المـــركز الوطـــني لضمـــان جـــــودة واعتمـــاد
المـــؤسسات التعليميـــة التـــدريبية

National Center for Quality Assurance and Accreditation of Educational and Training Institutions (NCQAAETIs)

المتطلبات الأكاديمية للمقرر الدراسي

Academic requirements for the course

يناير 2019**م**

Academic requirements for the course

This form is intended to be filled electronically only and the space and column widths can be controlled as needed

1. General information

1	**College/Department/Program responsible for the course**	Faculty of veterinary medicine/Department of poultry and fish disease/Master of poultry disease
2	**Course code and name (in Arabic and English)**	**Advanced Avian Immunology MVPO 606** **مناعة الدواجن متقدم**
3	**Prerequisites and Accompanying the Course (Priorities)**	Bachelor of Veterinary Medicine
4	**Course coordinator name**	Dr.(Abdulatif Asheg) Dr.Imad Benlashehr Dr. Abdulwahab Kamon
5	**Scientific departments related to the program**	Department of Microbiology
6	**Total course credit (unit - hour / week)**	2 credite- 3 hrs/week
7	**The language used in teaching the course**	English Languages
8	**Academic year/semester**	Spring season
9	**The date of the course accreditation point (department board/college/university/other)**	Decision of the National Committee for Graduate Studies No. 1 of 2010

Number of weekly hours of the course:

Download the weekly student by hours	Lectures	1	discussion/application		Seminars		Total hrs	3
	Practical	2	field practical		independent study			

Type of the Course:

Basic		Specialty	X	Mandatory		Elective	X	Supporter	

2. Course objectives

1. Importance of avian immune system to combatant diseases.
2. Application of serological test to evaluation humeral immune responses, and advanced technique in diagnosis of poultry disease
3. Vaccine and antigen manufacturing

3. Course intended learning outcomes

1. Knowledge & understand

Following successful completion of the course, the student should be able to

A.1	The student learn Laboratory Biosafety
A.2	The student understanding the serological test to diagnosis disease and evaluation of humeral immune responses
A.3	The student known several methods to produce vaccines

2. Mental skills

Following successful completion of the course, the student should be able to

B.1	The student able to show different type of immune response pending on type of infection
B.2	The student can select specific serological test to diagnosis specific disease, and to evaluation specific immune responses
B.3	The student can explain the different methods of vaccine productions

3. Practical & professional skills

Following successful completion of the course, the student should be able to

C.1	The student able to collect specific samples for immunological analysis.
C.2	The student can perform the serological test and read the results.
C 3	The student can right the reports and interpreted the results.

4. Generic and transferable skills

Following successful completion of the course, the must be able to:

D.1	The student Can explain to the owner the roles of immune suppression diseases.
D.2	The student can investigate the diseases condition and solve the problems to the owner.
D.3	The student can involve in research team to discover vaccination problems

4. Course contents

Topic	weeks	Lecture	Laboratory	Number of hours
The Importance of the Avian Immune System	1	1	2	3
Haemagglutination and Haemagglutination Inhibition (HA&HI)	2	1	2	3
Enzyme Linked Immunosorbent Assay (ELISA)	3	1	2	3
Agar Gel Precipitation (AGP)	4	1	2	3
Virus neutralization test (VN)	5	1	2	3
Immunofluorescence	6	1	2	3
Polymerase Chain Reaction (PCR)	7	1	2	3
Sequencing	8	1	2	3
Histopathological Techniques	9	1	2	3
Immunohistochemistry techniques	10	1	2	3
Isolation of Avian viruses in fertile eggs	11	1	2	3
Isolation of Avian viruses in fertile eggs	12	1	2	3
vaccine manufacturing	13	1	2	3
Antibodies manufacturing	14	1	2	3
		14	28	42

5. Teaching and learning methods

1- The use of power point presentation of lecture including photo and video of clinical and pathological changes.
2- The use of biosafety cloths and biosafety cabinets
The use of machine and equipment in laboratory ex: Elisa reader, PCR machine, ect

6. Assessment table:

Evaluation	Types of evaluation	%	Weight of evaluation	Time of evaluation	Date of evaluation	NB
First evaluation	Writing exam	10	35	2 hours	After fife weeks of studies	
Second evaluation	Writing exam	10	21	2 hours	After eight weeks of studies	
Practical evaluation	Practical exam	20	100	3 hours	At 14 weeks of studies	
Oral evaluation	Oral exam	10	100	10-15 mints	At 14 weeks of studies	
Final evaluation	Writing exam	50	100	3 hours	At the end of course	
		%100	**marks100**	total		

7. References:

References	Author	Copyright	Publisher	NB
Hand sheets	Lecture	PDF	Lecture	
Text book	Y. M. Saif	disease of poultry	Blackwell	Paperback
Text book	Bernd Kaspers Karel Schat Thomas Göbel Lonneke Vervelde	Avian Immunology	3rd Edition Elsevier	Paperback
Journals	Online	AAAP	Avian disease journal	https://meridian.allenpress.com/avian-diseases

The required capabilities to implement the course

No.	Required capabilities	Notes
1	LCD projectors (Data show)	
2	Laptop computer	
3	Autopsy kits	
4	Plastic claves	
5	Disinfected solution	
6	Light microscope	
7	Rapid serological reagent	

- **Course Coordinator: Dr. IMAD BENLASHEHR Signature……**
- **Program coordinator: Prof. ABDULATIF ASHEG Signature…….**
- **Head of Department: Prof. ABDULATIF ABDULAZIZ ASHEG**

Seal and signature …… Date 03 /11 /2021

Course Matrix and Course Targeted Learning Outcomes (**MVP0606**)

Skills																		Knowledge & understand (A)										Study week
Generic and transferable skills (D)					Practical & professional skills (C)						Mental skills (Intellectual capacity) (B)																		
D.5	D.4	D.3	D.2	D.1	C.6	C.5	C.4	C.3	C.2	C.1	B.8	B.7	B.6	B.5	B.4	B.3	B.2	B.1	A.10	A.9	A.8	A.7	A.6	A.5	A.4	A.3	A.2	A.1	
										√								√										√	1
										√								√										√	2
										√							√	√										√	3
										√							√	√									√	√	4
									√	√							√	√									√	√	5
									√	√							√	√									√	√	6
								√	√	√							√	√									√	√	7
								√	√	√							√	√									√	√	8
		√	√	√				√	√	√						√	√	√								√	√	√	9
		√	√	√				√	√	√						√	√	√								√	√	√	10
		√	√	√				√	√	√						√	√	√								√	√	√	11
		√	√	√				√	√	√						√	√	√								√	√	√	12
		√	√	√				√	√	√						√	√	√								√	√	√	13
		√	√	√				√	√	√						√	√	√								√	√	√	14

Note:

- The number of semester weeks is sixteen, two of which are for exams.