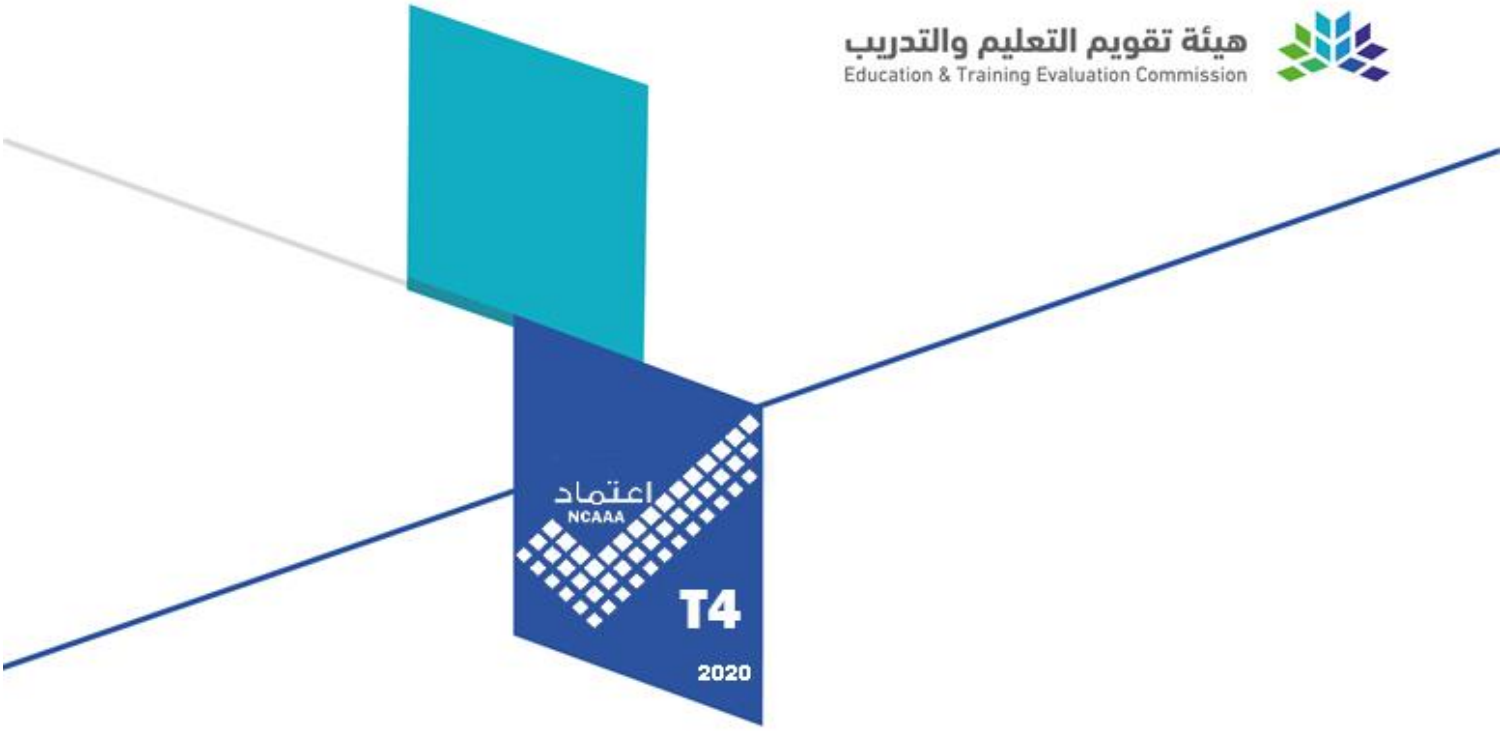
هيئة تقويم التعليم والتدريب
Education & Training Evaluation Commission



Course Specifications

Course Title:	Medical Virology
Course Code:	450 MBIO
Program:	Microbiology (B.Sc.)
Department:	Botany and Microbiology
College:	Science
Institution:	King Saud university

Table of Contents

A. Course Identification

1. Credit hours: 3(2+0+2)
2. Course type **a.** University ☐ College ☐ Department ☒ Others ☐ **b.** Required ☒ Elective ☐
3. Level/year at which this course is offered: 7th
4. Pre-requisites for this course (if any)**:** **250 MBIO**
5. Co-requisites for this course (if any)**:**

6. Mode of Instruction (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	**Traditional classroom**	45	%100
2	**Blended**		
3	**E-learning**		
4	**Distance learning**		
5	**Other**		

7. Contact Hours (based on academic semester)

No	Activity	Contact Hours
1	**Lecture**	30
2	**Laboratory/Studio**	30
3	**Tutorial**	
4	**Others** (specify)	
	Total	45

B. Course Objectives and Learning Outcomes

1. Course Description

This course introduces the role of viruses as human pathogens and their importance in the daily life and future activities. The course give a gain information about medical virology, virus infection pattern and different viral diseases.

2. Course Main Objective

1-To provide a strong fundamental aspects of medical virology.
2-To distinguish between different viral infection and understand the outcomes of infections for the host.
3- Discuss the prospects of using antivirals to eliminate specific viral
4- To be familiar with laboratory diagnostic measures for viral diseases

3. Course Learning Outcomes

CLOs		Aligned PLOs
1	**Knowledge and Understanding**	
1.1	At end of the course, the student will able to summarize the basic concepts of virus structure , viral classification as well as grouping of viruses basis on epidemiology criteria.	K3
1.2	At end of the course, the student will able to define the basic terms related to human immunity, virus infection type, virulence, viral disease and diagnostic methods.	
1.3	At end of the course, the student will able to compare between different type of vaccines and antivirals, and how its work.	
1.4	At end of the course, the student will able to define the basis of epidemiology, the issues on emergence of new viruses	
2	**Skills :**	
2.1	At end of the course, the student will able to write reports, essays and data sheets.	S1
2.2	At end of the course, the student will able to identify the main clinical and laboratory measures for diagnosis of human viral disease	
3	**Values:**	
3.1	At end of the course, the student will able to demonstrate the ability to work effectively as a part of team.	V1

C. Course Content

No	List of Topics	Contact Hours
1	Welcoming and discuss the syllables	3(2+0+2)
2	Classification of viruses and phylogenetic relationships	3(2+0+2)
3	Virus structure and composition.	3(2+0+2)
4	Laboratory diagnosis of virus disease	3(2+0+2)
5	Pathogenesis, Transmission mechanisms and route of entry	3(2+0+2)
6	Midterm 1	3(2+0+2)
7	Virulence and patterns of infection	3(2+0+2)
8	Human immunity and outcomes of infection for the host (innate and adaptive immune response).	3(2+0+2)
9	Mechanisms of viral oncogensis	3(2+0+2)
10	Midterm 2	3(2+0+2)
11	Emerging of viral disease.	3(2+0+2)
12	Epidemiology of viral infections	3(2+0+2)
13	Vaccines and vaccination	3(2+0+2)
14	Antiviral chemotherapy	3(2+0+2)
15	Examples of virus diseases in humans and their diagnosis (Practical)	3(2+0+2)
Total		45

D. Teaching and Assessment

1. Alignment of Course Learning Outcomes with Teaching Strategies and Assessment Methods

Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
1.0	**Knowledge and Understanding**		
1.1	At end of the course, the student will able to summarize the basic concepts of virus structure , viral classification as well as grouping of viruses basis on epidemiology criteria.	Lectures Presentations Homework	Midterm and final Exams Performance based assessment using rubrics
1.2	At end of the course, the student will able to define the basic terms related to human immunity, virus infection type, virulence, viral disease and diagnostic methods.		
1.3	At end of the course, the student will able to compare between different type of vaccines and antivirals, and how its work.		
1.4	At end of the course, the student will able to define the basis of epidemiology , the issues on emergence of new viruses		
1.3	Compare between different type of vaccines and antivirals, and how they work.		
2.1	At end of the course, the student will able to write reports, essays and data sheets.	Lab Assignments Reports.	performance assessment using rubrics
2.2	At end of the course, the student will able to Identify the main clinical and laboratory measures for diagnosis of human viral disease		
3.0	**Values**		
3.1	At end of the course, the student will able to demonstrate the ability to work effectively as a part of team.	Discussion in lectures Lectures	performance assessment using rubrics

2. Assessment Tasks for Students

#	Assessment task*	Week Due	Percentage of Total Assessment Score
1	Homework	4,6,8,10	5%
2	lab Reports	Every week	10%
3	M1	5	12%
4	M2	9	13 %
5	Practical exam	13	20%
6	Final exam	16	40%

***Assessment task** (i.e., written test, oral test, oral presentation, group project, essay, etc.)

E. Student Academic Counseling and Support

Arrangements for availability of faculty and teaching staff for individual student consultations and academic advice :
5 office hours\week 2 hours for the academic advice Email

F. Learning Resources and Facilities

1.Learning Resources

Required Textbooks	Burrell, C.J., Howard, C.R. and Murphy, F.A., 2016. *Fenner and White's Medical Virology*. Academic Press. Carter, J., Saunders, V. and Saunders, V.A., 2007. *Virology: principles and applications*. John Wiley & Sons.
Essential References Materials	
Electronic Materials	Websites- videos
Other Learning Materials	Saudi digital library (SDL) can be used for access to any books, ebooks, journals which related to the topics in this course or others.

2. Facilities Required

Item	Resources
Accommodation (Classrooms, laboratories, demonstration rooms/labs, etc.)	Classrooms laboratories
Technology Resources (AV, data show, Smart Board, software, etc.)	Data show, Smart Board
Other Resources (Specify, e.g. if specific laboratory equipment is required, list requirements or attach a list)	• cell culture, biosafety level 2 laboratory • Laminar airflow and safety cabinets • Microscopes (Light and inverted) • PCR and electrophoresis systems, kits used in diagnosis of viruses

G. Course Quality Evaluation

Evaluation Areas/Issues	Evaluators	Evaluation Methods
Effectiveness of teaching and assessment	Students	Questioners, course report (indirect)
Extent of achievement of course learning outcomes	Faculty	Exam and quizzes (direct)

Evaluation Areas/Issues	Evaluators	Evaluation Methods
Teaching strategy	Peer Reviewer – faculty, students	Questioners, direct
evaluation of course	students	Questioners (indirect)
Midterm evaluation feed-back form to increase instructor's awareness of the weak and strong points of the class	Faculty	Exams

Evaluation areas (e.g., Effectiveness of teaching and assessment, Extent of achievement of course learning outcomes, Quality of learning resources, etc.)
Evaluators (Students, Faculty, Program Leaders, Peer Reviewer, Others (specify)
Assessment Methods (Direct, Indirect)

H. Specification Approval Data

Council / Committee	**Academic Accreditation and Evaluation Committee** 
Reference No.	Update-1443
Date	20/09/1443 H