

وزارة التعليم العالي والبحث العلمي جهاز
الإشراف والتقويم العلمي
دائرة ضمان الجودة والاعتماد الأكاديمي

استمارة وصف البرنامج الأكاديمي للعام الدراسي ٢٠٢٤_٢٠٢٥ للكليات والمعاهد

الجامعة : جامعة شط العرب الأهلية

الكلية /المعهد : الكلية التقنية الهندسية

القسم العلمي : قسم هندسة تقنيات الأجهزة الطبية

تاريخ ملء الملف : 2025/8/4

التوقيع :

اسم المعاون العلمي: أ.د. كامل حسين السواري

التاريخ :

4/8/2025

الأستاذ الدكتور
كامل حسين السوداني
كيمياء تحليلية

التوقيع :

اسم رئيس القسم : د. نائل جبار

التاريخ : 2025 /8/4



دقق الملف من قبل

شعبة ضمان الجودة والأداء الجامعي

اسم مدير شعبة ضمان الجودة والأداء الجامعي: التاريخ

/ /

التوقيع

مصادقة السيد العميد

أ.م.د. مازن عبدالاله علوان

عميد الكلية التقنية الهندسية

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information			
معلومات المادة الدراسية			
Module Title	Anatomy & Physiology		Module Delivery
Module Type	Support or related learning activities		<input checked="" type="checkbox"/> Theory <input type="checkbox"/> Lecture <input checked="" type="checkbox"/> Lab <input type="checkbox"/> Tutorial <input type="checkbox"/> Practical Seminar
Module Code	MIET2105		
ECTS Credits	4		
SWL (hr/sem)	100		
Module Level	UGII	Semester of Delivery	
Administering Department	MIET	College	EETC
Module Leader	Dr. Abbas Fadhal Humadi	e-mail	Drabbas@mtu.edu.com
Module Leader's Acad. Title	Asst. Professor	Module Leader's Qualification	PhD.
Module Tutor		e-mail	
Peer Reviewer Name	Ghaidaa Abdulrahman Khalid	e-mail	ghaidaakhalid@mtu.edu.iq
Scientific Committee Approval Date	8/11/2023	Version Number	1.0

Relation with other Modules			
العلاقة مع المواد الدراسية الأخرى			
Prerequisite module	None	Semester	None
Co-requisites module		Semester	

Module Aims, Learning Outcomes and Indicative Contents أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Aims أهداف المادة الدراسية	<p>1-Anatomy and Physiology are important medical discipline to understand structures and functions of human body cells, tissues, organs, organ systems, and as a whole system, how it works and the relationships between body parts.</p> <p>2- This mode unit consists of main elements of anatomy and physiology, the terminology used, and how our body control itself.</p> <p>3- Students will be able to understand how medical device work with the human body and what the benefit from it.</p> <p>4- To understand the level of organization of the human organism and the homeostatic system.</p> <p>5- To understand the chemical structure, chemical reactions and their control with acid-base balance in human body.</p>
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	<ol style="list-style-type: none"> 1. Demonstrate correct usage of the terminology used to describe anatomical structures. 2. Describe the organization of cells and tissues. 3. Describe the principles relating to the structure of connective tissues, skeletal muscle, bones, and joints. 4. Describe the principles of excitable tissues. 5. Describe the structure and function of the human eye and ear and the mechanisms of vision and hearing. 6. Describe the principles of sensorimotor control. 7. Describe cardiac mechanics and cardiac biophysics. 8. Develop quantitative descriptions of physiological properties and systems. 9. Describe the application of technologies and techniques for investigating the structure and function of the body. 10. Demonstrate communication skills (oral and written) to describe the structure and function of the human body. 11. Describe basic structural and functional features of the major organ systems within the human body. 12. Define basic biological processes essential for maintenance of homeostasis. 13. Correlate specific structural features of human cells, tissues, organs and systems of the human body with their normal functions, and identify the changes that occur during human development, ageing and disease.
Indicative Contents	Topics include:

المحتويات الإرشادية	<ul style="list-style-type: none"> • Anatomical terminology (5 hrs). • The structure and appearance of cells and tissues (6 hrs). • The appearance of bone and cartilage, the organization of dense connective tissues (6 hrs). • Skeletal muscle structure and function. Principles of excitable tissues. [15 hr] • The structure and function of sensory systems, including the eye and vision and the ear and hearing. • Principles of sensory motor control. Cardiac mechanics and cardiac biophysics.[10 hr] • Multiscale modelling of physiological systems (6 hrs). • Technologies, quantitative measurements and experimental techniques used to investigate the structure and function of different tissues, organs and organ systems. [15 hr]
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Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	<p>The learning and teaching strategies employed in this module can vary depending on the specific course. However, here are some common strategies that may be used with this course:</p> <p><u>Teaching methods include:</u></p> <ul style="list-style-type: none"> • lectures • seminars • tutorials • lab experiments • design assignments. • industrial visits • professional training • a variety of projects <p><u>Assessment :</u> methods of assessment include a combination of:</p> <ul style="list-style-type: none"> • coursework • group project reports • lab reports • written exams.

Student Workload (SWL) الحمل الدراسي للطالب			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	64	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعيا	4
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	36	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعيا	2
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	100		

Module Evaluation تقييم المادة الدراسية					
		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	4	20%	2,4,6, 8, 10, 12	LO : 1,2,3.....14
	Assignments	2	5%	7, 10	LO : 6, 13
	Projects / Lab.	2	5%	5, 9	LO : 1-5, 6-9
	Report	1	10%	11	LO : 1,2,312
Summative assessment	Midterm Exam	2 hr	10% (10)	7	LO : 1-7
	Final Exam	4 hr	50 % (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus) المنهاج الاسبوعي النظري	
	Material Covered
Week 1	Introduction to Anatomy and Physiology.
Week 2	The Chemical level of Organization.
Week 3	The Cell level of Organization
Week 4	The Tissue level of organization
Week 5	The Integumentary system
Week 6	The Muscular system
Week 7	Mid Exam
Week 8	The Skeletal System
Week 9	The Central Nervous System
Week 10	The Peripheral Nervous System and Autonomic Nervous System.

Week 11	The Sense and Sensory System.
Week 12	The Endocrine System.
Week 13	The Cardiovascular System: The Heart, Blood Vessels And Blood.
Week 14	The Respiratory System. The Urinary System.
Week 15	Preparatory week before final exam

Delivery Plan (Weekly Lab. Syllabus) المنهاج الاسبوعي للمختبر	
	Material Covered
Week 1	Lab 1 measurement of body temperature
Week 2	Lab 2 Coagulation
Week 3	Lab 3 The blood
Week 4	Lab 4 Membrane transport
Week 5	Lab 5 Complete blood count
Week 6	Lab 6 Hemoglobin (Hb) Determination
Week 7	Lab 7 Erythrocyte Sedimentation Rate ESR
Week 8	Lab 8 Total leucocyte count
Week 9	Lab 9 Total Red Blood Cell R B C count
Week 10	Lab 10 Platelets count
Week 11	Lab 11 Blood film
Week 12	Lab 12 Blood group
Week 13	Lab 13 Blood sugar
Week 14	Lab 14 Blood urea & Blood pressure

Learning and Teaching Resources		
مصادر التعلم والتدريس		
	Text	Available in the Library?
Required Texts	Frederic H Martini, Edwin F Bartholomew, William C. Ober, Claire W. Garrison, Kathleen Welch, & Ralf T Hutchings (2007), <i>Essentials of Anatomy and Physiology</i> , 14 th edn, Pearson Education, San Francisco, USA.	No
Recommended Texts	1- Human Physiology Study Guide 2- Human Anatomy & Physiology: Help and Review	
Websites	Interactive physiology, Copyright © 2005 Pearson Education, Inc. publishing as Benjamin	

Grading Scheme				
مخطط الدرجات				
Group	Grade	التقدير	Marks (%)	Definition
Success Group (50 - 100)	A - Excellent	امتياز	90 - 100	Outstanding Performance
	B - Very Good	جيد جدا	80 - 89	Above average with some errors
	C - Good	جيد	70 - 79	Sound work with notable errors
	D - Satisfactory	متوسط	60 - 69	Fair but with major shortcomings
	E - Sufficient	مقبول	50 - 59	Work meets minimum criteria
Fail Group (0 – 49)	FX – Fail	راسب (قيد المعالجة)	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required
Note: Marks Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.				