



Ministry of Higher Education and
Scientific Research - Iraq
University of Warith Al-Anbiyaa
College of Sciences
Department of Medical Physics



MODULE DESCRIPTOR FORM

نموذج وصف المادة الدراسية

أ.م. د. شيلا وصفي نوري

Module Information			
معلومات المادة الدراسية			
Module Title	GENERAL BIOLOGY		Module Delivery
Module Type	CORE		Theory ✓ Lab ✓ Tutorial ✓ Seminar ✓
Module Code	MPH103		
ECTS Credits	9		
SWL (hr/sem)	225		
Module Level	1	Semester of Delivery	1
Administering Department	Medical Physics	College	College of Sciences
Module Leader	Dhurgham Adel Obaid	e-mail	dirgham.ad@uowa.edu.iq
Module Leader's Acad. Title	Assist Lecturer	Module Leader's Qualification	MSc in Biology
Module Tutor	Mohammed Abd Ali Hamza	e-mail	mohammed.ab@uowa.edu.iq
Peer Reviewer Name	-	e-mail	-
Review Committee Approval	2023-2024	Version Number	1

Relation With Other Modules			
العلاقة مع المواد الدراسية الأخرى			
Prerequisite module	No	Semester	-
Co-requisites module	No	Semester	-

Module Aims, Learning Outcomes and Indicative Contents

أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية

Module Aims أهداف المادة الدراسية	<p>The aims of the syllabus are to:</p> <ul style="list-style-type: none">• Contribute to students' general education through their involvement in the process of scientific investigation and the acquisition of biological knowledge and understanding• Encourage in students an attitude of scientific enquiry, of curiosity and self-discovery through<ul style="list-style-type: none">(i) individual study and personal initiative(ii) teamwork(iii) class-directed work• Develop an understanding of biological facts and principles• Enhance an interest in and develop an appreciation of the nature and diversity of organisms• Create an awareness of the application of biological knowledge to modern society in personal, social, economic, environmental, industrial, agricultural, medical, waste management and other technological contexts• Develop in students an ability to make informed evaluations about contemporary biological issues.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	<p>Upon successful completion of this course, the student will be able to do the following:</p> <ol style="list-style-type: none">1-Identifying the steps in the scientific method .2- Identifying function of cellular organelles.3- Describing the cellular membrane and the methods of cellular transport4- Differentiating between molecular structure of carbohydrates, lipids, proteins and nucleic acids.5-Recognizing the differences in chemical bonding and describe the structure of an enzyme and the enzyme's role in metabolism.6- Describing the structure of a chromosome including being able to distinguish between chromatin, chromatids, and centromere.7- Explaining the process of meiosis , define the following terms: gene, allele, locus, dominant, recessive, phenotype, genotype, homozygous and heterozygous8- Explaining the structure and types of Animal and Plant tissues.9- Recognizing the differences of Animal Cell Culture and Plant Cell Culture10- Demonstrating an understanding of the pathways that constitute cellular respiration and photosynthesis

	<p>11- Distinguishing between prokaryotic and eukaryotic cells</p> <p>12- Explaining the anatomy of bacteria and explain techniques used in bacterial smear preparation, such as Gram staining.</p>
<p>Indicative Contents المحتويات الإرشادية</p>	<p>Indicative content includes the following:</p> <ul style="list-style-type: none"> • Explaining the scope of biology and molecular basis of life (1) . • Describing life activities from the cellular point of view (2) . • Identifying the principal features of different groups of living things (3). • Explaining the scope of Tissues, bone and cartilages (8) . • Outlining basic processes of energy transduction and synthesis of intermediate or final products in living cells (4,5) . • Understanding the basic concepts of genetics and inheritance (6). • Understanding the concepts of infection and immunity (12) . • Classifying organisms based on their cellular organization and complexity (11) . • Explaining components, processes and interrelationships within a given ecosystem (3). • Explaining the scope of Plant tissues and Photosynthesis(10). • Develop scientific attitude, skill and conduct biological experiments using scientific procedures (12) . • Manipulating basic biological tool, record data and draw conclusions (12,9).

<p>Learning and Teaching Strategies استراتيجيات التعلم والتعليم</p>	
<p>Strategies</p>	<p>The ability to: - identify problems, make predictions, develop hypotheses and devise means of carrying out investigations to test the hypotheses; - plan and execute experimental procedures and operations in an appropriate sequence; - use experimental controls where appropriate; - modify an original plan or sequence of operations as a result of difficulties encountered in carrying out experiments or obtaining unexpected results; - take into account possible sources of errors and danger in the design of an experiment; - select and use appropriate equipment and techniques.</p>

Student Workload (SWL) الحمل الدراسي للطالب			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	93 hrs.	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعيا	6 hr.
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	132 hrs.	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعيا	9 hrs.
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	225 hrs.		

Module Evaluation تقييم المادة الدراسية					
		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	3	6	2, 8, 13, 5	3, 5, 6, 7, 8, 11
	Assignments	4	8	10, 9, 6, 1	12, 7, 8, 4
	Seminar	2	6	all	all
	Report	12	12	2,3,4,5,6,7,8,10, 11,12,13,14	all
	Discussion/ Lab	4	8	4,6,7,12	3,5,8,11
Summative assessment	Midterm Exam	1	10	8	1-10
	Final Exam	1	50	1-15	All points
Total assessment			100	1-15	All points

Delivery Plan (Weekly Syllabus) المنهاج الاسبوعي النظري	
	Material Covered
Week 1	Introduction to Biology
Week 2	Cell Structure
Week 3	Cytoplasmic membrane
Week 4	Organic Compounds a. Carbohydrates b. Lipids c. Proteins d. Nucleic Acids
Week 5	Energy and Metabolism
Week 6	DNA: The Genetic Material
Week 7	The Chromosomal Basis of Inheritance
Week 8	How Cells Divide + Midterm
Week 9	Tissues, bone and cartilages
Week 10	Plant tissues and organs
Week 11	Photosynthesis
Week 12	Prokaryotes and Viruses
Week 13	Anatomy of bacteria: Surface appendages, Capsule.
Week 14	Cell wall of G.+ve & G –ve bacteria.
Week 15	Protists and Fungi
Week 16	Final exam

Delivery Plan (Weekly Lab. Syllabus) المنهاج الأسبوعي للمختبر	
	Material Covered
Week 1	Orientation to the laboratory. Rules of conduct and general safety.
Week 2	Microscope & cell structure
Week 3	Cells : Prokaryotic Cells and Eukaryotic Cells
Week 4	Plant Cells, and Animal Cells
Week 5	Mitosis and Meiosis
Week 6	Animal Cell Culture
Week 7	The tissues (Single epithelial tissue)
Week 8	Plant tissue under microscope
Week 9	Plant Cell Culture
Week 10	Aseptic procedures ,culture media and habitat of microbiology
Week 11	Isolation and preparation of pure culture bacteria and fungi
Week 12	Microscopic examination and general morphology of fungi
Week 13	Bacterial smear preparation
Week14-15	Simple staining of bacteria (Gram staining).
Week 16	Final exam

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	Available in the Library?
Required Texts	<p>Mader, S. S. (2004). Human biology. (<i>No Title</i>).</p> <p>Lowe, J. S., & Anderson, P. G. (2014). <i>Stevens & Lowe's Human Histology E-Book: With STUDENT CONSULT Online Access</i>. Elsevier Health Sciences.</p> <p>Weaver, R. (2011). <i>EBOOK: Molecular Biology</i>. McGraw Hill.</p> <p>Alberts, B., Hopkin, K., Johnson, A. D., Morgan, D., Raff, M., Roberts, K., & Walter, P. (2018). <i>Essential cell biology: Fifth international student edition</i>. WW Norton & Company.</p> <p>Jawetz, M., Melinck, J., Adberg, E. A., Broks, G. O., Butel, J. S., & Ornston, N. L. (2012). Medical Microbiology 25.</p>	<p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p>
Recommended Texts	<p>Davis, J. (Ed.). (2011). <i>Animal Cell Culture</i>. Wiley-Blackwell.</p>	<p>No</p>
Websites	لا يوجد	

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