

المركز الوطني لضمان جودة واعتماد
المؤسسات التعليمية والتدريبية



المتطلبات الأكاديمية للمقرر الدراسي

اسم المؤسسة التعليمية: Faculty of Medicine ElMarj

اسم البرنامج التعليمي: Bachelor of Medicine and Surgery (MBBS)

اسم المقرر: علم وظائف الأعضاء I

رمز المقرر: 1203

العام الدراسي 1st year

المتطلبات الأكاديمية للمقرر الدراسي

١. معلومات عامة:

Medical physiology 1	اسم المقرر الدراسي	١
Taher Elshami	منسق المقرر	٢
Physiology	القسم / الشعبة التي تقدم البرنامج	٣
//	الأقسام العلمية ذات العلاقة بالبرنامج	٤
145	الساعات الدراسية للمقرر	٥
English	اللغة المستخدمة في العملية التعليمية	٦
1 st	السنة الدراسية/ الفصل الدراسي	٧
2024- مجلس الكلية	تاريخ وجهة اعتماد المقرر	٨

١,١ عدد الساعات الأسبوعية:

محاضرات ٣ معام ١ تدريب ١ المجموع ٥

٢- أهداف المقرر:

1. To introduce the medical students to the basic concepts of homeostasis.
2. To familiarize the medical student with control mechanisms at molecular and mechanical levels.
3. To provide the medical student with the basic concepts and facts of how the cardiovascular, respiratory systems, and blood work.
4. To enable the medical student to understand, apply and interpret physiological testing for cardiovascular, respiratory systems, and blood.
5. To raise the ethical sense of dealing with human life within the medical student.
6. To orient the medical student to the importance of communication skills.
7. To Enable the medical student to acquire and maintain abilities necessary for self-learning and lifelong learning.

٣-مخرجات التعلم المستهدفة: أ.المعرفة والفهم.

To Outline the structure and functions of each body system.	1أ
To Describe the functional anatomy of nervous, cardiovascular and respiratory systems..	2أ
To Relate both mechanistic (how) and teleologic (why) comprehension of the human organism's organizational levels.	3أ
To Describe units used in medical physiology laboratory	4أ

ب-المهارات الذهنية:

To Apply the principles and regulations of physiology in practical situations.	1ب
To Explain how these separate systems interact to yield integrated physiological responses to challenge	2ب
To plan experiments to demonstrate physiological processes.	3ب
To report explained results of physiological experiments.	4ب

ج-المهارات العلمية والمهنية:

To Perform systematic examination of cardiovascular and respiratory system.	1ج
To Apply essential special laboratory tests to measure some physiological parameters of different body systems.	2ج
To Analyze data obtained from physiological experiments.	3ج
To Differentiate between normal and abnormal function of different tissue and organs.	4ج

د-المهارات العامة:

To Use independently acquired credible knowledge of the physiological principles in solving given real-world physiologically based problems.	1د
To Consuming presentation and communication skills.	2د
To Demonstrate the self-learning tools required for further professional development.	3د
To Manage their time successfully.	4د
To exhibit self confidence in self learning activities.	5د
To Use independently acquired credible knowledge of the physiological principles in solving given real-world physiologically based problems.	
To Consuming presentation and communication skills.	

4-محتوى المقرر:

	Topics to be covered in the Course:	Sub-topics	Total teaching hours	Teaching strategy		
	List of Topics			Lecture	Practical	Tutorial
1	Cell physiology	1. Cell compositions Cell membrane. 2. Cytoplasmic organelles Nucleus 3. Movements of molecules across membranes. 4. Mechanism of particles and water diffusion across cell membrane.	5	3	-	2
2	1-Body fluids, and fluid balance	1. Body fluid importance 2. Body fluid compartments. 3. Intracellular fluid(ICF) 4.Extracellular fluid(ECF)	5	3	1	1
3	Blood physiology 1	Blood Composition of blood: Plasma, Blood elements, Red blood corpuscles	5	5	-	-
4	Blood physiology 2	Most common types of normal and abnormal hemoglobin	5	1	2	2
5	Blood physiology 3	Anemia: Types of anemia RBCs functions	5	1	2	2
6	Blood physiology 4	White blood cells Types of leucocytes	5	5	-	-
7	Blood physiology 5	White blood cells functions and disorders	5	2	2	1
8	Blood physiology 6	Platelets Hemostasis	5	2	2	1
9	Resting membrane potentials, action potentials and factors affecting them.	Resting and action potential	5	3	1	1
10	Nerve fibers, structures, classifications, functions and properties of nerves	The neuron (Nerve cell) neuron classification, structure and function	5	3	1	1
11	Conduction of nerve impulse	Myelin sheath Neuroglia or glial cells General functions of neuroglia Types of neuroglia cells	5	3	2	-
12	Motor end plate / neuromuscular		5	3	2	-

	transmission					
13	Overview of the nervous system	Functional parts of the nervous system. Autonomic (involuntary or visceral) nervous system (ANS) Types of autonomic nervous system	5	3	-	2
14	Autonomic ganglia and synapses		5	3	-	2
15	Sympathetic		5	3	2	-
16	Parasympathetic		5	3	2	-
17	General aspect for the cardiovascular system		5	3	1	1
18	Peripheral circulation	Regulation of blood flow	5	3	1	1
19	Cardiac muscle	1. Electrical activity of the heart 2.	5	3	1	1
20	Heart muscle mechanics		5	3	1	1
21	Cardiac output		5	3	1	1
22	Cardiac cycle		5	3	1	1
23	Lung mechanics		5	3	1	1
24	Gas exchange and carriage	Alveolar-blood gas exchange - Transport of O ₂ and CO ₂ – hypoxia	5	3	1	1
25	Regulation of Respiration		5	3	1	1
	Total		125	73	28	24

5- طرق التعليم والتعلم:

١. الدروس النظرية (المحاضرات).
٢. الدروس العملية.
٣. حلقات النقاش (Tutorials)
٤. محاضرات الكترونية.

6- طرق التقييم:

ت	طرق التقييم	تاريخ التقييم	النسبة المئوية	ملاحظات
١	امتحان نصفي	الاسبوع ١٢	٣٠٪	
٢	امتحان شفهي	نهاية السنة	١٠٪	
٣	امتحان عملي	نهاية السنة	١٥٪	
٤	امتحان نهائي	نهاية السنة	٥٠٪	
٥	النشاط	نصف السنة	٥٪	
	المجموع		100%	

7- المراجع والدوريات:

مكان تواجدها	Author	Edition	Publisher	Reference Title	
Library	Guyton; John E Hal	==	Philadelphia: Saunders	Guyton on textbook of Human Physiology and Mechanisms of Disease	Essential Books
Library	William F. Ganong	22nd edition 2005	McGraw- Hill Medical	Review of Medical Physiology	Recommended Books:

8- الإمكانيات المطلوبة لتنفيذ المقرر:

ت	الإمكانيات المطلوب توفرها	ملاحظات
1	القاعات الدراسية المجهزة	
2	معمل متكامل	
3	مكتبة	
4	أجهزة حاسوب + إنترنت	

منسق المقرر... د طاهر الشامي..... التوقيع

منسق البرنامج..... د وائل اسماعيل..... التوقيع

التاريخ...../...../.....م

مصفوفة المقرر الدراسي (علم وظائف الاعضاء 1)

المه																المعرفة والفهم				الأسبوع الدراسي
المهارات العامة							المهارات العلمية والمهنية				المهارات الذهنية									
٧.د	٦.د	٥.د	٤.د	٣.د	٢.د	١.د	٤.ج	٣.ج	٢.ج	١.ج	ب.٤	ب.٣	ب.٢	ب.١	أ.٤	أ.٣	أ.٢	أ.١		
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النموذج ط.ا.ب (٠١١) | تاريخ الاصدار : ٠١ / ٠١ / ٢٠٠٩ م | تعديل رقم (٢) | تاريخ التحديث ٠٨ / ٠٨ / ٢٠٢٣ م