creative and inductive thinking*

- Research, analysis and synthesise of data information using the necessary methodologies
- Production of new research ideas
- Promotion of free, creative and inductive thinking

### 3. COURSE CONTENT

1. Fundamental concepts in physiology
2. Homeostasis and mechanisms of regulation
3. Nervous system
4. General and special senses - Nervous system
5. Principles of function of hormonal control systems
6. Muscle tissue
7. Cardiovascular system
8. Respiratory system
9. Urinary system - Kidney functions
10. Digestive system
11. Endocrine and Nervous Control and Completion of Organic Metabolism of compounds
12. Controlling Growth and Development - Growth Hormonal Effects
13. Physiology of Reproduction - Sex Hormones

### 4. TEACHING and LEARNING METHODS - EVALUATION

<b>TYPE OF TRAINING</b> <i>Face-to-face, Distance learning, etc..</i>	Face to face	
<b>USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY</b> <i>Use of ICT in teaching, laboratory education, and in communication with the students</i>	Use of ICT in Teaching Use of ICT in Communication with students	
<b>MODES OF DELIVERY</b> <i>Describe the teaching methods in detail. Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, practicum, placements, clinical practice, art workshop, interactive teaching, educational visits, project, essay writing, artistic creativity, etc. The student's study hours for each learning activity are given as well as the hours of non-directed study according to the principles of the ECTS</i>	Lectures, use of e-class and new technologies, laboratory exercise in conjunction with Laboratory Course IV, study and analysis of literature	
<b>STUDENT PERFORMANCE EVALUATION</b> <i>Describe of the methods of evaluation language, methods of evaluation, types of exams, multiple choice questionnaires, short-answer questions, open-ended questions, problem solving, written work, essay/report, oral examination, public presentation, laboratory work, clinical examination of patient, art interpretation, other</i>  <i>Are evaluation criteria known to the students?</i>	<b>Student evaluation languages</b> Greek, English  <b>Method (Formative or Concluding)</b> Formative  <b>Student evaluation methods</b> Written Exam with Short Answer Questions (60%) Midterm exam (40%)  Evaluation criteria are known to the students and are presented in the course work guide available on the course website.	

<b>Activity</b>	<b>Workload/semester</b>
Lectures	52
Bibliographic research & analysis	128
<b>Course Total</b>	<b>180</b>

### 5. SUGGESTED READING

#### Suggested Textbooks

1. Introduction to Human Physiology (Greek translation). Lauralee Sherwood. Academic Publications J. Basdra & Co., 2014 (ISBN: 9786185135027). EUDOXOS code: 41959951.
2. Human Physiology – The mechanisms of body function (Greek translation). Vander A., Sherman J., Luciano D. BROKEN HILL PUBLISHERS LTD (ISBN: 9789604892259). EUDOXOS code: 13257031

3. Course notes and presentations are available through the e-class platform (<https://eclass.duth.gr/courses/ALEX01193/>).