



UNIVERSITÀ DEGLI STUDI DI PALERMO

DEPARTMENT	Scienze e Tecnologie Biologiche, Chimiche e Farmaceutiche		
ACADEMIC YEAR	2022/2023		
MASTER'S DEGREE (MSC)	PHARMACY		
SUBJECT	HUMAN PHYSIOLOGY		
TYPE OF EDUCATIONAL ACTIVITY	A		
AMBIT	50325-Discipline Biologiche		
CODE	03379		
SCIENTIFIC SECTOR(S)	BIO/09		
HEAD PROFESSOR(S)	BALDASSANO SARA	Professore Associato	Univ. di PALERMO
OTHER PROFESSOR(S)			
CREDITS	8		
INDIVIDUAL STUDY (Hrs)	136		
COURSE ACTIVITY (Hrs)	64		
PROPAEDEUTICAL SUBJECTS			
MUTUALIZATION			
YEAR	2		
TERM (SEMESTER)	2° semester		
ATTENDANCE	Not mandatory		
EVALUATION	Out of 30		
TEACHER OFFICE HOURS	BALDASSANO SARA Saturday 0:00 1:00 SI RICEVE TUTTI I GIORNI PER APPUNTAMENTO da concordare con il docente via email. Studio n 507, Dip. STEBICEF, viale delle Scienze, Ed. 16, piano 1 o via teams- codice canale emzcza3.		

DOCENTE: Prof.ssa SARA BALDASSANO

PREREQUISITES	Knowledge of Biochemistry concerning: a) the structure of the major organic compounds (proteins, carbohydrates, fats); b) the notion of "enzyme"; c) the possible mechanisms of regulation of the enzymes; d) the main metabolic processes.
LEARNING OUTCOMES	Knowledge and understanding ability: acquisition of advanced knowledge about the working of organs and systems, as target of the action of drugs. Capacity to understand the specific language of Physiology. Capacity to apply knowledge and understanding: ability to use the acquired knowledge in order to study the mechanisms of action of drugs in the various organs and systems. Independent judgment: to be able to evaluate the implications and results of investigations about the functioning of organs and systems. Communication skills: ability to use the language of Physiology to interact with other health professionals, but also to illustrate the concepts of Physiology to a non-expert audience. Learning skills: ability to upgrade examining the scientific publications in the field, in order to avoid the obsolescence of acquired knowledge. Ability to follow, using the knowledge acquired during the curricular course, or second level master, or seminars and advanced courses, in the field of Physiology.
ASSESSMENT METHODS	Oral exam. The candidate must answer at least three questions orally asked, about all issues of the program, with reference to the suggested textbooks and provided teaching equipment. The exam aims to assess whether the student has knowledge and understanding of the topics, has interpretative competence and ability to establish connections between the topics of the course. The sufficiency is reached when the student shows knowledge and understanding of the subjects at least in general terms; also, must be able to explain and argue to convey his knowledge to the examiner. Below this threshold, the examination result insufficient. On the contrary, the more the student, arguing and explaining, is able to interact with the examiner, and his knowledge of the subject is detailed, the more the evaluation will be positive. 30/30 cum laude. Excellent knowledge of the topics, excellent language skills, good analytical capacity; the student is able to apply knowledge to solve posed problems. 26/29. Good mastery of the subjects, full language skills; the student is able to apply knowledge to solve posed problems. 24/25. Basic knowledge of the main topics, moderate language skills; the student has a limited ability to apply knowledge to solve posed problems. 21/23. The student does not have full mastery of the main topics, but he has adequate knowledge; the property language is satisfactory; the student has a poor ability to apply knowledge to solve posed problems. 18/20. Minimal basic knowledge of the main topics and technical language; very little or no ability to apply knowledge to solve posed problems. Insufficient. He does not have an acceptable knowledge of the contents of the topics.
EDUCATIONAL OBJECTIVES	The student will address the study of various organs and systems, considering their functioning key mechanisms, emphasizing above all the arguments of General Physiology more useful for the study of Pharmacology, and in any case, for knowledge must possess a graduate in Pharmacy
TEACHING METHODS	Classroom lessons
SUGGESTED BIBLIOGRAPHY	-Carbone E, Aicardi G, Maggi R: "Fisiologia – dalle molecole ai sistemi integrati" – Ed. Edises. ISBN 9788879599795 -Taglietti FONDAMENTI DI FISIOLOGIA GENERALE E INTEGRATA. Edises 2019 ISBN 8833190528 -BERNE&LEVY FISIOLOGIA viii edizione casa editrice Ambrosiana. ISBN 9788808480040 Materiale didattico (files delle lezioni inserite nel portale)

SYLLABUS

Hrs	Frontal teaching
3	CELLULAR ORGANIZATION OF LIVING AND HOMEOSTASIS. The importance of regulation in vital processes. The internal environment of the living and its regulation. The concept of homeostasis. Homeostatic principles and mechanisms - Integration systems (Nervous, endocrine and neuroendocrine messages). Exchanges between cell and environment. Membrane transports.
2	Blood physiology: generality; The plasma; Red blood cells; White blood cells; Platelets and hemostasis
16	Nervous system physiology: introduction; Cell excitability; Excitability and conductivity of nerve fibers; Synapses; Sensory systems and receptors; The somatosensory system; The visual system; Reflexes; Brain motor cortex; The basal ganglia; The vegetative nervous system; Functions of the hypothalamus; The cerebral cortex; Emotions
5	Muscle tissue: skeletal muscle tissue; smooth muscle tissue
15	Endocrine system and reproduction: General information; hypothalamus, pituitary gland, pineal gland; the thyroid; metabolism of calcium and phosphorus; the adrenal cortex; the endocrine pancreas; sexual reproduction

SYLLABUS

Hrs	Frontal teaching
9	Cardiovascular system. Heart: General information; electrical activity; mechanical activity; Regulation of cardiac activity. Circulation: General information; the arteries; arterioles; the capillaries; the veins; the vasomotility. Control of the cardiovascular system. The coronary circulation
4	Respiratory system: General information; respiratory mechanics; gas exchange; Regulation of respiration
5	Excretory apparatus: General information and functional organization; Glomerular filtration; proximal tubule functions; functions of the loop of Henle; distal tubule functions; functions of collecting ducts. The body fluids. Endocrine functions of the kidney
5	Digestive system: The functions of the digestive system. General aspects of mechanical and chemical digestion of food. Intestinal absorption. The gastrointestinal hormones.