

	<p>Ministry of Higher Education and Scientific Research - Iraq Al-Mustaql University College Of Sciences Department of biology</p>	
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MODULE DESCRIPTOR FORM

نموذج وصف المادة الدراسية

Module Information			
معلومات المادة الدراسية			
Module Title	MICROBIOLOGY II		Module Delivery
Module Type	CORE		<ul style="list-style-type: none"> -Theory Lecture -Lab -Practical Seminar
Module Code	UOMU0352404		
ECTS Credits	5		
SWL (hr/sem)	200		
Module Level	1	Semester of Delivery	1
Administering Department	BIO	College	SCI
Module Leader	ali.kumait.hamad	e-mail	ali.kumait.hamad@uomus.edu.iq
Module Leader's Acad. Title	Assistant Professor	Module Leader's Qualification	
Module Tutor		e-mail	
Peer Reviewer Name		e-mail	
Review Committee Approval		Version Number	

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 والمحويات الإرشادية

Module Aims أهداف المادة الدراسية	<p>This study aims to:</p> <ol style="list-style-type: none"> 1. Giving information to the student regarding main characteristic of microorganisms. 2. Defining the types of microorganisms. 3. Studying the composition of Gram positive and Gram negative microorganisms. 4. Branches of microbiology.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	<ol style="list-style-type: none"> 1. Students were able to learn the latest information on microorganisms. 2. The student should know the most important terms related to the subject. 3. The student should understand the most important methods of isolating microorganisms. 4. The student should know the important and distinctive characteristics of microorganisms. 5. Identifying "bacteria" by studying the types of microscopes used and then examining them in their natural form under a light microscope. This is followed by the use of different staining methods to examine the cellular structures and can be used different culture methods to identify many types of pathogens.
Indicative Contents المحويات الإرشادية	<p>Indicative content includes the following.</p> <ol style="list-style-type: none"> 1. Students must wear lab gowns, gloves and masks 2. Handle with care laboratory chemicals 3. Do not use the mobile device inside the laboratory 4. Do not eat food and drinks inside the laboratory 5. Ensure that tools and hands are sterilized before and after work
Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	<ol style="list-style-type: none"> A. Theoretical lectures B. Practical laboratories C. Films and slideshows D. Scientific trips for field application

<h3 style="text-align: center;">Student Workload (SWL)</h3> <p style="text-align: center;">الحمل الدراسي للطالب</p>			
Structured SWL (h/sem) الحمل الدراسي المنظم للطالب خلال الفصل	102	Structured SWL (h/w) الحمل الدراسي المنظم للطالب أسبوعيا	7
Unstructured SWL (h/sem) الحمل الدراسي غير المنظم للطالب خلال الفصل	98	Unstructured SWL (h/w) الحمل الدراسي غير المنظم للطالب أسبوعيا	7
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	200		

<h3 style="text-align: center;">Module Evaluation</h3> <p style="text-align: center;">تقييم المادة الدراسية</p>					
		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	10% (10)	5, 10	LO # 1, 2, 10 and 11
	Assignments	2	10% (10)	2, 12	LO # 3, 4, 6 and 7
	Projects / Lab.	1	10% (10)	Continuous	
	Report	1	10% (10)	13	LO # 5, 8 and 10
Summative assessment	Midterm Exam	2 hr	10% (10)	7	LO # 1-7
	Final Exam	2hr	50% (50)	16	All
Total assessment		100% (100 Marks)			

<h3 style="text-align: center;">Delivery Plan (Weekly Syllabus)</h3> <p style="text-align: center;">المنهاج الأسبوعي النظري</p>	
	Material Covered
Week 1	Lecture. 1: Introduction to Medical Microbiology
Week 2	Lecture 2: General Characteristics of Bacteria
Week 3	Lecture 3: Gram Positive Cocci (Genus: Staphylococcus)
Week 4	Lecture 4: Gram Positive Cocci (Genus: Streptococcus)
Week 5	Lecture 5: Gram Negative Cocci (Genus: Neisseria)
Week 6	Exam

Week 7	Lecture 6: Gram Positive Rod (Genus: Clostridia and Bacillus)
Week 8	Lecture 7: Gram Negative Rod (Family : Enterobacteracea / Genus: E. coli and Salmonella)
Week 9	Lecture 8: Mycobacteria
Week 10	Lecture 9: Spirochetes
Week 11	Lecture 10: Bacterial Genetics
Week 12	Lecture 11: Polymerase Chain Reaction
Week 13	Lecture 12: Introduction to Virology
Week 14	Lecture 13: Introduction to Mycology
Week 15	Exam

Delivery Plan (Weekly Lab. Syllabus) المنهج الاسبوعي للمختبر	
	Material Covered
Week 1	Lab 1: Safety Measures in the Microbiology Laboratory
Week 2	Lab 2: Bacterial Count
Week 3	Lab 3: Types of Dilution used in Microbial Experiment (mic)
Week 4	Lab 4: Preparation of Culture Media
Week 5	Lab 5: Laboratory Diagnosis of Bacteria
Week 6	Exam
Week 7	Lab 6: Colony Morphology
Week 8	Lab 7: Biochemical Reaction
Week 9	Lab 8: Diagnosis of Staphylococcus and Streptococcus
Week 10	Lab 9: Diagnosis of Gram Negative Bacteria
Week 11	Lab 10: Immunological Methods
Week 12	Lab 11: Molecular Methods
Week 13	Lab 12: Diagnosis of Fungal Infection
Week 14	Lab 13: Diagnosis of Viral Infection
Week 15	Exam

Learning and Teaching Resources مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	<ul style="list-style-type: none"> - Procop, G. W., Church, D. L., Hall, G. S., & Janda, W. M. (2020). Koneman's color atlas and textbook of diagnostic microbiology. Jones & Bartlett Publishers. - Tortora, G. J., Funke, B. R., & Case, C. L. (2015). Microbiology: an introduction. Pearson Higher Ed. - Talaro, K., Chess, B., Wiersema, D. S., & Sen, P. (2013). Foundations in Microbiology, 2012. McGraw-Hill. - Madigan, M. T., Clark, D. P., Stahl, D., & Martinko, J. M. (2010). Brock biology of microorganisms 13th edition. Benjamin Cummings. - Warren Levinson (2023) . Review of Medical Microbiology and Immunology: 13 th edition. 	Yes Yes
Recommended Texts	Microbiology : A laboratory Manual 12 th edition . Pearson .2th edition. General Microbiology lab Manual . memoir . 2018.	Yes
Websites	https://faculty.ksu.edu.sa/sites/default/files/140_mbio-final_notes.pdf https://rlmc.edu.pk/themes/images/gallery/library/books/Microbiology/Text_Book_of_Microbiology.pdf	

APPENDIX:

GRADING SCHEME مخطط الدرجات				
Group	Grade	النطير	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.