

## Course Syllabus of Medical virology

Faculty: Medicine and Health Sciences

Department: Health sciences

Program: Bachelor in Medical laboratories

### I. General information about the course instructor :

Name	Dr.Rua'a Assayaghi	Office Hours(2 Hours Weekly )					
Location & phone No.	777259096	Sat	Sun	Mon	Tue	wen	Thu
Email	Rowamohammed2010@yahoo.com				2		

### II. General information about the course:

1.	Course Title :	Medical virology				
2.	Course Code and No. :	BML364				
3.	Credit Hours :	Theoretical	Seminar/Tutorial	Practical	Training	Total
		2		-		2
4.	Study Level and Semester:	3 <sup>rd</sup> year/ Second semester				
5.	Pre-requisites :	BHS120				
6.	Co-requisites :	None				
7.	Program in which the course is offered:	Bachelor in Medical laboratories				
8.	Teaching Language:	English				
9.	Instruction location:	University of Science and Technology, Sana'a ,Yemen				

### III. Course Description

Medical virology course provides students with basic knowledge in virology. Course is divided into two parts. First part contains the basic information about virus discovery, history of viral diseases, structure and classification of viruses, viral replication cycle and laboratory diagnosis. Second part involves information about pathogenesis, diseases, mode of transmission, lab. diagnosis and prevention of each human virus. Practical section focuses on the laboratory assays used in the diagnosis of viral diseases. Lectures, lab classes and other teaching strategies are used. Biology is a e pre-requisite.



عميد الكلية:  
د. عبد الله المخلافي

رئيس القسم:  
د. عبد الحبيب ريمان

المراجع:  
د. أروى عثمان  
د. محمد الشميري

الموصف:  
د. رؤى السياغي

#### IV. Course Aims:

This course aimed to:

1. Provide students with knowledge on the structure of viruses, life cycle, classification, diseases they cause and mode of transmission.
2. Enable students to understand the different mechanisms of viral pathogenesis.
3. Enable students to perform basic and advance laboratory diagnostic tests for viruses.
4. Help students understand the principles of prevention and control measures for viral diseases.

#### V. Course Intended Learning Outcomes (CILOs)

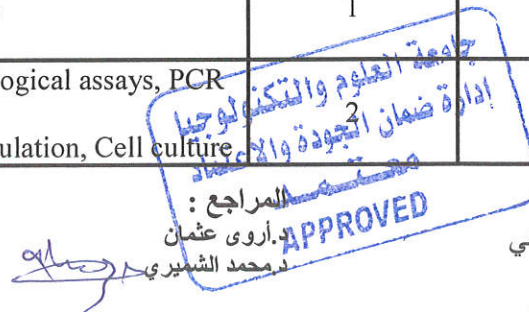
After completing this course, students would be able to:

1. Describe the general features , structure of viruses and differences between viruses and other microorganisms.
2. Explain the replication strategies of viruses, genetics ,classification and the mechanisms of viral pathogenesis.
3. List viral diseases , their mode of transmission and different viral cell lines suitable for viral growth.
4. Define the principles and procedures of laboratory tests used to diagnose viral diseases.
5. Categorize viruses according to standard taxonomy.
6. Select the suitable sample , laboratory tests for diagnosis and the suitable measurements for control of viral diseases.
7. Interpret laboratory results of viral tests.
8. Collect, transport and store viruses samples.
9. Perform the main serological tests used for detection of viral antigens in clinical samples and molecular techniques used for virus detection.
10. Monitor and handle live virus preparations, growth and quantification in cell culture.
11. Respect senior academic/medical staff and colleagues.
12. Appreciate different views and team work.

#### VI. Course Contents

Theoretical Aspect:

No.	Course Units	Sub-topics	Week	Contact Hours
1	Introduction to virology	-Definition and history of viruses - General features of viruses - Virus structure	1	2
2	Viral classification	Old and new classification of viruses	1	2
3	Viral replication cycle	- Replication of DNA viruses - Replication of RNA viruses - Replication of retroviruses	1	2
4	Bacteriophages, Genome and Genetics	- Phage therapy - Genome principle - Baltimore system	1	2
5	Lab diagnosis of viruses	- Microscopy, serological assays, PCR & RT-PCR - Virus animal inoculation, Cell culture	2	2



6	<b>Hepatitis viruses</b>	-Hepatitis viruses A, E and C -Hepatitis viruses B and D	2	4
7	<b>Mid exam</b>	Written exam	1	2
8	<b>Retroviruses</b>	- Human immunodeficiency virus - Human T-lymphotropic virus	1	2
9	<b>Childhood viral infections</b>	- Measles -Mumps - Rubella virus - Cytomegalovirus	1	2
10	<b>Viral respiratory tract infections</b>	-Influenza viruses - Parainfluenza viruses - Respiratory syncytial virus - Coronavirus	1	2
11	<b>Viral Gastroenteritis</b>	- Rotavirus - Adenoviruses	1	2
12	<b>picornaviruses</b>	- Poliovirus - Coxsackie viruses - Echoviruses	1	2
13	<b>Herpesviridae</b>	- Herpes simplex virus 1,2 - Varicella zoster virus - Epstein-Barr virus	1	2
14	<b>Arboviruses and unusual viruses</b>	- - Dengue and Zika virus - Yellow fever virus - Rabies virus - Ebola virus	1	2
15	<b>Final exam</b>	Written exam	1	2
<b>Total number of weeks and hours</b>			<b>16</b>	<b>32</b>

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بجودة والاعتماد  
معتد  
APPROVED  
المراجع  
د. أروى عثمان  
د. محمد الشميري

الموصف :  
د. زوى السياغي