

COURSE OUTLINE

1. GENERAL

SCHOOL	School of Food and Nutritional Sciences		
ACADEMIC UNIT	Department of Food Science & Human Nutrition		
LEVEL OF STUDIES	<i>Undergraduate</i>		
COURSE CODE	289	SEMESTER	5 th
COURSE TITLE	"Principles of Human Anatomy and Physiology"		
INDEPENDENT TEACHING ACTIVITIES <i>if credits are awarded for separate components of the course, e.g. lectures, laboratory exercises, etc. If the credits are awarded for the whole of the course, give the weekly teaching hours and the total credits</i>	WEEKLY TEACHING HOURS	CREDITS	
Lectures	5	5	
<i>Add rows if necessary. The organisation of teaching and the teaching methods used are described in detail at (d).</i>			
COURSE TYPE general background, special background, specialised general knowledge, skills development	Field of Science		
PREREQUISITE COURSES:	N/A		
LANGUAGE OF INSTRUCTION and EXAMINATIONS:	Greek (English if needed)		
IS THE COURSE OFFERED TO ERASMUS STUDENTS	Yes		
COURSE WEBSITE (URL)			

2. LEARNING OUTCOMES

Learning outcomes

The course learning outcomes, specific knowledge, skills and competences of an appropriate level, which the students will acquire with the successful completion of the course are described.

Consult Appendix A Description of the level of learning outcomes for each qualifications cycle, according to the Qualifications Framework of the European Higher Education Area Descriptors for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and Appendix B Guidelines for writing Learning Outcomes

The "Principles of Anatomy and Physiology" module describes the basic anatomic and physiological structures and functions of the different systems/organs of the human body, aiming to provide the students with the required knowledge to understand the key principles of Anatomy and Physiology of the human body.

Upon successful completion of this module the students will:

- know the physiological organization of the human body in systems/organs and will be able to describe their anatomy, structure and functions
- understand the key principles of human physiology and the mechanisms and functions of the different systems/organs of the human body
- understand the role of homeostatic mechanisms for maintaining the functions of the different systems/organs of the human body and will be able to recognize the impact of factors that are associated with dysfunction of these systems/organs and the manifestations of different diseases
- have acquired the required knowledge to understand the basic physiological functions related to human nutrition, such as metabolism and the functions of the digestive system

- have acquired the basic knowledge of the human anatomy and will be able to apply their knowledge of human anatomy to better understand subjects where knowledge of human anatomy is essential
- understand the role and function of the different organs/tissues of the human body and will be able to apply this knowledge to better understand and evaluate the development of diseases based on the principles of human anatomy

General Competences

Taking into consideration the general competences that the degree-holder must acquire (as these appear in the Diploma Supplement and appear below), at which of the following does the course aim?

<i>Search for, analysis and synthesis of data and information, with the use of the necessary technology</i>	<i>Project planning and management</i>
<i>Adapting to new situations</i>	<i>Respect for difference and multiculturalism</i>
<i>Decision-making</i>	<i>Respect for the natural environment</i>
<i>Working independently</i>	<i>Showing social, professional and ethical responsibility and sensitivity to gender issues</i>
<i>Team work</i>	<i>Criticism and self-criticism</i>
<i>Working in an international environment</i>	<i>Production of free, creative and inductive thinking</i>
<i>Working in an interdisciplinary environment</i>	
<i>Production of new research ideas</i>	

- Acquisition, analysis and synthesis of data and information with the use of relevant technologies
- Independent work
- Knowledge flexibility and adaptation in new scientific environments
- Promotion of free, creative, critical and analytical thinking
- Development of new research ideas
- Social and ethical responsibility and sensitivity on male/female issues
- Respect of ecosystems

3. SYLLABUS

- Basic principles of human physiology, homeostasis and physiological structure of the systems/organs of the human body, body fluid compartments, transport of substances through cell membranes and membrane transport mechanisms
- Basic principles of human anatomy
- Intercellular communication and homeostatic mechanisms: homeostasis and regulation of cellular functions
- Nervous system: functions of neuronal cells, biological and action potentials, neuronal synapses and neurotransmitters, signal transmission from neurons to target cells, sensory organs
- Muscular system: skeletal and smooth muscles, contraction and mechanics of skeletal muscles, excitation and contraction of smooth muscles
- Hematopoietic system: hematopoietic system functions and blood, blood cells, hemostasis and blood coagulation, basic principles of immunology
- Circulation: heart and regulation of cardiovascular circulation, arterial and venous systems, systemic and pulmonary circulation, blood pressure regulation, lymphatic system
- Respiratory system: pulmonary ventilation, principles of gas exchange through the respiratory membranes
- Urinary System: kidney functions, renal regulation of electrolytes and blood/extracellular fluid volume
- Gastrointestinal System: gastrointestinal functions and motility, alimentary tract secretory functions, digestion and absorption in the gastrointestinal tract
- Endocrine system: endocrine organs, axes and hormones, regulation of growth, metabolism and regulation of feeding, metabolism and body temperature
- Male and female reproductive system, pregnancy, and lactation

4. TEACHING and LEARNING METHODS - EVALUATION

DELIVERY Face-to-face, Distance learning, etc.	Lectures. Direct, and distant learning where needed.	
USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY Use of ICT in teaching, laboratory education, communication with students	Lectures with the aid of slides and videos. Lecture material available on e-class platforms, also employed for the communication with the students.	
TEACHING METHODS The manner and methods of teaching are described in detail. Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, 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	Activity	Semester workload
	Lectures/Interactive teaching	65
	Individual Study	60
	Total Course Load (25 hours course load per credit unit)	125
STUDENT PERFORMANCE EVALUATION <i>Description of the evaluation procedure.</i> <i>Language of evaluation, methods of evaluation, summative or conclusive, 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>Specifically-defined evaluation criteria are given, and if and where they are accessible to students.</i>	I. Written exam (100%) which includes: - Multiple choice questions and short answer questions where needed for critical evaluation of key concepts	

5. SELECTED BIBLIOGRAPHY

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- Atlas of Human Anatomy, 7e (Netter Basic Science), 2018, ISBN-10: 0323393225, Publisher: Elsevier.
- Gray's Anatomy for Students, by Richard Drake PhD FRCGS (Author), A. Wayne Vogl PhD FRCGS (Author), Adam W. M. Mitchell MB BS FRCGS FRCR (Author); 4th edition (11 April 2019), ISBN-10: 03233930472019, Publisher: Elsevier.
- Netter Frank H., 2003, "Ατλας βασικών ιατρικών επιστημών Ι: Ανατομία", Εκδόσεις Πασχαλίδης, Αθήνα.
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