جامعة المستقبل
AL MUSTAQBAL UNIVERSITY

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information معلومات المادة الدراسية					
Module Title	Medical Virology			**Module Delivery**	
Module Type	Core			☒**Theory** ☐**Lecture** ☒**Lab** ☐**Tutorial** ☐**Practical** ☒**Seminar**	
Module Code	UOMU0307062				
ECTS Credits	5				
SWL (hr/sem)	125				
Module Level	3		**Semester of Delivery**	6	
Administering Department	Medical Biotechnology dept.		**College**	Sciences of college	
Module Leader	**Dr. Hussain Mahdi Abid**		**e-mail**	Hussain.Mahdi.Abid@uomus.edu.iq	
Module Leader's Acad. Title	Lecturer		**Module Leader's Qualification**	Ph.D.	
Module Tutor			**e-mail**		
Peer Reviewer Name			**e-mail**	E-mail	
Scientific Committee Approval Date			**Version Number**	1.0	

Relation with other Modules

العلاقة مع المواد الدراسية الأخرى

Prerequisite module	Medical Microbiology	**Semester**	4
Co-requisites module	Medical analysis	**Semester**	6

Module Aims, Learning Outcomes and Indicative Contents

أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية

Module Objectives أهداف المادة الدراسية	After completing this course student should be able to: 1. Review the history and principles of virology. 2. List the general properties of viruses 3. Write the different types of viruses 4. Describe the basic structure of viruses. 5. Differentiate between viruses and other microorganisms. 6. State the characteristics used to classify viruses. 7. List the taxonomic groups of viruses. 8. Describe the process of viral replication and reproduction. 9. Summarize the common Human viral diseases. 11. Describe the symptom and signs caused by human viruses 12. Discuss how viruses are transmitted and the application of control measures. 13. Summarize the different methods for isolation, purification and detection of viruses
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	Upon successful completion of this course, The student will be able to: 1. Define the virology term 2. List the general properties of viruses 3. Describe the reproduction method of the viruses 4. Write the different types of viruses 5. Describe the basic structure of viruses. 6. Differentiate between viruses and other microorganisms.

	7. State the principle used to classify viruses. 8. List the taxonomic groups of viruses. 09. Describe the process of viral replication and reproduction. 10. Describe the signs and symptom of infection by some human viruses 11. identify the different methods for virus isolation, purification 12. identify the up-to date laboratory diagnostic methods used for detection of human viruses.
Indicative Contents المحتويات الإرشادية	The lecture notes will introduce pathogenicity, virulence, signs and symptoms of some of the common viruses including Influenza, RSV, CMV, HIV, Rabies, Retroviruses, Rubella and parvoviruses. Some details about the detection methods of these viruses will also be reviewed.

Learning and Teaching Strategies

استراتيجيات التعلم والتعليم

Strategies	The lecture will be Delivered through open discussion and interactive learning which will attract and encourage almost all students to actively participate. Focused discussion on the major key points of the lecture and assess the students understanding through open discussion.

Student Workload (SWL)

الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا

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	61	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	4
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	**125**		

Module Evaluation

تقييم المادة الدراسية

		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	3	10	4, 9, 12	#1 ,#2 and 3, #8-#7, #10 and # 11
	Assignments (Exam)	2	10	7, 14	#13 and #6
	Oral presentation	1	10	10	all
	Essay	0	10	12	all
Summative assessment	Midterm Exam	2h	10	8	#1 to -#10
	Final Exam	3h	50	16	all
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)

المنهاج الاسبوعي النظري

	Material Covered
Week 1	General Virology - Brief outline on discovery of viruses - Nomenclature and classification of viruses - Distinctive properties of viruses
Week 2	Morphology and ultra-structure Capsids and their arrangements - Types and structures of viral envelopes. - Viral genome composition. - Virus related agents (viroids, prions, satellites).
Week 3	Nomenclature, classification and taxonomy of viruses
Week 4	Replication of viruses

Week 5	Isolation and cultivation of viruses
Week 6	Epidemiology, lifecycle, pathogenicity of viruses e.g Influenza, RSV, Retroviruses,
Week 7	Epidemiology, lifecycle, pathogenicity of viruses e.g HIV, Rabies
Week 8	Mid exam
Week 9	Epidemiology, lifecycle, pathogenicity of Oncogenic viruses
Week 10	Oral presentation
Week 11	Epidemiology, lifecycle, pathogenicity of HERPES SIMPLEX Virus (HSV1 AND HSV2)
Week 12	Epidemiology, lifecycle, pathogenicity of CMV, Rubella, mumps,
Week 13	Epidemiology, lifecycle, pathogenicity of Parvoviruses
Week 14	Viral vaccines, interferon and antiviral drugs
Week 15	Preparatory week for the final exam
Week 16	final Exam

Delivery Plan (Weekly Lab. Syllabus)

المنهاج الاسبوعي للمختبر

	Material Covered
Week 1	Introduction and principles of Electron microscope
Week 2	Introduction and principles of Inverted light microscope
Week 3	Virus titration and Hemagglutination and Haemagglutination inhibition test.
Week 4	Viral disinfection techniques
Week 5	purification for DNA viruses and RNA viruses
Week 6	Virus isolation via human and animal tissue culture
Week 7	Virus detection and isolation via antigen detection test.
Week 8	Mid term exam
Week 9	Virus detection and isolation via Enzyme immunoassays (EIA)

Week 10	Virus Quantification plague essay
Week 11	Viral DNA extraction from clinical specimen
Week 12	Viral RNA extraction from clinical specimen
Week 13	Virus Quantification and detection via Real time PCR
Week 14	Virus detection through PCR, reverse transcription-PCR
Week 15	Sequencing and phylogenetic analyses
Week 16	Final exam

Learning and Teaching Resources

مصادر التعلم والتدريس

	Text	**Available in the Library?**
Required Texts	Principles of Virology: 2004. 2nd ed. S. J. Flint, et al. ASM Press. • Plant virology 3rd edition. R.E.F., Matthews (2006).	
Recommended Texts	John B. Carter, Venetia A. Saunders, (2007) Virology: principles and applications .John Wiley and Sons– 358 pages	
Websites	related scientific papers	
Other learning materials	PPT prepared by the tutor of the module	

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)	Considerable amount of work 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.