



IDENTIFYING DATA

Physiology: Physiology

Subject	Physiology: Physiology			
Code	V53G140V01105			
Study programme	(*)Grao en Enfermaría			
Descriptors	ECTS Credits	Choose	Year	Quadmester
	9	Basic education	1st	2nd
Teaching language	Spanish			
Department				
Coordinator	Pesqueira Santiago, Daniel			
Lecturers	Antón Badiola, Jesús María Pesqueira Santiago, Daniel			
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General description	It treats to learn the physical principles-chemical that regulate the state of the health, so that the student can comprise the processes *fisiopatológicos that determine alterations of the same, the forms of *enfermar, and the illnesses.			

Competencies

Code	
C1	To know and identify the structure and function of the human body. To understand the molecular and physiological basis of cells and tissues.
C9	To know the physiopathologic processes, its declarations and the factors of risk that determine the states of health and illness in the different stages of the vital cycle.
D1	Analysis and synthesis ability
D2	Organization and planning ability
D3	Information management ability.

Learning outcomes

Expected results from this subject	Training and Learning Results	
Be able to comprise which is the normal function of the distinct devices and systems of the normal organism.	C1 C9	D1 D2 D3
(*)1. Identificar dificultades de aprendizaje y disfunciones de personalidad.		
Be able to purchase the fundamental knowledges on the mechanisms that regulate the functions of the distinct organs and systems.	C1 C9	D1 D2 D3

Contents

Topic	
Introduction the physiology.	Introduction. Concept.
Cellular physiology ,histológica and immune system.	Basic concepts : normal operation of the cells and of the fabrics. Defence and immunity: Main organs and functions. Physiology of the defensive answer: the inflammation. Immune answers and autoinmunes. Immunity inespecifica and specific.

Renal physiology and corporal liquids.	Function of the kidney. The nefrona. Leak glomerular and mechanism of training of the urine: secretion and reabsorción tubular. Control of the volume of urine. Technician of the aclaramiento of the renal function. Renal pelvis, ureters, bladder and urethra: the urination. Control neurológico of the urination. Homeostasis. Mechanisms *homeostáticos of the main functional systems.
Blood and cardiovascular physiology.	Composition of the sangre. el plasma. Hematopoyesis prenatal And posnatal. The médula osseous and the peripheral blood. Hematócrito And speed of sedimentación globular. Main analytical values of a blood analysis. Cells of the blood and his functions. Hemostasia And coagulation. Types of blood. Systems AB0 and RH. Transfusion. Defence and immunity: Main organs and functions. Physiology of the defensive answer: the inflammation. Immune answers and autoinmunes. Specific immunity and inespecífica. Operation of the heart. Blood supply to the cardiac muscle. Cardiac cycle. System of driving. Electrocardiograma. Hemodinámica Vascular. Arteries, veins and capilares. Lymphatic circulation. Circulation sistémica and pulmonary.
Respiratory physiology.	Mechanics of the breath. Exchange of gases. Regulation of the breath. Types of breath. Espirometría.
Digestive physiology.	General principles. Motilidad Intestinal: concepts of peristaltismo and tone: functional types of movements in the digestive tube. Nervous control of the function gastrointestinal. Nervous system entérico. Blood flow gastrointestinal. Splenic circulation. The digestion: enzymes and chemical digestion. Digestion and absorption of the immediate principles. Function of the digestive device. Secrecións Salivated, esofáxica and gastric. The pancreas, the liver and the gall bladder: his secrecións. Intestinal secretion. Nutrition and energetic metabolism. Metabolism of the immediate principles. Vitamins and mineral.
Endocrine physiology.	Mechanism of action hormonal. Chemical and functional classification of the hormones. Regulation of the secretion hormonal. System hypothalamus-hipofisario: hypothalamus, cut hipofisario, adenohipófise and neurohipófise. Hormones hypothalamus-*hipofisarias: functions and regulation. ADH And oxytocin. Functions fisiológicas. Thyroid hormones and calcitonina. Hormones parathyroid: regulation of the calcium and phosphate in the organism. Relation with the calcitonina. Pancreatic hormones and regulation of the glicemia. Hormones adrenales: corticais (the cortisol, the aldosterona and the sexual steroids) and medullary (catecolaminas). The stress. Catecolaminas And vegetative nervous system. The masculine sexual hormones and feminine: The ovarian cycle. Menarquía. Cycle menstrual, and menopause. The placenta. The melatonina. The system APUD. The prostaglandins.
Physiology of him device locomotor	Muscular physiology: unit motora. Types of contraction.
Neurofisiología.	Physiology of the nervous system. The nervous impulse. Neurotransmisores. Driving of the nervous impulse: potential of membrane in rest, local potential and potential of action. Physiology of the organs of the general and special senses. Physiology of the cerebral bark. Learning and memory. The dream and the vigilia. The electroencefalograma. Nervous roads motoras and sensitivas. The reflections.

Planning

Class hours

Hours outside the
classroom

Total hours

Introductory activities	3	15	18
Master Session	64	81	145
Presentations / exhibitions	10	5	15
Multiple choice tests	1	0	1
Jobs and projects	1	45	46

*The information in the planning table is for guidance only and does not take into account the heterogeneity of the students.

Methodologies

	Description
Introductory activities	Activities directed to take contact and gather information on the alumnado, as well as to present the asignatura.
Master Session	Exhibition by part of the professor of the contents on the matter object of study, theoretical bases and/or guidelines of a work, exercise or project to develop by the student.
Presentations / exhibitions	Exhibition by part of the *alumnado in front of the educational and/or a group of students of a subject on contents of the matter or of the results of a work, exercise, project... Can carry out of individual way or in group.

Personalized attention

Methodologies	Description
Presentations / exhibitions	By means of calendar of tutorías exposed in classroom at the beginning of course, by means of email or personal request, the student will gather with the professor to solve the difficulties of learning, pedagogical support, orientacion, etc.
Tests	Description
Jobs and projects	By means of calendar of tutorías exposed in classroom at the beginning of course, by means of email or personal request, the student will gather with the professor to solve the difficulties of learning, pedagogical support, orientacion, etc.

Assessment

	Description	Qualification	Training and Learning Results
Multiple choice tests	Proofs for the evaluation of the competitions purchased that include enclosed questions with different alternative of answer (true/false, multiple election, emparejamiento of elements...). The students select an answer between a number limited of possibilities.	80	C1 C9
Jobs and projects	Preparation of individual works or in group, tutelados by the professor and presented publicly in classroom	20	D1

Other comments on the Evaluation

Sources of information

Tortora Grabovsky, **Principios de anatomía y fisiología**, 9ª edición,
 PEDRO GABRIEL MARTIN VILLAMOR, JOSÉ MARÍA SOTO ESTEBAN, **ENFERMERÍA . ANATOMO-FISIOLOGÍA (TOMOS I Y II) . SERIE DE MANUALES DE ENFERMERÍA,**
 GUYTON, **TRATADO DE FISIOLOGÍA MÉDICA**, 11ª,
 GARY A. THIBODEAU, KEVIN T. PATTON, **ANATOMÍA Y FISIOLOGÍA**, 6ª edición,
 EDITORIAL MASSON, **ANATOMÍA - FISIOLOGÍA (I Y II)**,
 EDITORIAL MASSON, **ANATOMÍA - FISIOLOGÍA (I Y II)**,
 HALL, JOHN E, **COMPENDIO DE FISIOLOGÍA MÉDICA**,
 B. Escuredo, **Estructura y Función del Cuerpo Humano**, 2ª edición.,

Recommendations

Subjects that continue the syllabus

Human Anatomy: Human Anatomy/V53G140V01101
 Biochemistry: Biochemistry/V53G140V01103
 Basics of nursing/V53G140V01107
 Clinical Nursing I/V53G140V01204
 Clinical Nursing II/V53G140V01205
 Pharmacology and dietetics/V53G140V01203
 Introduction to clinical nursing/V53G140V01201
 Clinical practice I/V53G140V01208

Subjects that are recommended to be taken simultaneously

Human Anatomy: Human Anatomy/V53G140V01101

Biochemistry: Biochemistry/V53G140V01103

Physiology: Physiology/V53G140V01105
