	Ministry of Higher Education and Scientific Research - Iraq Al-Nahrain University College of Science Applied Pathological Analysis Department	

MODULE DESCRIPTOR FORM

نموذج وصف المادة الدراسية

Module Information معلومات المادة الدراسية					
Module Title	Human Biology		**Module Delivery**		
Module Type	Core		☒**Theory** ☒**Lecture** ☒**Lab** ☒**Tutorial** ☐**Practical** ☒**Seminar**		
Module Code	APPA124				
ECTS Credits	7				
SWL (hr/sem)	175				
Module Level	1	**Semester of Delivery**		2	
Administering Department	Applied Pathological Analysis	**College**	College of Science		
Module Leader	Dr. Zainab Sabeeh Dr. Mustafa A. Hadid	**e-mail**	Zainab.sabeeh@nahrainuniv.edu.iq hadid.m.a@nahrainuniv.edu.iq		
Module Leader's Acad. Title	Assistant Professor	**Module Leader's Qualification**		Ph. D.	
Module Tutor	MSc. Ahmed Jabbar	**e-mail**	ahmedjabbar939393@gmail.com		
Peer Reviewer Name	Dr. Mustafa A. Hadid	**e-mail**	hadid.m.a@nahrainuniv.edu.iq		
Review Committee Approval	24/02/2024	**Version Number**	1		
Laboratory Staff	Dr. Wael Adil Obaid, Dr. Evan H. Sulaiman, MSc. Hadeer Faris, MSC. Estabraq Sami, MSc. Mays Abdulhadi, MSC. Zeena Murshed, MSc. Eman Adnan Abdulmajeed, Dr. Nawfal Haitham Shakir, MSc. Ahmed Jabbar, MSc. Saddam Yahya Diwan, MSc. Noor Dheyaa Jaafar, MSc. Anwar Hameed Darwesh, MSc. Noor Jumaa Swari.				

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

Module Aims, Learning Outcomes and Indicative Contents أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Aims أهداف المادة الدراسية	The course is designed to teach the students: 1. A comprehensive understanding of the human body's structure, function, process, and behavior. 2. Knowledge of human biology improves our understanding of the human body, and how it works at the cellular, tissue, organ, and system levels to illustrate our place as human beings in the natural world.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	Knowing the body molecules and the body systems is of paramount importance for several reasons: 1. Understanding the body's systems work helps identify issues and select appropriate treatments. 2. Understanding the body's systems enables individuals to make informed decisions about their health. This knowledge can promote preventive measures, such as adopting a healthy lifestyle, regular check-ups, and identifying disease risk factors. 3. Teaching about body systems is fundamental in medical and biology education. It provides the foundation for healthcare professionals. 4. Individuals can better manage their health and well-being when they understand their bodies; this includes making dietary and lifestyle choices that promote good health.
Indicative Contents المحتويات الإرشادية	Chemistry of life. Carbohydrates (starch and glycogen) from simple sugars Lipids from fatty acids and glycerol Protein from amino acids Nucleic acids from nucleotides

	Transport and movement of substances: diffusion, osmosis, and active transport. Factors that affect the rate of transport
	Major organ systems
	Blood vessels and circulation
	Lymphatic system and Immune system components
	Mid-Term Examination
	Digestive System and Nutrition
	Respiratory tract structure and function
	Kidney structure and function
	Bones and their roles and joints
	Muscle types
	Neurons and nerve impulses
	Endocrine Glands
	Male and female reproductive anatomy

Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	Learning Strategies: Encourage students to take organized notes during lectures. Provide practice questions and problem-solving exercises. Participate actively in group discussions and collaborative activities. Use textbooks, online resources, and supplementary materials to reinforce learning. Provide constructive feedback on assignments and assessments. Feedback helps students understand their strengths and areas for improvement. **Teaching Strategies:** - Encourage students to actively engage with the material through discussions and group activities to promote deeper understanding. - Deliver well-structured lectures that provide a clear overview of the topic. - Incorporate videos, animations, and interactive simulations to illustrate complex biological processes.

	- Assign readings or video lectures as homework and use class time for discussions and activities.

Student Workload (SWL) الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	97	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعيا	7
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	78	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	5
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	175		

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

Delivery Plan (Weekly Syllabus) المنهاج الاسبوعي النظري	
	Material Covered
Week 1	**Week 1**: Introduction to human biology.

	Chemistry of life, Molecule of life **(**Micro molecules and macromolecules) in the human cell. Understand the structure of carbohydrates, proteins, lipids, and nucleic acids as large molecules made up of smaller basic units: - Carbohydrates (starch and glycogen) from simple sugars - Lipids from fatty acids and glycerol - Protein from amino acids - Nucleic acids from nucleotides
Week 2-3	**Week 2:** Understanding of the nature of biological membranes. Review and explain the types of cellular transport. Understand the factors that affect the rate of movement of substances into and out of cells, including surface area to volume ratio, temperature, and concentration gradient. **Week 3:** Know the definitions of diffusion, osmosis, and active transport. Understand that the movement of substances into and out of cells can be by diffusion, osmosis (understanding of water potential is required), active transport.
Week 4-7	**Week 4:** Body Systems. Cardiovascular System: Heart and Blood Vessels, and Blood Overview of the Cardiovascular System The Types of Blood Vessels The Heart Is a Double Pump Features of the Cardiovascular System Two Cardiovascular Pathways Exchange at the Capillaries Blood: An Overview Red Blood Cells and Transport of Oxygen White Blood Cells and defense Against Disease Platelets and Blood Clotting Blood Typing **Week 5:** Lymphatic System and Immunity Microbes, Pathogens, and human The Lymphatic System Types of Immunity Hypersensitivity Reactions **Week 6:** Digestive System Overview of Digestion First Part of the Digestive Tract The Stomach and Small Intestine Three Accessory Organs and Regulation of Secretions The Large Intestine **Week 7: Mid-Term Examination**
Week 8-11	**Week 8:** Respiratory System The Respiratory System

	The Upper Respiratory The Lower Respiratory Mechanism of Breathing Control of Ventilation Gas Exchanges in the Body **Week 9:** Urinary System and Excretion Urinary System Kidney Structure Urine Formation Regulatory Functions of the Kidneys **Week 10:** Reproductive System Human Life Cycle Male Reproductive System Female Reproductive System **Week 11:** Skeletal System Movement and Support in Humans, Overview of the Skeletal System Bone Growth; Bones of the Axial Skeleton, and Bones of the Appendicular Skeleton Articulations
Week 12-14	**Week 12:** Muscular System Overview of Muscular System Skeletal Muscle Fiber Contraction Whole Muscle Contraction **Week 13:** Nervous System Overview of the Nervous System The Central Nervous System The Limbic System and Higher Mental Functions The Peripheral Nervous System **Week 14:** Endocrine System Endocrine Glands Hypothalamus and Pituitary Gland Thyroid and Parathyroid Glands Adrenal Glands Pancreas Other Endocrine Glands
Delivery Plan (Weekly Lab. Syllabus) **المنهاج الاسبوعي للمختبر**	
Weeks	**Material Covered**

Week 1	**Lab1.** Classification of living organisms. -Definition of taxonomy and what are the levels of classification of organisms. -Life kingdoms including Kingdom Animalia, Kingdom Fungi, Kingdom Plantae Kingdom Eubacteria, kingdom Protista, and Archaebacterial.
Week 2	**Lab2.** Transport of cellular materials part 1. - Types of transport across membranes. - Passive transport across membrane including simple and facilitated diffusion. Experiment: passive transport (simple diffusion) in solid and liquid medium
Week 3	**Lab3**. Transport of cellular materials part 2. - Passive transport across membrane including osmosis. Experiment 1: Red blood cells in hypertonic solution 0.9% NaCl. Experiment2: Dialysis tubing experiment
Week 4	**Lab 4.** Blood group system and Rhesus factor (Rh). - Rh blood group system for classifying blood groups according to the presence or absence of the Rh antigen (Rh factor) on the cell membranes of red blood cells. - Blood group detection test using ABO and Rh blood grouping kit.
Week 5	**Lab 5.** Mid-term exam
Week 6	**Lab 6.** Human body tissues. - Body tissue types and features including Epithelial tissues, Connective tissues, nerve tissues, and muscular tissues - Epithelial tissue types and their sites in human body organs.
Week 7	**Lab7.** Human body tissues. -An introduction to the skin and its function. -Skin layers features: -Epidermal appendages including nails, hair, sweat glands and sebaceous glands.

Learning and Teaching Resources
مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts		No

Recommended Texts	International-GCSE-Human-Biology-Student-Book  International-GCSE-Human-Studer Human Biology (10 Ed) Sylvia S. Mader	No Yes
Websites	https://ia601502.us.archive.org/24/items/cnx-org-col11903/clark-college-human-biology	

APPENDIX:

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	مقبول بقرار	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required

Note:

NB 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.



ملاحظة: هذا النموذج تم وضعه وتقديمه من قبل مديرية ضمان الجودة في وزارة التعليم العالي والبحث العلمي