Beni Suef University
Faculty of Veterinary Medicine

Program Specification for Master Degree of Virology 2017-2018

A-Basic information:

1-Program title: *MVSC.,*
2- Program type: *Single*
3- Department offering program: *Virology*
4-Academic year: *2017-2018*
5-Approval date of Department Council:
6-Approval date of Faculty Council:
7-External evaluator:

B-Professional information:

1- Overall aims of the program:

The main purpose of this program is introducing the postgraduates to the basics of scientific research in the field of isolation, identification and control of different viral diseases.

1- Intended learning outcomes of course (ILOs):

a- Knowledge and understanding:

On successful completion of this program the graduate should be able to :

a1-Recognize the advanced concepts in virology field.
a2-Mention the advanced research techniques used in the field of virology.
a3-Identify methods of different viral diagnosis and describe the basis of viral immunity.
a4-Enumerate viruses inducing diseases.
a5-Explain the impact of molecular virology and viral genetics and describe basic methods of various virus control and prevention.

b- Intellectual skills:

On successful completion of master program the graduate should be able to:

b1- Analyze their own research data and develop new approach to solve their research questions.
b2- Interpret the results of serological techniques.
b3-Construct creative approaches to solve technical problems associate with running and research project.
b4-Plan for enhancing virological technique performance.

c- Professional and practical skills:

On successful completion of this program the graduate should be able to:

c1-Apply the principles of good experimental design and analysis to their own research project .
c2-Use recent virological techniques for diagnosis of different viral diseases.
c3-Evaluate the available and required material, tools and equipment in virological research projects.
c4- Write efficiently scientific paper and dissertation.

d- General and transferable skills:

On successful completion of this program the graduate should be able to:

d1-Properly use computer and internet skills.
d2- Work in teams and appreciate the importance of cooperation.
d3-Properly communicate with others.
d4- Enhance his/her effective presentation skills.

2- Academic standers:

* The faculty mission, vision and strategic objective are confirmed to the academic standard. The learning outcomes are inline with the department and the faculty mission.
* Postgraduates NARS (March 2009) Master degree chapter issued by national authority for quality assurance and accreditation of education (NAQAAE) and Veterinary medicine post graduate academic standards (ARS) for the faculty of veterinary medicine, Beni-Suef University, Beni-Suef, Egypt are selected to confirm the appropriateness of the academic standards .

4- Program Structure and Contents

A- Program duration: At least two academic years from the approval of registration by the Faculty Council and maximum four years. The faculty council has the right to give the applicant another period not exceed two years according to the supervisor request The first year for preliminary courses study, while the second year for researches and preparation of the Master Thesis.

B- Program structure: Hours/ week:

Basic course:-

Theoretical	4	Practical	7	Total	11

Subsidiary courses:-

Theoretical	5-8	Practical	6-10	Total	11-18

Master Thesis: completed during the second academic year.

C- Program courses:

1- basic courses

Code	Course title	Hours /week		Academic year	Teaching duration
		theoretical	practical		
	Master Principal course	3	4	Preliminary year	36 weeks
	Research methods	1	3	Preliminary year	36 weeks

2-subsidiary courses

Code	Course title	Hours /week		Academic year	Semester
		theoretical	Practical		
	Selected (3-5) courses depending on the thesis title from the various Faculty Master courses other than specialty of the Master.	5-8	6-10	Preliminary year	36 weeks

D- Courses contents
See master courses specification

5- Program Admission Requirements

a- According to the Faculty of Veterinary Medicine, Beni-Suef University Bylaws for Post Graduate Programs, applicants should have BVSc., from an Egyptian University or equivalent degree from any approved university, with at least general grade (Good) and (Very Good) in the specialized subject.
b- Also if the student has postgraduate diploma in one specialization of total (3 hours) at least with general grade (Good) and (Very good) in the specialized subject.
c- According to Beni-Suef University requirements, all applicants for postgraduate studies should fulfill preliminary courses on the following subjects:
I- English language (Toefl or equivalent degree)
d- Admission to the program is open during March and September annually after at least one year from the BVSc degree.

6. Regulations for Progression and Program Completion

After finishing the preliminary courses, the graduate student will be eligible to sit for the examination according to the following roles:

No. of course teaching hours/ week	Allowed time for written exam.	Degree	
		Theoretical	Practical and oral exam
≥ 3 hours	3 hours	50	50
Less than 3 hours	2 hours	25	25

- It is mandatory to pass all the courses each chance except biostatistic (212)
-The passing mark in each exam is ⩾ 60%.
-The faculty council has the right to deprive the applicant from entering the exams if his attendance courses is less than 75% .

Qualification grades:

Excellent	≥ 90
Very good	From 80 to89
Good	From 70 to79
Pass	From 60to 69
Failed	45 to less than 60 weak
	Less than 45 Very weak

-After passing, the graduate starts research for Master Thesis at the beginning of the second year.
-The candidate will receive his degree after evaluating and approving the thesis by a committee according to University regulations.
-The applicant should publish at least one scientific papers from the thesis in local or international journals

7-Graduate student assessment

A: Assessment Tools

According the Faculty of Veterinary Medicine, Beni-Suef University Bylaws for Post Graduate, students should be assessed at the end of preliminary year and the thesis should be evaluated and approved by a committee according to University regulations.

1-Preliminary year

Assessments methods for each course	**practical exam**	**Oral exam**	**Written exam**
Time of Assessments	By the end of the year	By the end of the year	By the end of the year
Marks	25%	25%	50%

2-Master Thesis:

All master-degree students should prepare a thesis in virology. The department council must approve the protocol (plan) of the research. The thesis is supervised by one or more staff members and may include other specialties according to the nature of the research. The thesis should be evaluated and approved by a committee according to University regulations. The applicant should publish at least one scientific paper from the thesis in local or international journals

Program coordinator — Head of Department

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

Master Program Specification Matrix (Program Courses with ILOS)

Program ILOs		Courses
Knowledge and understanding	a1	M-90to M-94+Principle course
	a2	M-90to M-94+Principle course +Thesis
	a3	M-90, M-92 + Thesis
	a4	M-90 to M-94+Principle course
	a5	M-90to M-94+Principle course +Thesis
Intellectual skills	b1	Thesis
	b2	M-92 + Thesis
	b3	Thesis
	b4	M-92 + Thesis
Professional and practical skills	c1	Thesis
	c2	M-92 + Thesis
	c3	Thesis
	c4	Thesis
General and transferable skills	d1	M-90to M-94+Principle course +Thesis
	d2	M-90to M-94+Principle course +Thesis
	d3	M-90to M-94+Principle course +Thesis
	d4	M-90to M-94+Principle course +Thesis

Program aims – ILOS Matrix for the Master Degree
مصفوفة اهداف البرنامج مع مخرجات التعلم المستهدفة

Program aims / Program ILOs		1-Provide graduate with the knowledge about different viral disease and their control	2-Use efficiently the most recent techniques for identification and isolation of different viruses	3-Collect, manage and analyze the scientific data in virology field	4-Develop communication skills and improve scientific co-operation in research groups within the related fields	5-Write the dissertation, scientific papers and apply for scientific projects in the field of virology
Knowledge and understanding	a1	✓	✓	✓	✓	
	a2		✓			
	a3		✓		✓	✓
	a4			✓		
	a5	✓				✓
Intellectual skills	b1			✓		
	b2			✓	✓	✓
	b3		✓			
	b4	✓	✓		✓	
Professional and practical skills	c1		✓		✓	
	c2		✓			
	c3	✓		✓		
	c4					✓
General and transferable skills	d1					✓
	d2				✓	
	d3				✓	
	d4	✓	✓	✓		

Master Program Specification Matrix
(Program ILOS with Academic standers ARS)

Academic standers		Knowledge and understanding					Intellectual skills				Professional and practical skills				General and transferable skills			
Program ILOs		a1	a2	a3	a4	a5	b1	b2	b3	b4	c1	c2	c3	c4	d1	d2	d3	d4
Knowledge and understanding	a1	✓																
	a2		✓															
	a3			✓														
	a4				✓													
	a5					✓												
Intellectual skills	b1						✓											
	b2							✓										
	b3								✓									
	b4									✓								
Professional and practical skills	c1										✓							
	c2											✓						
	c3												✓					
	c4													✓				
General and transferable skills	d1														✓			
	d2															✓		
	d3																✓	
	d4																	✓

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Beni Suef University
Faculty of Veterinary Medicine

Course specification (Virology 2017-2018)

1-Basic information	
Course Code:	**MBC- Viro**
Course title :	**Basic Virology course**
Program title:	Master degree in Veterinary Medical Sciences (Virology).
Contact hours/ week	Lecture: 3hrs/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. Also, providing the student with the advanced methods of virus treatment and control measures of virus infection.

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 difference of virus from other in addition to its physical, chemical and biological properties
a3.Mention the laboratory diagnosis methods that used in virology field.
a4.Explain the molecular biology of viruses.
a5.Identify virus structure.
a6-Enumerate different types of virus vaccines

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.
b5- Differentiate between viral 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.
c5-Design and evaluate a diagnostic report.

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	No. of hours	Lectures	Practical
(Lec. 2 h./week, Pract.2 h./week)	**-Physico-chemical and biological properties of viruses. - virus structure**	**63**	**27**	**36**
	-viral immunity	**63**	**27**	**36**
	-Laboratory diagnosis of viruses	**63**	**27**	**36**
	-Molecular virology	**63**	**27**	**36**
	Total	**252**	**108**	**144**

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-a5-a6	b2-b3-b5	c3-c4	d3-d4
Practical Exam	a3-a4	b1-b4	c1-c2-c4-c5	d1-d2
Oral Exam	a1-a2-a3-a4-a5-a6	b1-b2-b3-b4-b5	c1-c2-c3-c4-c5	d2-d4

7.2. Assessment schedules/semester:

Method	Week(s)
Practical exam	managed by the faculty
written exam	managed by the department
Oral Exam	managed by the department

7.3. Weight of assessments/semester

Assessment	Weight of assessment
Written exam	50%
Practical exam	25%
student activities	---------
Oral exam	25%
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)

	Topic	weeks	ILOs			
			K and U (a)	I.S (b)	P. P.S. (c)	G.T.S (d)
1-	-Physico-chemical and biological properties of viruses. - virus structure	1st -9th	1,2,5	2,3	3,4	1,2,3,4
2-	-viral immunity	10th-18th	1,2	3	3,4	1,2,3,4
3-	-Laboratory diagnosis of viruses	19th-27th	1,3	1,2,4,5	1,4,5	1,2,3,4
4-	-Molecular virology	28th-36th	1,4,6	1,4,5	1,2,5	1,2,3,4

Beni Suef University
Faculty of Veterinary Medicine

Course specification (Virology 2017-2018)

1-Basic information

Course Code:	**M-90**
Course title :	**Virology (General)**
Program title:	Master degree in Veterinary Medical Sciences (Virology).
Contact hours/ week	Lecture: 2hrs/week Practical: 2hrs/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. Also, providing the student with the advanced methods of virus treatment and control measures of virus infection.

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 difference of virus from other in addition to its physical, chemical and biological properties
a3.Mention the laboratory diagnosis methods that used in virology field.
a4.Explain the molecular biology of viruses.
a5.Identify virus structure.
a6-Enumerate different types of virus vaccines

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.
b5- Differentiate between viral 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.
c5-Design and evaluate a diagnostic report.

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	No. of hours	Lectures	Practical
(Lec. 2 h./week, Pract.2 h./week)	**-Physico-chemical and biological properties of viruses. - virus structure**	**36**	**18**	**18**
	-viral immunity	**36**	**18**	**18**
	-Laboratory diagnosis of viruses	**36**	**18**	**18**
	-Molecular virology	**36**	**18**	**18**
	Total	**144**	**72**	**72**

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-a5-a6	b2-b3-b5	c3-c4	d3-d4
Practical Exam	a3-a4	b1-b4	c1-c2-c4-c5	d1-d2
Oral Exam	a1-a2-a3-a4-a5-a6	b1-b2-b3-b4-b5	c1-c2-c3-c4-c5	d2-d4

7.2. Assessment schedules/semester:

Method	Week(s)
Practical exam	managed by the faculty
written exam	managed by the department
Oral Exam	managed by the department

7.3. Weight of assessments/semester

Assessment	Weight of assessment
Written exam	50%
Practical exam	25%
student activities	---------
Oral exam	25%
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

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-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:

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-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)

	Topic	weeks	ILOs			
			K and U (a)	I.S (b)	P. P.S. (c)	G.T.S (d)
1-	-Physico-chemical and biological properties of viruses. - virus structure	1st -9th	1,2,5	2,3	3,4	1,2,3,4
2-	-viral immunity	10th-18th	1,2	3	3,4	1,2,3,4
3-	-Laboratory diagnosis of viruses	19th-27th	1,3	1,2,4,5	1,4,5	1,2,3,4
4-	-Molecular virology	28th-36th	1,4,6	1,4,5	1,2,5	1,2,3,4

Beni Suef University
Faculty of Veterinary Medicine

Course specification (Virology 2017-2018)

1-Basic information

Course Code:	**M-91**
Course title :	**Farm animals Virology**
Program title:	Master degree in Veterinary Medical Sciences (Virology).
Contact hours/ week	Lecture: 2hrs/week Practical: 3hrs/week
Approval Date	2017-2018

2-Professional information

Overall aims of course:

The main purpose of this course is helping the postgraduate student to distinguish between viral diseases that affect farm animals, isolate and identify the causative viruses , with principles of virus treatment, prevention and control.

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 farm animals virology.
a2.Describe morphology and physiology of farm animals viruses.
a3.Explain the basis of farm animals viral immunity.
a4.Mention the laboratory diagnosis methods that used in farm animals virology field.
a5.Enumerate different types of farm animals virus vaccines.

b-Intellectual skills

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

b1-Arrange farm animals viruses according to standard taxonomy.
b2-Formulate a systematic approach for laboratory diagnosis of farm animals virus diseases.
b3-Demonstrate the danger of handling and use of infectious agents on community and environment as a part of their ethical heritage.
b4-Interpret the results of serological techniques that used in diagnosis of farm animals viruses.

C- Professional and practical skill

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

c1-Employ all the gained knowledge in virological practice in skillful pattern.
c2-Use recent virological techniques for diagnosis of different viral diseases affecting farm animals.
c3-Perform serological tests for farm animals viruses identification..
c4-Design and evaluate a diagnostic report about farm animals virus disease.

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	No. of hours	Lectures	Practical
(Lec. 2 h./week, Pract.3h./week)	Physical, chemical and biological properties of farm animals viruses.	36	18	27
	Viral diseases affecting farm animals	36	18	27
	Laboratory diagnosis of farm animals viruses	36	18	27
	Basic methods of farm animals virus control and prevention	36	18	27
	Total	**180**	**72**	**108**

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-a5	b1-b4	c1-c4	d2-d3
Practical Exam	a1-a2-a4	b2-b3-b4	c2-c3-c4	d1-d4
Oral Exam	a1-a2-a3-a4-a5	b1-b2-b3-b4	c1-c2-c3-c4	d2-d4

7.2. Assessment schedules/semester:

Method	Week(s)
Practical exam	managed by the faculty
written exam	managed by the department
Oral Exam	managed by the department

7.3. Weight of assessments/semester

Assessment	Weight of assessment
Written exam	50%
Practical exam	25%
student activities	---------
Oral exam	25%
total	100%

8- List of references

8.1. Notes and books

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

8.2. Essential books:

-Fenner and White's Medical Virology (2016)5th Edition: Christopher Burrell Colin Howard Frederick Murphy

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

8.3. Recommended texts

- Alan Cann (2015), Principles of Molecular Virology, 6th Edition

- 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:

-https://www.futurelearn.com/courses/animal-viruses

-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)

	Topic	weeks	ILOs			
			K and U (a)	I.S (b)	P. P.S. (c)	G.T.S (d)
1-	Physical, chemical and biological properties of farm animals' viruses.	1st -9th	1,2,3	1	1,4	1,2,3,4
2-	Viral diseases affecting farm animals	10th-18th	1,2,3,5	2,3,4	1,2,3,4	1,2,3,4
3-	Laboratory diagnosis of farm animals viruses	19th-27th	4	1,2,3,4	1,2,3,4	1,2,3,4
4-	Basic methods of farm animals virus control and prevention	28th-36th	1,5	3	1	1,2,3,4

Beni Suef University
Faculty of Veterinary Medicine

Course specification (Virology 2017-2018)

1-Basic information

Course Code:	**M-92**
Course title :	**Diagnostic Virology**
Program title:	Master degree in Veterinary Medical Sciences (Virology).
Contact hours/ week	Lecture: 2hrs/week Practical: 2hrs/week
Approval Date	2017-2018

2-Professional information

Overall aims of course:

Introduce the postgraduates to the basics of scientific research in the field of isolation, identification and control of different viral diseases.

3- Intended learning outcomes of course (ILOs)

a- Knowledge and understanding:

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

a1-Identify scheme for diagnostic virology.

a2-Enumerate methods of sampling in the filed of virology.

a3-Mention the methods of viral diagnosis by different serological and recent molecular biology techniques.

a4-Recognize laboratory differential diagnosis.

b-Intellectual skills

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

b1-Demonstrate knowledge of the laboratory diagnosis of viral diseases and practical skills, including the isolation and characterisation of causative agents in clinical specimens.

b2-Formulate a systematic approach for laboratory diagnosis of virus disease and selection the most appropriate and cost effective for virus identification

b3-Distinguish between and critically assess classical and modern approaches to the development of therapeutic agents and vaccines for the prevention of viral diseases.

b4-Interpret the results of serological and molecular techniques.

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-Evaluate the used different serological and recent molecular biology techniques

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	No. of hours	Lectures	Practical
(Lec. 2 h./week, Pract.2 h./week)	-Sampling. -Basics of scientific research in the field of isolation, identification and control of different viral diseases.	36	18	18
	-Virus detection and identification by different serological tests.	36	18	18
	-Isolation of viruses by different methods.	36	18	18
	-Recent molecular virology techniques. -The danger of handling and use of infectious agents on community and environment as a part of their ethical heritage.	36	18	18
	Total	**144**	**72**	**72**

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-b4	c3-c4	d3-d4
Practical Exam	a2-a3-a4	b1-b4	c1-c2-c4	d1-d2
Oral Exam	a1-a2-a3-a4	b1-b2-b3-b4	c1-c2-c3-c4	d2-d4

7.2. Assessment schedules/semester:

Method	Week(s)

Practical exam	managed by the faculty
written exam	managed by the department
Oral Exam	managed by the department

7.3. Weight of assessments/semester

Assessment	Weight of assessment
Written exam	50%
Practical exam	25%
student activities	---------
Oral exam	25%
total	100%

8- List of references

8.1. Notes and books

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

8.2. Essential books:

-Diagnostic Virology Protocols(2011): Stephenson, John R., Warnes, Alan (Eds.)

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

8.3. Recommended texts

-Luisa Barzon,Laura Squarzon ,Monia Pacenti Giorgio Palù (2013):Developments and Challenges In Diagnostic Virology.

-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:

-http://www.virology.net/garryfavwebvirlabs.html

-http://www.virology.wisc.edu/links.html

-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)

	Topic	weeks	ILOs			
			K and U (a)	I.S (b)	P. P.S. (c)	G.T.S (d)
1-	-Sampling. -Basics of scientific research in the field of isolation, identification and control of different viral diseases.	1st -9th	1,2,3	1,2,4	3,4	1,2,3,4
2-	-Virus detection and identification by different serological tests.	10th-18th	3,4	1,2,3,4	1,2,3	1,2,3,4
3-	-Isolation of viruses by different methods.	19th-27th	1,3	1,2,3,4	1,2,3	1,2,3,4
4-	-Recent molecular virology techniques. -The danger of handling and use of infectious agents on community and environment as a part of their ethical heritage.	28th-36th	1,4,6	1,2,4	2,3,4	1,2,3,4

Beni Suef University
Faculty of Veterinary Medicine

Course specification (Virology 2017-2018)

1-Basic information

Course Code:	**M-93**
Course title :	**Poultry Virology**
Program title:	Master degree in Veterinary Medical Sciences (Virology).
Contact hours/ week	Lecture: 2hrs/week Practical: 2hrs/week
Approval Date	2017-2018

2-Professional information

Overall aims of course:

The main purpose of this course is helping the postgraduate student to distinguish between viral diseases that affect poultry, isolate and identify the causative viruses , with principles of virus treatment, prevention and control.

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 poultry virology.
a2.Describe morphology and physiology of poultry viruses
a3.Explain the basis of poultry viral immunity.
a4.Mention the laboratory diagnosis methods that used in poultry virology field.
a5.Enumerate different types of poultry virus vaccines.

b-Intellectual skills

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

b1-Arrange poultry viruses according to standard taxonomy.
b2-Formulate a systematic approach for laboratory diagnosis of poultry virus diseases.
b3-Demonstrate the danger of handling and use of infectious agents on community and environment as a part of their ethical heritage.
b4-Interpret the results of serological techniques that used in diagnosis of poultry viruses.

C- Professional and practical skill

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

c1-Employ all the gained knowledge in virological practice in skillful pattern.
c2-Use recent virological techniques for diagnosis of different viral diseases affecting poultry.
c3-Perform serological tests for poultry viruses identification..
c4-Design and evaluate a diagnostic report about poultry virus disease.

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	No. of hours	Lectures	Practical
(Lec. 2 h./week, Pract.2h./week)	Physical, chemical and biological properties of poultry viruses.	36	18	18
	Viral diseases affecting poultry	36	18	18
	Laboratory diagnosis of poultry viruses	36	18	18
	Basic methods of poultry virus control and prevention	36	18	18
	Total	**144**	**72**	**72**

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-a5	b1-b4	c1-c4	d2-d3
Practical Exam	a1-a2-a4	b2-b3-b4	c2-c3-c4	d1-d4
Oral Exam	a1-a2-a3-a4-a5	b1-b2-b3-b4	c1-c2-c3-c4	d2-d4

7.2. Assessment schedules/semester:

Method	Week(s)
Practical exam	managed by the faculty
written exam	managed by the department
Oral Exam	managed by the department

7.3. Weight of assessments/semester

Assessment	Weight of assessment
Written exam	50%
Practical exam	25%
student activities	---------
Oral exam	25%
total	100%

8- List of references

8.1. Notes and books

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

8.2. Essential books:

- Poultry Diseases, 6th Edition,(2007) Mark Pattison Paul McMullin Janet Bradbury Dennis Alexander
- Sharma,S.N. (2009): Veterinary Virology volume 4.

8.3. Recommended texts

- David E. Swayne Laboratory (2017), Director Diseases of Poultry, 13th Edition
- 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:

-http://www.thepoultrysite.com/publications/6/Diseases_Of_Poultry/
-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)

	Topic	weeks	ILOs			
			K and U (a)	I.S (b)	P. P.S. (c)	G.T.S (d)
1-	Physical, chemical and biological properties of poultry viruses.	1st -9th	1,2,3	1	1,4	1,2,3,4
2-	Viral diseases affecting poultry	10th-18th	1,2,3,5	2,3,4	1,2,3,4	1,2,3,4
3-	Laboratory diagnosis of poultry viruses	19th-27th	4	1,2,3,4	1,2,3,4	1,2,3,4
4-	Basic methods of poultry virus control and prevention	28th-36th	1,5	3	1	1,2,3,4

Beni Suef University
Faculty of Veterinary Medicine

Course specification (Virology 2017-2018)

1-Basic information

Course Code:	**M-94**
Course title :	**Fish Virology**
Program title:	Master degree in Veterinary Medical Sciences (Virology).
Contact hours/ week	Lecture: 2hrs/week Practical: 1hrs/week
Approval Date	2017-2018

2-Professional information

Overall aims of course:

The main purpose of this course is helping the postgraduate student to distinguish between viral diseases that affect fish, isolate and identify the causative viruses , with principles of virus treatment, prevention and control.

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 fish virology.
a2.Describe morphology and physiology of fish viruses
a3.Explain the basis of fish viral immunity.
a4.Mention the laboratory diagnosis methods that used in fish virology field.
a5.Enumerate different types of fish virus vaccines.

b-Intellectual skills

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

b1-Arrange fish viruses according to standard taxonomy
b2-Formulate a systematic approach for laboratory diagnosis of fish virus diseases.
b3-Demonstrate the danger of handling and use of infectious agents on community and environment as a part of their ethical heritage
b4-Interpret the results of serological techniques that used in diagnosis of fish viruses.

C- Professional and practical skill

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

c1-Employ all the gained knowledge in virological practice in skillful pattern
c2-Use recent virological techniques for diagnosis of different viral diseases
c3-Perform serological tests for virus identification..
c4-Design and evaluate a diagnostic report about fish virus disease.

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	No. of hours	Lectures	Practical
(Lec. 2 h./week, Pract.1h./week)	Physical, chemical and biological properties of fish viruses.	36	18	9
	Viral diseases affecting fish	36	18	9
	Laboratory diagnosis of fish viruses	36	18	9
	Basic methods of fish virus control and prevention	36	18	9
	Total	**108**	**72**	**36**

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-a5	b1-b4	c1-c4	d2-d3
Practical Exam	a1-a2-a4	b2-b3-b4	c2-c3-c4	d1-d4
Oral Exam	a1-a2-a3-a4-a5	b1-b2-b3-b4	c1-c2-c3-c4	d2-d4

7.2. Assessment schedules/semester:

Method	Week(s)
Practical exam	managed by the faculty
written exam	managed by the department
Oral Exam	managed by the department

7.3. Weight of assessments/semester

Assessment	Weight of assessment
Written exam	50%
Practical exam	25%
student activities	---------
Oral exam	25%
total	100%

8- List of references

8.1. Notes and books

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

8.2. Essential books:

-Fish Diseases and Disorders 2nd Edition by Patrick T. K. Woo (Editor), David W. Bruno (Editor)

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

8.3. Recommended texts

-Aquaculture Virology 1st Edition (2016), https://www.elsevier.com/books/aquaculture-virology/kibenge/978-0-12-801573-5

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:

-http://www.els.net/WileyCDA/ElsArticle/refId-a0020713.html

-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)

	Topic	weeks	ILOs			
			K and U (a)	I.S (b)	P. P.S. (c)	G.T.S (d)
1-	Physical, chemical and biological properties of fish viruses.	1st -9th	1,2,3	1	1,4	1,2,3,4
2-	Viral diseases affecting fish	10th-18th	1,2,3,5	2,3,4	1,2,3,4	1,2,3,4
3-	Laboratory diagnosis of fish viruses	19th-27th	4	1,2,3,4	1,2,3,4	1,2,3,4
4-	Basic methods of fish virus control and prevention	28th-36th	1,5	3	1	1,2,3,4