Ministry of Higher Education and Scientific Research - Iraq
AL Mustaqba University
College of science
Department of biology

"COURSE PORTFOLIO"

Module Information معلومات المادة الدراسية					
Module Title	**Immunology**			**Module Delivery**	
Module Type	**Basic**			✓ **Theory** ✓ **Lecture** ✓ **Lab** ☐ **Tutorial** ☐ **Practical** ☐ **Seminar**	
Module Code	**Bio-**				
ECTS Credits	**7.0**				
SWL (hr/sem)	**175**				
Module Level	**3**		**Semester**	**1**	
Department	**Biological**		**College**	**College of Science**	
Module Leader	**Prof. Dr. Hussein Mahdi**		**E-mail**	**hussain.mahdi@uomus.edu.iq**	
Module Leader's Acad. Title			**Module Leader's Qualification**		
Module Tutor	**Name (if available)**		**e-mail**	**E-mail**	
Peer Reviewer Name	**Name**		**e-mail**	**E-mail**	
Scientific Committee Approval Date			**Version Number**		

Student Workload (SWL): Structured SWL (h/w) (Two contact hours of lectures) + Unstructured SWL (h/w) .

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	111	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	7.40
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	175		

Relation with other Modules:-

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	
COURSE DESCRIPTION:	Students will explore innate and adaptive immunity, antigen processing, antibody structure and function, hypersensitivity reactions, autoimmune diseases, immunodeficiencies, vaccines, and immune system disorders. Laboratory sessions introduce students to immunological techniques such as agglutination, ELISA, and blood typing. The course prepares students for advanced studies in medical immunology, microbiology, pathology, and clinical diagnostics.
Module Aims أهداف المادة الدراسية	1. Introduce students to the components and fundamental functions of the immune system. 2. Provide understanding of innate and adaptive immune responses. 3. Explain the structure and function of antibodies. 4. Study immune-related diseases such as hypersensitivity, autoimmunity, and immunodeficiency. 5. Develop students' understanding of vaccine mechanisms and immune responses. 6. Train students in laboratory techniques used for immunological diagnosis.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	**Knowledge and Understanding** 1. Describe the structure and functions of the immune system. 2. Distinguish between innate and adaptive immunity. 3. Explain antibody structure and functions. **Cognitive Skills** 4. Analyze immune responses under normal and pathological conditions. 5. Interpret immune system disorders and their underlying mechanisms. **Practical Skills** 6. Perform immunological tests such as agglutination, ELISA, and blood typing. 7. Handle biological samples and interpret immunological results.
Indicative Contents المحتويات الإرشادية	

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	**Available in the Library?**
1- Required textbooks	/Medical Immunology/ Tristram Stites	No
2- Main references (sources)	Introduction to Medical Immunology / Daniel P.	No
A- Recommended books and references (scientific journals, reports, etc.)	Immunology and Serology / Dr. Tariq Rashid Al-Zaidy	No

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)	A considerable amount of work is 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.

COURSE SCHEDULE:-

Week	hours	Topics Covered	Learning Outcomes
1	2	History of Immunology	

2	2	Types of Innate Immunity	
3	2	Cellular Factors	
4	2	Acquired Immunity: Innate, Artificial, and Cellular	
5	2	Lymphatic Secondary Organs	
67,	2	Immune System Function and Immune Response	
8	2	Exam	
9	2	Antigens	
10	2	Body Antigens	
11	2	Antibodies: General Characteristics	
12	2	Antibody-Antigen Interactions	
13	2	Forces Involved in Antibody-Antigen Interactions	
14	2	The Mechanism of Cellular Immunity - Chemical and Biological Factors	
15	2	Cancer and its Relationship to Immunity	
Final Exam			

Delivery Plan (Weekly Lab. Syllabus) المنهاج الاسبوعي للمختبر	
Week	**Material Covered**
Week 1	**Introduction to immunology and immunology**
Week 2	**Blood and its components, how to separate it, preserve plasma, serum, supplement and For him**
Week 3	**Antibodies - antibody structure, antigens and antigens**
Week 4	**The financial reaction of the antibody to the antibody**
Week 5	**Types of relief and**
Week 6,7	**Standardization and the concept of calibration**
Week 8	**Supplemental and damaged installation test**
Week 9	**Take care of a tie, so study check**
Week 10	**Turn-off examination and mobilization of the national dose**
Week 11	**The Viral hepatitis and its types**

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Learning Outcomes and Assessment Methods for " Immunology " Course.

Topics Covered	Learning Outcomes	Strategies for Achieving Outcomes	Assessment Methods
Topic History of Immunology	1-6	Report Writing, Field Visits, Theoretical Lectures, Scientific Films, Exploratory Work Teams.	Quizzes, Major reports, discussions during lectures, Written Exams, and oral exams.
Topic II: - Types of Innate Immunity	1-3	Problem-Based Learning, Report Writing, Field Visits, Scientific Trips, Theoretical Lectures, Small Group Discussions, Scientific Films, Exploratory Work Teams.	Seminars, Major reports, and discussions during lectures. Written Exams, oral exams.
Topic III: - Cellular Factors	3-6	Problem Based Learning, Report Writing, Theoretical Lectures, Small Group Discussions, Scientific Films.	Quizzes, discussions during lectures, Written Exams, homework, and oral exams.
Topic IV: - Acquired Immunity: Innate, Artificial, and Cellular	1-6	Report Writing, Scientific Trips. Theoretical Lectures, Small Group Discussions, and Scientific Films.	Seminars, Major reports, and discussions during lectures. Written Exams, oral exams.
Topic V: Lymphatic Secondary Organs	1-3	Theoretical Lectures, Small Group Discussions,	Seminars, quizzes, discussions during lectures, Written Exams, and oral exams.
Topic VI: - Immune System Function and Immune Response	1-6	Problem-Based Learning, Report Writing, Field Visits, Scientific Trips, Theoretical Lectures, Small Group Discussions, Scientific Films, and Exploratory Work Teams.	Seminars, quizzes, Major reports, Written Exams, homework, and oral exams.
***Topic VII*: Antigens**	2-3	Problem-Based Learning, Theoretical Lectures, Small Group Discussions.	Quizzes and discussions during lectures. Written Exams, Homework.

Module Evaluation:-

Module Evaluation تقييم المادة الدراسية					
		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative	Quizzes	2	10% (10)	5, 10	LO #1, 3 and 5
	Assignments &	2	10% (10)	2, 12	LO # 1, 3 and 6

assessment (40%)	**H.W.**				
	Projects / Lab.	1	10% (10)	Continuous	
	Seminar	1	10% (10)		
	Field Visits Report	1	10% (10)	10	LO # 3, 6
	Discussions During Lectures	10	10% (10)	Continuous	ALL
Summative assessment	**Midterm Exam (10%)**	2 hr	10% (10)	8	LO # All
	Final Exam (50%)	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

توزيع الساعات المجدولة و الغير مجدولة (SWL= SSWL +USWL)

Activity types	Structured SWL	Un structured SWL	No. of weeks	Time Factor	SWL (hr)
Class	32	66	15	2	98
Lab.	32	45	15	2	77
Tutorial					
Self Study		7.40	15		7.40
Quizzes	2		2	30 min.	2
discussions during lectures	5		15	20 min.	5
Projects / Lab.	15	2	15	1 hr.	16
Seminar	2	5	1	15 min.	12
Assignments, Home Work		4	1		4
Report		10	1		10
Midterm Exam (10%)	4		1		4

Final Exam (50%)	4		1		4
		Total SWL (hr/ Semester)			175
		ECTS			7