Beni Suef University
Faculty of Veterinary Medicine

Course specification (Virology 2017-2018)

1-Basic information

Course Code:	-
Course title :	General, systemic and diagnostic virology
Academic year:	Third year
Program title:	B. Sc. Veterinary Medical sciences
Contact hours/ week	Lecture: 2hrs/week Practical: 4hrs/week
Approval Date	2017-2018

2-Professional information

Overall aims of course:

The main purpose of this course is introducing the academic background and practical experience about virology science including virus structure, physico-chemical and biological properties of viruses and how to approach a problems caused by a viral agent.

3- Intended learning outcomes of course (ILOs)

a- Knowledge and understanding:

By the end of this course the student should be able to:

a1.Recognize the impotence of study in the field of virology.
a2.Describe the physico-chemical and biological properties of viruses.
a3.Mention the laboratory diagnosis methods that used in virology field.
a4.Explain the Mol. Biology of viruses
a5.Identify virus structure.
a6.Enumrate viruses inducing diseases in the veterinary field.

b-Intellectual skills

By the end of this course the student should be able to:

b1- Interpret the results of serological and molecular techniques.
b2- Arrange viruses according to standard taxonomy.
b3- Illustrate the virus replication strategy and infectious cycle.
b4-Formulate a systematic approach for laboratory diagnosis of virus diseases.

C- Professional and practical skill

By the end of this course the student should be able to:

c1-Perform serological tests for virus identification.
c2-Use molecular biology for virus diagnosis and vaccine preparation methods.
c3-Apply treatment by different antiviral chemotherapy.
c4-Employ all the gained knowledge in virological practice in skillful pattern.

d- General and transferable skills

By the end of studying the course, the student should be able to:

d1-Work in team and respect the legal ethical rules
d2-Classify different duties.
d3-Utilize information and communicating skills.
d4-Communicate effectively with public, colleagues and appropriate authorities.

4-Topics and contents

Course	Topic	week	No. of hours	Lectures	Practical
Third year-Virology (Lec. 2 h./week, Pract.4 h./week)	1-Introduction on viruses.	1	2	2	-
	2- Scheme and sampling	1	4	-	4
	3-Physical, chemical and biological proprieties of viruses	2	2	2	-
	4-AGPT	2	4	-	4
	5-Virus replication.	3	2	2	-
	6-FAT	3	4	-	4
	7-Virus pathogenesis.	4	2	2	-
	8-ELISA (introduction and principle)	4	4	-	4
	9- Host resistance to viral infection.	5	2	2	-
	10-ELISA (types and procedures)	5	4	-	4
	11- Immunity against viral disease.	6	2	2	-
	12-HA	6	4	-	4
	13-Virus vaccination	7	2	2	-
	14-HI	7	4	-	4
	15-Virus Taxonomy, Picornaviruses	8	2	2	-
	16-ECE(introduction and principle)	8	4	-	4
	17- Orthomyxoviruses	9	2	2	-
	18-ECE (types and procedures)	9	4	-	4
	19-Paramyxoviruses, Corona viruses	10	2	2	-
	20-TC (introduction and principle)	10	4	-	4
	21-Birna viruses, Rhabdoviruses	11	2	2	-
	22-TC (types and procedures)	11	4	-	4
	23- Arboviruses, Herpes viruses	12	2	2	-
	24-Virus titration	12	4	-	4
	25- Pox viruses ,Adenoviruses	13	2	2	-
	26-Revision	13	4	-	4
	Total	**13**	**78**	**26**	**52**

5-Teaching and learning methods

5.1- Lectures (brain storm, discussion) using board, data shows.

5.2-Self learning by preparing essays and presentations (internet researches and faculty library)

5.3- Practical (application of laboratory diagnosis and data show).

7-Student assessment

7.1. Assessments methods:

Method	Matrix alignment of the measured ILOs/ Assessments methods			
	K&U	**I.S**	**P&P.S**	**G.S**
Final Exam	a1-a2-a3-a4	b2-b3	c4	
Practical Exam	a1-a3	b1-b4	c1-c2-c3-c4	
Oral Exam	a1-a2-a3-a4	b1-b2-b3-b4	c1-c4	d2-d4

7.2. Assessment schedules/semester:

Method	Week(s)
Practical exams	14th week
Final exams	15th week
Oral Exam	managed by the department
Student activities	along the semester

7.3. Weight of assessments/semester

Assessment	Weight of assessment
Final exams	50%
Practical exam	30%
Oral Exam	20%
Student activities	-
total	100%

8- List of references

8.1. Notes and books

-Bases in veterinary virology (staff members of virology department).

8.2. Essential books:

- Sharma,S.N. (2009): Veterinary Virology volume 4.

8.3. Recommended texts

-D. E. White, Frank J. Fenner (2007): Virology Principles and Applications

-D. E. White, Frank J. Fenner (2004): Medical Virology, Fourth Edition

-Arie J. Zuckerman , Jangu E. Banatvala , J. R. Pattison (2007): Principles and Practice of Clinical Virology, 4th Edition

-Alan J. Cann (2005): Principles of Molecular Virology (Standard Edition), Fourth Edition

Journals:

-www.Sciencedirect.com

-www.OIE.int.com

-www.pubmed.gov

-www.asmnews@asmusa.org

Course Coordinators — **Head of Department**

Dr. Ahmed Saad Hussein — Prof. Dr./ Sabry Mohammed Tamam

Matrix of Intended learning outcomes of course (ILOs)

	Topics	Wk	Knowledge and Understanding	Intellectual Skills	Practical and Professional Skills	General & Transferable Skills
			K and U (a)	I.S (b)	P. P.S. (c)	G.T.S (d)
1	1-Introduction on viruses.	1	1		4	1,2,3,4
2	2- Scheme and sampling	1	1	4	2,4	1,2,3,4
3	3-Physical, chemical and biological proprieties of viruses	2	1,2,5	4	4	1,2,3,4
4	4-AGPT	2	1,3	1,4	1,4	1,2,3,4
5	5-Virus replication.	3	1,2	1,3,4	4	1,2,3,4
6	6-FAT	3	1,3	1,4	1,4	1,2,3,4
7	7-Virus pathogenesis.	4	1,4	2,4	2,4	1,2,3,4
8	8-ELISA (introduction and principle)	4	1,3	1,4	1,4	1,2,3,4
9	9- Host resistance to viral infection.	5	1,4	2,4	2,4	1,2,3,4
10	10-ELISA (types and procedures)	5	1,3	1,4	1,4	1,2,3,4
11	11- Immunity against viral disease.	6	1,4	2,4	2,3,4	1,2,3,4
12	12-HA	6	1,3	1,4	1,4	1,2,3,4
13	13-Virus vaccination	7	1	4	2,4	1,2,3,4
14	14-HI	7	1,3	1,4	1,4	1,2,3,4
15	15-Virus Taxonomy, Picornaviruses	8	1,2,3,5,6	2,4	1,2,3,4	1,2,3,4
16	16-ECE(introduction and principle)	8	1,3	1,4	1,4	1,2,3,4
17	17- Orthomyxoviruses	9	1,2,3,5,6	2,4	1,2,3,4	1,2,3,4
18	18-ECE (types and procedures)	9	1,3	1,4	1,4	1,2,3,4
19	19-Paramyxoviruses, Corona viruses	10	1,2,3,5,6	2,4	1,2,3,4	1,2,3,4
20	20-TC (introduction and principle)	10	1,3	1,4	1,4	1,2,3,4
21	21-Birna viruses, Rhabdoviruses	11	1,2,3,5,6	2,4	1,2,3,4	1,2,3,4
22	22-TC (types and procedures)	11	1,3	1,4	1,4	1,2,3,4
23	23- Arboviruses, Herpes viruses	12	1,2,3,5,6	2,4	1,2,3,4	1,2,3,4
24	24-Virus titration	12	1,3	1,4	1,4	1,2,3,4
25	25- Pox viruses ,Adenoviruses	13	1,2,3,5,6	2,4	1,2,3,4	1,2,3,4
26	26-Revision	13	1,2,3,4,5,6	1,2,3,4	1,2,3,4	1,2,3,4