



Course Specifications

Course Title:	Virology	
Course Code:	232 MIC – 2	
Program:	Biology	
Department:	Biology	
College:	Science	
Institution:	Jazan University	

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A. Course Identification

1. Credit hours: 2h			
2. Course type			
a.	University <input type="checkbox"/>	College <input type="checkbox"/>	Department <input checked="" type="checkbox"/>
b.	Required <input checked="" type="checkbox"/>	Elective <input type="checkbox"/>	Others <input type="checkbox"/>
3. Level/year at which this course is offered: Four/Two (level4 / year 2 nd)			
4. Pre-requisites for this course (if any): None			
5. Co-requisites for this course (if any): None			

6. Mode of Instruction (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	Traditional classroom	15 h	75%
2	Blended	5 h	25%
3	E-learning	-	-
4	Distance learning	-	-
5	Other	-	-

7. Contact Hours (based on academic semester)

No	Activity	Contact Hours
Contact Hours		
1	Lecture	15
2	Laboratory/Studio	30
3	Tutorial	-
4	Others (specify)	-
	Total	45
Other Learning Hours*		
1	Study	26
2	Assignments	4
3	Library	2
4	Projects/Research Essays	-
	Lab reports	2
5	Others(specify)- Exam preparation (mid + final)-	10
	-Office hours	1
	Total	45
	Grand Total (Contact hours + Other learning hours)	90

B. Course Objectives and Learning Outcomes

1. Course Description

Course Description:

Course Title	Course No.	Credit Units			Year	Level	Pre-Requisite
		Theoretical	Practical	Total			
VIROLOGY	232MIC	1	1	2	2 nd	4th	231Mic

1) Course Objectives:

The nature of viruses and their relationships with the other living organisms, and to study their characteristics and their medical and economical importance

2) Course Contents:

General characteristics of viruses. Virus structure and shapes, viroids, prions, satellites, multiplication of viruses, virus. Taxonomy and cultivation, viral pathogenesis, patterns of some viral diseases, cell transformation by viruses, interferon, antiviral agents, immunization and vaccination

3) Practical:

- Structure of the particles of different families of viruses.
- Virus isolation (tissue culture, chick embryo and laboratory animals) .
- Isolation and characteristics of bacteriophage.
- Enumeration of viruses: Haemagglutination.
- Hospital Visits: to know the laboratory diagnosis methods of virus infection

4) Assessment:

Exams: Objective (MCQs), class work, Quiz, Written.

Practical: Identifying samples and slides, drawings.

Theory 15%

Quiz 10%

Practical 25%

Final 50%

5) Teaching Methods:

Lectures, photographs, slides, multimedia, web-based learning. Samples, light microscopes, glassware, chemicals.

6) Text Books:

- Carter J., Venetia (2005) Virology. John and John Wiley & Sons, London.

7) References:

- W. A. Volk (1994) Essentials of Medical Microbiology. Lippincott, Philadelphia.
- Levine, A.J. (1992) Viruses. Scientific American Library.
- Belshe, R.B. (1984) Human Virology. PSG. Publishing Com. INC.
- Alan, J. C. (2005) Principles of Molecular Virology. Elsevier, Amsterdam.
- Pleczar, M.J., Cang E.C.S., Krieg N.R. (1993) Microbiology. McGraw Hill, New York.

2. Course Main Objective

This course aims at giving the student knowledge in the fields:

- Viruses, Viroids and Prions.

- Viruses Classification/Cultivation/Replication/Diseases.
- Clinical types, Properties, epidemiology, structure and classification of:
Influenza Viruses/Enteroviruses/Rabies/Herpes/Hepatitis
- Rotavirus, adenovirus, calciviruses and astroviruses.
- Cytomegalovirus and congenital and postnatal problems.
- Benefits of using antiviral therapy for treatment the viral disease.
- Virus and cancer. (Sarcoma and leukaemia viruses)
- Morphology, genome structure, epidemiology and transmission of retroviruses.
- Clinical features of HIV.

3. Course Learning Outcomes

CLOs		Aligned PLOs
1	Knowledge and Understanding	
1.3	List all characteristics importance features steps related to Virology.	K1
2.1	Differentiate (compare) between different mechanisms, functions, practices and aspects related to Virology.	K2
2.3	Draw all systems organs cells and its contents diagrams and figures of Virology	K3
2	Skills :	
1.3	Examine theoretically or practically the slides photos, diagrams or statements of Virology.	S1
2.1	Predict the results of some Virology problems and experiments.	S2
3.3	Propose solutions for different complex virology approaches.	S3
3	Values:	
1.2	Integrate prior knowledge of virology technology along with new knowledge in the profession for the sake of self-continuing professional development	V1

C. Course Content

No	List of Topics	Contact Hours
1	Viruses, general properties; disease and host response	1
2	Virus replication	1
3	Influenza and Other respiratory tract infections	1
4	- Neurological diseases due to viruses and Enterovirus infections	2
5	Viral gastroenteritis	1
6	Arthropod-borne virus infections and Rabies, non-arthropod-born haemorrhagic fevers	2
7	Herpesvirus diseases and Childhood fevers	2
8	Poxvirus diseases - Viral hepatitis	2
9	Warts and Retroviruses	2
10	Antiviral therapy	1
Total		15

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		
K1.3	List all characteristics importance features steps related to Virology.	Lectures,	Quizzes, Short Answer Question, MCQs
K2.1	Differentiate (compare) between different mechanisms, functions, practices and aspects related to Virology.	Lectures,	Quizzes, Short Answer Question, MCQs, Assignments
K2.3	Draw all systems organs cells and its contents diagrams and figures of Virology	Lectures	Assignments, Quizzes, MCQs, Short answers
2.0	Skills		
S1.3	Examine theoretically or practically the slides photos, diagrams or statements of Virology courses.	Lectures/ Labwork/Assignment	Quizzes, Short Answer Question
S2.1	Predict the results of some virology problems and experiments	Lectures/Labwork/ assignment	Quizzes, Short Answer Question, Assignment
S3.3	Propose solutions for different complex virology approaches.	Lab work/Assignment	Lab work/ assessment
3.0	Values		
V1.2	Integrate prior knowledge of Virology technology along with new knowledge in the profession for the sake of self-continuing professional development.	Lab work/Assignment	Lab work / assessment

2. Assessment Tasks for Students

#	Assessment task*	Week Due	Percentage of Total Assessment Score
1	Lecture Quizzes 1	4	5
2	Mid-term Theory exam	6	10
3	Practical Midterm exam	8	10
4	Homework assignment	10	5
5	Lecture Quizzes 2	12	5
6	Final practical exam	14	15
7	Final Exam	15	50

*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 :

Each group of students is assigned to a member of staff who will be available for help and academic guidance office hours at specific hours on daily basis.

F. Learning Resources and Facilities

1. Learning Resources

Required Textbooks	- Carter J., Venetia (2005) Virology. John and John Wiley & Sons, London.	
Essential References Materials	- Alan, J. C. (2005) Principles of Molecular Virology. Elsevier, Amsterdam.	
Electronic Materials	E-Journals in Virology.	
Other Learning Materials	None	

2. Facilities Required

Item	Resources
Accommodation (Classrooms, laboratories, demonstration rooms/labs, etc.)	1 Lecture room(s) for groups of 50 students. 1 Laboratory for group of 25 students.
Technology Resources (AV, data show, Smart Board, software, etc.)	AV, data show, Smart Board.
Other Resources (Specify, e.g. if specific laboratory equipment is required, list requirements or attach a list)	Light microscopes, glassware, chemicals, consumables, Dissection tools.

G. Course Quality Evaluation

Evaluation Areas/Issues	Evaluators	Evaluation Methods
Effectiveness of teaching	Students, Faculty	Direct (Questionnaire)
Effectiveness of assessment	Peer Reviewer	Direct (Cross Check marking)
Extent of achievement of course learning outcomes	Program Leader	Indirect (QA Committee)
Quality of learning resources	QA. Committee	Indirect (Benchmarking)

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	Consultant Committee/ Board of Biology Department	
Reference No.	6 th MEETING OF THE BOARD OF BIOLOGY DEPARTMENT 1440-1441	
Date	01/03/2021	