Unit Description Form

Course Description Form

Faculty of Engineering / Department of

Unit Information

Course Information

Unit Title	Physiology I I	**Unit delivery**	
Unit Type	**fundamental**	☒ نظريه ☒ حاضر ☒ المختبر ☐ تعليمي ☐ عملي ☐ Seminar	
Unit Code	BME-22-01		
ECTS Credits	**8**		
SWL (ساعة / SEM)	60 hours theoretical		

Unit level	3	**Delivery Semester**	2
Department of Administration	Biomedical	**College**	Engineering
Unit Commander	Ahmed Back	**E-mail Address**	ahmed.oudah@uowa.edu.iq
Title of Unit Commander	Assistant Lecturer	**Unit Commander Qualifications**	Master
Unit Teacher		**E-mail Address**	
Peer Reviewer Name	name	**E-mail Address**	E-mail Address
Date of accreditation of the Scientific Committee	26/9/2024	**Version number**	1.0

Relationship with other units

Relationship with other subjects

Prerequisites Unit	No	**Semester**	
Common Requirements Unit	No	**Semester**	

Unit objectives, learning outcomes and how-to contents Course objectives, learning outcomes and instructional contents	
Objectives of the Unit Course Objectives	**1. Understand the basic concepts of physiology: Study the functioning of various vital systems in the body such as the nervous, circulatory, respiratory, and digestive systems.** **2. Developing scientific analysis skills: analyzing physiological processes such as neurotransmission, regulating blood circulation, and thermal equilibrium mechanisms using appropriate experimental methods.** **3. Application of physiological principles in practical life: linking normal bodily functions to practical applications in medicine, nursing, and health sciences.** **4. Develop critical and scientific thinking: Understand how organs and systems interact with each other in normal and pathological conditions to analyze health problems.** **5. Master the use of physiological instruments: Learn to use medical devices and modern technologies such as electrocardiogram (ECG), spirometer, and hematography to understand vital processes.** **6. Promote an applied understanding of organ functions: explore the impact of environmental factors, physical activity, and medications on various bodily functions.** **7. Deepen integrative understanding: Study the relationship between physiology and other sciences such as anatomy, biochemistry, and physics to comprehensively understand biological processes.**
Unit Learning Outcomes Learning outcomes of the course	**1. Comprehensive understanding of organ functions: The student can interpret the basic physiological processes in different body systems and relate them to normal and pathological conditions.** **2. Physiological data analysis: The student is able to analyze experimental results and observations related to physiology using scientific tools and techniques.** **3. Application of physiological knowledge: The student can employ physiological concepts to understand the impact of external factors such as medicines, diseases, and the environment on the human body.** **4. Critical thinking and problem solving: The student masters critical and systematic thinking to identify physiological problems and propose appropriate solutions based on scientific evidence.** **5. Use of modern technologies: The student is able to operate specialized physiological devices and analyze results related to physiology in research and practical contexts.**

Indicative Contents Indicative Contents	**1. Basic concepts:** **Definition of physiology and its importance in understanding the functioning of the human body.** **Study the organizational levels of the body (cell, tissue, organs).** **2. Body systems and their functions:** **Nervous system: mechanisms of neurotransmission and regulation of vital functions.** **Circulatory system: heart work, circulation, blood pressure.** **Respiratory system: gas exchange and respiratory mechanisms.** **Digestive system: digestion and absorption of nutrients.** **Urinary system: regulation of fluid balance and excretion of waste.** **3. Hardware integration:** **Study the functional relationships between organs (such as the relationship between the nervous and circulatory systems).** **4. Physiological changes:** **Analysis of physiological responses to various factors (such as sports or diseases).** **Study the differences between normal and pathological physiology.** **5. Physiological measurements:** **Use tools and techniques such as ECG and spirometer.** **Interpret experimental data and results.** **6. Practical applications:** **Use physiological knowledge in the fields of medicine, nursing, and physiotherapy.** **Analyze health problems and provide appropriate solutions based on physiological understanding.**

Learning and Teaching Strategies Learning and Teaching Strategies	
Strategies	1. Active Learning: Encourage students to actively participate by solving exercises and problems themselves, enhancing their understanding of mathematical concepts. 2. Collaborative learning: teamwork to solve mathematical problems, helping to exchange ideas and develop analytical skills. 3. Project-based learning: Using applied mathematical projects that link mathematics to everyday life, such as studying statistics or engineering designs.

	4. Ongoing Assessment: Conduct regular quizzes and exercises to track students' progress and identify points that need to be strengthened. 5. Interpretation and Discussion: Encourage students to explain their solutions and ways of thinking to stimulate deep understanding and improve communication skills.

Student Workload (SWL)

The student's academic load is calculated for 15 weeks

SWL منظم (h / sem) Regular academic load of the student during the semester	30	**SWL regulator(h/s)** Regular student load per week	5
SWL غير منظم (h / sem) Irregular academic load of the student during the semester	30	**Unregulated SWL (h/s)** Irregular student academic load per week	5
SWL إجمالي (h / sem) The student's total academic load during the semester	60		

Unit Evaluation

Course Evaluation

As		Time/Number	Weight (tags)	Week due	Related learning outcomes
Formative Assessment	Contests	2	10% (10)	5, 10	LO #1 , 2, 10 and 11
	Assignments	2	10% (10)	2, 12	LO #3 , 4, 6 and 7
	Projects /Laboratory.	1	10% (10)	continuous	every
	report	1	10% (10)	13	LO #5 , 8 and 10
Final Assessment	Midterm Exam	2 hr	10% (10)	7	LO #1-7
	Final Exam	2 hours	50% (50)	16	every
	Overall Rating		100% (100 degree)		

Delivery Plan (Weekly Curriculum)

Theoretical Weekly Curriculum

week	Covered Material
Week 1	
Week 2	
Week 3	
Week 4	
Week 5	

Week 6	
Week 7	
Week 8	
Week 9	
Week 10	
Week 11	
Week 12	
Week 13	
Week 14	
Week 15	
Week 16	

Learning and Teaching Resources Learning and Teaching Resources		
	text	**Available in the library?**
Required texts		Yes
Recommended texts		Yes
Websites		

Grading chart Grading chart				
group	**degree**	Appreciation	**Tags (%)**	**definition**
An-Najah Group (50 - 100)	**A -** Excellent	privilege	90 - 100	Outstanding Performance
	B - Very Good	Very good	80 - 89	Above average with some errors
	C - Good	Good	70 - 79	Proper work with noticeable errors
	D - Satisfactory	medium	60 - 69	Fair but with significant shortcomings
	E - sufficient	Acceptable	50 - 59	The work meets the minimum standards
Group failure (0 – 49)	**FX -** Failed	Deposit (in (processing	(45-49)	More work required but credit granted
	F - Failed	Failure	(0-44)	Large amount of work required

Note: Signs that are more than 0.5 decimal places greater than or below the full mark will be rounded higher or lower (for example, a score of 54.5 will be rounded to 55, while a mark of 54.4 will be rounded to 54. The university has a policy of not tolerating "imminent traffic failure", so the only modification to the marks granted by the original mark(s) will be the automatic rounding described above.