INSTITUTO POLITÉCNICO DE BRAGANÇA

Course Unit	Anatomy and Pathophysology I			Field of study	Health Sciences
Bachelor in	Biomedical Technology			School	School of Technology and Management
Academic Year	2023/2024	Year of study	3	Level	1-3
ECTS credits	6.0				
Type	Semestral	Semester	1	Code	9600-752-3101-00-23

Workload (hours)	162	Contact hours	T	TP	PL	TC	S	E	OT	O
			30	30	-	-	-	-	-	-

T - Lectures; TP - Lectures and problem-solving; PL - Problem-solving, project or laboratory; TC - Fieldwork; S - Seminar; E - Placement; OT - Tutorial; O - Other

Name(s) of lecturer(s): Alexandra Daniela Afonso Prada

Learning outcomes and competences

At the end of the course unit the learner is expected to be able to:
1. To describe structural organization of osteoarticular structural muscular systems, cardiovascular system, hemolynphoid system, respiratory system .

Prerequisites

Before the course unit the learner is expected to be able to:
none

Course contents

1. Topographical regions. Anatomic plans 2. Osteoarticular and muscular systems. Skeletal tissues. Bones and joints. Muscular physiology. Osteoarthritis, osteoporosis and bone fracture 3. Anatomy and physiology of cardiovascular system. Cardiac cycle. Hemodynamics. Hypertension. Atherosclerosis. Stroke. Heart Arrhythmia. Ischemic heart disease. 4. Haemolymphoid system. Blood. Lymphoid tissue. Immune response. Immune disorders. 5. Anatomy and physiology of respiratory system.

Course contents (extended version)

1. Basic principles of pathology; Medical History. Additional Tests
2. Cell Injury. Causes of cell damage; Necrosis; Response to injury; Aging and Death.
3. Musculoskeletal Diseases
   - Osteoarthritis, Osteoporosis, Gout
4. Disorders of Hematopoietic and Lymphoid Systems
   - Iron Deficiency Anemia. Hemolytic Anemia. Megaloblastic Anemia
   - Clotting Disorders.
5. Diseases of Blood vessels
   - Response to Injury; Atherosclerosis. Hypertension. Aneurysm.
6. Heart Diseases
   - Congestive Heart Failure
   - Ischemic Heart Disease
   - Hypertensive Heart Disease
7. Diseases of the Lung and the Respiratory Tract
   - Asthma
   - Chronic Obstructive Pulmonary Diseases

Recommended reading

1. Kumar, Vinay, Cotran, Ramizi S. , & Robbins, Stanley L. (Eds.). (2003). Robbins Patologia Básica (7ª ed.): Saunders Elsevier Science.
2. Rubin, Raphael, & Strayer, David S. (Eds.). (2005). Patologia: Bases Clinicopatológicas de Medicina (4ª ed.): Guanabara Brasil.
3. Sergio, J. Silveira, Coutinho, Isabel, & Marques, Sandra (Eds.). (2002). Fundamentos de Patologia para Técnicos de Saúde (2ª ed.): Lusociência.
4. Berne, R. M. , & Levy, M. N. (Eds.). (2004). Fisiologia. (5ª ed.): Rio de Janeiro: Mosby.
5. Netter FH (Ed.). (1987). Anatomia y Fisiologia. Colección CIBA de Ilustraciones Médicas. : Barcelona: Salvat Editores.

Teaching and learning methods

Theoretical and Practical: expositive, with the support of reflective media. Analysis of clinical cases to develop thinking and application of theoretical knowledge

Assessment methods

1. Alternative 1 - (Regular, Student Worker) (Final)
   - Intermediate Written Test - 35%
   - Intermediate Written Test - 35%
   - Practical Work - 30%
2. Alternative 2 - (Regular, Student Worker) (Final, Supplementary, Special)
   - Final Written Exam - 100%

Language of instruction

Portuguese

Electronic validation

Alexandra Daniela Afonso Prada	Joana Andrea Soares Amaral	José Carlos Rufino Amaro
10-10-2023	31-10-2023	04-11-2023