Ministry of Higher Education and Scientific Research
Scientific Supervision and Scientific Evaluation Apparatus
Directorate of Quality Assurance and Academic Accreditation
Accreditation Department

Academic Program and Course Description Guide

2024

Introduction:

The educational program is a well-planned set of courses that include procedures and experiences arranged in the form of an academic syllabus. Its main goal is to improve and build graduates' skills so they are ready for the job market. The program is reviewed and evaluated every year through internal or external audit procedures and programs like the External Examiner Program.

The academic program description is a short summary of the main features of the program and its courses. It shows what skills students are working to develop based on the program's goals. This description is very important because it is the main part of getting the program accredited, and it is written by the teaching staff together under the supervision of scientific committees in the scientific departments.

This guide, in its second version, includes a description of the academic program after updating the subjects and paragraphs of the previous guide in light of the updates and developments of the educational system in Iraq, which included the description of the academic program in its traditional form (annual, quarterly), as well as the adoption of the academic program description circulated according to the letter of the Department of Studies T 3/2906 on 3/5/2023 regarding the programs that adopt the Bologna Process as the basis for their work.

In this regard, we can only emphasize the importance of writing an academic programs and course description to ensure the proper functioning of the educational process.

Concepts and terminology:

Academic Program Description: The academic program description provides a brief summary of its vision, mission and objectives, including an accurate description of the targeted learning outcomes according to specific learning strategies.

Course Description: Provides a brief summary of the most important characteristics of the course and the learning outcomes expected of the students to achieve, proving whether they have made the most of the available learning opportunities. It is derived from the program description.

Program Vision: An ambitious picture for the future of the academic program to be sophisticated, inspiring, stimulating, realistic and applicable.

Program Mission: Briefly outlines the objectives and activities necessary to achieve them and defines the program's development paths and directions.

Program Objectives: They are statements that describe what the academic program intends to achieve within a specific period of time and are measurable and observable.

Curriculum Structure: **All courses / subjects included in the academic program according to the approved learning system (quarterly, annual, Bologna Process) whether it is a requirement (ministry, university, college and scientific department) with the number of credit hours.**

Learning Outcomes: **A compatible set of knowledge, skills and values acquired by students after the successful completion of the academic program and must determine the learning outcomes of each course in a way that achieves the objectives of the program.**

Teaching and learning strategies: **They are the strategies used by the faculty members to develop students' teaching and learning, and they are plans that are followed to reach the learning goals. They describe all classroom and extra-curricular activities to achieve the learning outcomes of the program.**

Academic Program Description Form

University Name : Al-Furat Al-Awsat Technical University
Faculty/Institute : Al-Mussaib Technical Institute
Scientific Department : Animal Production Techniques
Academic or Professional Program Name : ABET
Final Certificate Name : Technical Diploma
Academic System : Semester
Description Preparation Date : 19\2\2024
File Completion Date : 8 \3 \ 2024

Signature :
Head of Department Name:
Assistant Professor Doctor
Marwan Zuher Rijib
Date :19\ 2 \ 2024

Signature :
Scientific Associate Name:
Lecturer
Mohammed Hadi Sabri
Date :19\ 2 \ 2024

The file is checked by: Aws Mahmoud Kreet
Department of Quality Assurance and University Performance
Director of the Quality Assurance and University Performance Department:
Date: 24\3\2024
Signature:

2024

Approval of the Dean
Prof.Dr.
Jabbar Abbas Jaber

1. Program Vision
Program vision is written here as stated in the university's catalogue and website.

2. Program Mission
Program mission is written here as stated in the university's catalogue and website.

3. Program Objectives
1- The link between animal production and food security for the country **2- Learn about the manufacture of animal products from meat and milk** **3- Learn how to create large animal fields and poultry fields, create fish lakes** **4- Learn about the environment of large animals, poultry and fish farming** **5- Learn about ways to provide water and healthy food and daily field work for animals** **6- Identifying, preventing and treating various animal diseases**

4. Program Accreditation
Does the program have program accreditation? And from which agency?

5. Other external influences
It is directly related to the labor market

6. Program Structure				
Program Structure	**Number of Courses**	**Credit hours**	**Percentage**	**Reviews***
Institution Requirements				
College Requirements				
Department Requirements				

Summer Training				
Other				

*** This can include notes whether the course is basic or optional.**

7. Program Description				
Year/Level	**Course Code**	**Course Name**	**Credit Hours**	
			theoretical	**Practical**
First year		**fall semester**	**180**	**300**
First year		**spring semester**	**195**	**270**
Second Year		**fall semester**	**150**	**315**
Second Year		**spring semester**	**165**	**285**

8. Expected learning outcomes of the program	
Knowledge	
Learning Outcomes 1	**Learning Outcomes Statement 1**
Skills	
Learning Outcomes 2	**Learning Outcomes Statement 2**
Learning Outcomes 3	**Learning Outcomes Statement 3**
Ethics	
Learning Outcomes 4	**Learning Outcomes Statement 4**
Learning Outcomes 5	**Learning Outcomes Statement 5**

9. Teaching and Learning Strategies
Teaching and learning strategies and methods adopted in the implementation of the program in general.

10. Evaluation methods
Implemented at all stages of the program in general.

11.Faculty
Faculty Members

Academic Rank	Specialization		Special Requirements/Skills (if applicable)		Number of the teaching staff	
	General	Special			Staff	Lecturer

Professional Development
Mentoring new faculty members
Briefly describes the process used to mentor new, visiting, full-time, and part-time faculty at the institution and department level.
Professional development of faculty members
Briefly describe the academic and professional development plan and arrangements for faculty such as teaching and learning strategies, assessment of learning outcomes, professional development, etc.

12.Acceptance Criterion
(Setting regulations related to enrollment in the college or institute, whether central admission or others) The The student's average upon graduating from middle school (50-55)% Branch (scientific + agricultural). There are no admission exams in the department and they depend on desire.

13.The most important sources of information about the program
State briefly the sources of information about the program. 1- Methodological books, auxiliary manuals, and the Internet 2- Corresponding programs in Iraqi and international universities 3- Modern scientific research

14.Program Development Plan
Providing academic support capabilities in organizing field visits - Providing an appropriate classroom environment that enables the teacher to diversify teaching strategies - Providing information technology in the campus library - Hosting experts from outside the institute, or from the work environment for which they are preparing, to benefit from their expertise in developing the course according to the actual need of the labor market.

Please tick the boxes corresponding to the individual program learning outcomes under evaluation.

Program Skills Outline															
				Required program Learning outcomes											
Year/Level	Course Code	Course Name	Basic or optional	Knowledge				Skills				Ethics			
				A1	A2	A3	A4	B1	B2	B3	B4	C1	C2	C3	C4
second		animal physiology	basic	*				*				*			
		Animal breeding	basic	*					*			*			
second		poultry diseases	basic		*				*						
first		Poultry feeding	basic	*				*					*		
		Dairy cattle production	basic		*				*					*	
first		Animal health	basic		*				*					*	
		Fish Breeding	Basic	*					*				*		

Course Description Form

This course description provides a brief summary of the most important characteristics of the course and the learning outcomes expected of the student to achieve, demonstrating whether he has made the most of the available learning opportunities. It must be linked to the description of the program.

1. Course Name : Sheep and goat production	
2. Course Code:	
3. Semester / Year : / fall semester	
4. Description Preparation Date : 2024	
5. Available Attendance Forms : Section	
6. Number of Credit Hours (Total) / 75	
7. Course administrator's name (mention all, if more than one name)	
Name: **Email:**	
8. Course Objectives	
Course Objectives	**Teaching the student about the most important international and local sheep breeds (meat, milk, and woo sheep). Identifying sexual maturity, the breeding season, methods of controlling the timing of shedding, the properties and characteristics of wool, morphological anatomy, the period of pregnancy and birth, care of ewes the origin of goats, and their classification.**
9. Teaching and Learning Strategies	
Strategy	**A- Cognitive objectives** **1- Identifying local sheep breeds** **2- Learn about daily and seasonal field operations for sheep and goats** **3- The possibility of establishing a herd, choosing th appropriate breed, the size of the herd, and the dat**

	of purchasing sheep and goats. **4- Identifying sheep pens, their requirements and types** **4- Learn how to carry out the breastfeeding proces care for newborns and their weights, and prepare feeders and waterers.** **5- Identifying the reasons for the death of some lambs** **7- Learn how to estimate age in sheep using teeth** **B - The skills objectives of the course.** **1. Conducting the process of shearing and dipping animals** **2. Carrying out the birth process for sheep** **3. Conduct feeding, watering, and health monitoring o animals** **4. Establishing the herd in terms of choosing a locatio and purchasing animals** **Teaching and learning methods** **1. Scientific lecture.** **2. Discussion among students.** **3. Preparing reports related to the lecture** **Evaluation methods** **1. Daily exams** **2. Ask some questions** **3. Giving homework** **C- Emotional and value goals** **1. Benefit from scientific material in understanding th course of events.** **2. The ability to deal with urgent developments.** **3. Choose the optimal solution from among the availal solutions and options.** **4. The ability to lead and confront challenges.** **5. Developing students' abilities to analyze the content of social variables to identify thinking skills and problem-solving skills.** **Teaching and learning methods** **Lectures, identifying and diagnosing problems throug explanations, exercises, and classroom exercises, and practical applications so that students understand hov to benefit from the specifications used and understand their application.** **Evaluation methods** **Direct questions, daily exams, stimulating students an**

	pushing them to actively participate, discussing lectur additional activities, semester exams, and actual attendance. **D - Transferable general and qualifying skills (other skill related to employability and personal development).** **1. Improving their intellectual skills** **2. Raising their conceptual perceptions and moving th student from the stage of teaching to learning** **3. The tendency to cooperate and work together**

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
First	2+3 +	Scientific basis for classifying sheep	Scientific basis for classifying sheep	Continuous guidance of students by the profess during the lecture	questions and answers
Second	2+3	Breeds of sheep for meat, milk and wool	Breeds of sheep for meat, milk and wool	Lecture an discussion	Asking questio
Third	2+3	Reproduction and fertilization in sheep and reproductive systems	Reproductio and fertilization sheep and reproductiv systems	Lecture an discussion	Listening
Fourth	2 +3	Sexual puberty, the breeding season, and ways to control the timing of m	Sexual puberty, the breeding season, and ways to control the timing of m	Lecture an discussion	Ask questions
Fifth	2 +3	The period of pregnancy, childbirth, and care of ew before and after birth	The period pregnancy, childbirth, and care of ewes before and after birth	Lecture an discussion	Case study

Sixth	**2+3**	**Growth and development sheep**	**Growth and developmen in sheep**	**Lecture an discussion**	**Asking questio**
Seventh	**2+3**	**Milk production in sheep and factors affecting milk production**	**Milk production sheep and factors affecting mi production**	**Lecture an discussion**	**Mini lesson**
Eighth	**2+3**	**Properties and features of wool and morphological anatomy**	**Properties and features of wool and morphologi anatomy**	**Lecture an discussion**	**discussion**
Ninth	**2 +3**	**Stages of wool fiber growt and wool gradation**	**Stages of wo fiber growth and wool gradation**	**Lecture an discussion**	**Case study**
Tenth	**2+3**	**Theorigin, classification, and location of goats in th animal kingdom**	**Theorigin, classificatio and location of goats in t animal kingdom**	**Lecture an discussion**	**Listening and a questions**
Eleventh	**2+3**	**Breeds of sheep for meat, r**	**Breeds of sl**	**Lecture an discussion**	**Listening and al questions**
Twelfth	**2+3**	**Goat breeds in the world**	**Goat breeds in the world**	**Lecture an discussion**	**Case study**
Thirteenth	**2+3**	**Goat reproduction, puber and sexual maturity**	**Goat reproductio puberty and sexual maturity**	**Lecture an discussion**	**Discussion**
fourteenth	**2+3**	**Milk, hair and skin production in of goats**	**Milk, hair a skin production of goats**	**Lecture an discussion**	**Case study**
Fifteenth	**2 +3**	**The future of sheep indust and intensive production**	**The future sheep industry an intensive production**	**Listening and ask questions**	**Case study**
11.Course Evaluation					

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc

12.Learning and Teaching Resources	
Required textbooks (curricular books, if an	**Curriculum**
Main references (sources)	**Sheep and goat production Zuhair Fakhri - Jalal Elia Al-Qass 1984**
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	

12. Course development plan
*** Providing academic support capabilities in organizing field visits**
*** Providing an appropriate classroom environment that enables the teacher to diversify teaching strategies**
*** Providing information technology in the campus library**
*** Hosting experts from outside the institute, or from the work environment for which they are preparing, to benefit from their expertise in developing the course according to the actual need of the labor market**

Course Description Form

This course description provides a brief summary of the most important characteristics of the course and the learning outcomes expected of the student to achieve, demonstrating whether he has made the most of the available learning opportunities. It must be linked to the description of the program.

13.Course Name : poultry production
14.Course Code:
15.Semester / Year : / fall semester
16.Description Preparation Date : 2024
17.Available Attendance Forms : Section

18.Number of Credit Hours (Total) / 75	
19.Course administrator's name (mention all, if more than one name)	
Name: **Email:**	
20.Course Objectives	
Course Objectives	**Course objectives:** **Introducing the student to the types and recipes of poultr** **hatching, hatchery management, and maintaining poultry** **fields.** **Anatomy of the internal systems (digestion, breathing, reproductive systems of chickens), natural and artificial hatching, and types of hatcheries..**
21.Teaching and Learning Strategies	

A- Cognitive objectives

1- Identifying methods of managing poultry fields

2- Identify the important factors that affect artificial hatching

3- Learn about the anatomy of the internal organs of poultry

4- Identify the types of poultry and their breeds

B - The skills objectives of the course.

1. Conducting artificial hatching

2. Analyze and dissect poultry to view the various internal systems

3. Preparing and operating hatcheries, specifications of a typical hatchery

4. Learn about methods of raising turkey chickens and ducks

Teaching and learning methods

1. Scientific lecture.

2. Discussion among students.

3. Preparing reports related to the lecture

Evaluation methods

1. **Daily exams**

2. **Ask some questions**

3. **Giving homework**

C- Emotional and value objectives

1. Benefit from scientific material in understanding the course of events.

2. The ability to deal with urgent developments.

3. Choose the optimal solution from among the available solutions and options.

4. The ability to lead and confront challenges.

5. Developing students' abilities to analyze the content of social variables to identify thinking skills and problem-solving skills.

Teaching and learning methods

Lectures, identifying and diagnosing problems through explanations, exercises, and classroom exercises, and practical applications so that students understand how to benefit from the specifications used and understand their application.

Evaluation methods

Direct questions, daily exams, stimulating students and pushing them to actively participate, discussing lectures, additional activities, semester exams, and actual attendance.

D - Transferable general and qualifying skills (other skills related to employability and personal development).

1. Improving their intellectual skills

2. Raising their conceptual perceptions and moving the student from the stage of teaching to learning

3. The tendency to cooperate and work

10. Course structure					
the week	Hours	Required learning outcomes	Unit name and/or topic	education method	Evaluation method
first	3 + 2	The importance of the poultry industry in Iraq and the international companies producing breeds of meat chickens and egg chickens	The importance of the poultry industry in Iraq and the international companies producing breeds of meat chickens and egg chickens	Continuous guidance of students by the professor during the lecture	questions and answers
Second	3 + 2	Reproductive functions in poultry and egg formation	Reproductive functions in poultry and egg formation	Lecture and discussion	Asking questions
Third	3 + 2	The male and female reproductive system, hormones and their control over egg formation	The male and female reproductive system, hormones and their control over egg formation	Lecture and discussion	Listen
Fourth	3 + 2	Physiological actions in the digestive system	Physiological actions in the digestive system	Lecture and discussion	Ask questions
Fifth	3 + 2	Natural and artificial hatching in	Natural and artificial	Student discussion	Case study

		chickens and the basic components of hatching	**hatching in chickens and the basic components of hatching**		
Sixth	**3 + 2**	**Poultry housing, elements that must be available when choosing a field location and design, calculations of ventilation, cooling and lighting needs.**	**Poultry housing, elements that must be available when choosing a field location and design, calculations of ventilation, cooling and lighting needs.**	**Lecture and discussion**	**Listen and ask questions**
Seventh	**3 + 2**	**Various poultry equipment used in poultry houses**	**Various poultry equipment used in poultry houses**	**Discussion and mini-lesson**	**Mini lesson**
Eighth	**3 + 2**	**Egg production, laying hen rearing systems, factors affecting egg production, methods used to calculate egg production.**	**Egg production, laying hen rearing systems, factors affecting egg production, methods used to calculate egg production.**	**Lecture and discussion**	**discussion**

Ninth	**3 + 2**	**Production of biological eggs or programmed eggs produced from laying hens and turkeys, its economic and health importance**	**Production of biological eggs or programmed eggs produced from laying hens and turkeys, its economic and health importance**	**Student discussion**	**Case study**
Tenth	**3 + 2**	**Quail egg production, economic importance, general rules followed in egg production**	**Quail egg production, economic importance, general rules followed in egg production**	**Lecture and discussion**	**Listen and ask questions**
Eleventh	**3 + 2**	**The importance of the poultry industry in Iraq and the international companies producing breeds of meat chickens and egg chickens**	**The importance of the poultry industry in Iraq and the international companies producing breeds of meat chickens and egg chickens**	**Discussion and mini-lesson**	**Listen and ask questions**
twelfth	**3 + 2**	**Reproductive functions in poultry and egg formation**	**Reproductive functions in poultry and egg formation**	**Lecture and discussion**	**questions and answers**

Thirteenth	**3 + 2**	**The male and female reproductive system, hormones and their control over egg formation**	**The male and female reproductive system, hormones and their control over egg formation**	**Lecture and discussion**	**questions and answers**
Fourteenth	**3 + 2**	**Physiological actions in the digestive system**	**Physiological actions in the digestive system**	**Lecture and discussion**	**Asking questions**
Fifteenth	**3 + 2**	**Natural and artificial hatching in chickens and the basic components of hatching**	**Natural and artificial hatching in chickens and the basic components of hatching**	**Student discussion**	**Listen**

22.Course Evaluation	
Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc	
23.Learning and Teaching Resources	
Required textbooks (curricular books, if an	**Curriculum**
Main references (sources)	**Health management of poultry... written by Saad Abdel Hussein and hiscolleagues, 2009** **Commercial layer production mannal ..saad.A.H. naji .. 2007**
Recommended books and references (scientific journals, reports...)	**Poultry Products Technology.. Dr. Hamdi Abdel Aziz Al-Fayad and colleagues 2010**
Electronic References, Websites	

12. Course development plan

*** Providing academic support capabilities in organizing field visits**

*** Providing an appropriate classroom environment that enables the teacher to diversify teaching strategies**
*** Providing information technology in the campus library**
*** Hosting experts from outside the institute, or from the work environment for which they are preparing, to benefit from their expertise in developing the course according to the actual need of the labor market**

Course Description Form

This course description provides a brief summary of the most important characteristics of the course and the learning outcomes expected of the student to achieve, demonstrating whether he has made the most of the available learning opportunities. It must be linked to the description of the program.

Course Name : Dairy cattle
Course Code:
Semester / Year : / fall semester
Description Preparation Date : 2024
Available Attendance Forms : Section

24.Number of Credit Hours (Total) / 60
Course administrator's name (mention all, if more than one name)
Name: **Email:**
Course Objectives

Course Objectives	**Course objectives:** **The course aims to give a general idea about the importance of dairy cattle, the anatomy and physiology o the udder, hormones, and milk secretion.**

25.Teaching and Learning Strategies

9- Course outcomes and teaching, learning and evaluation methods

A- Knowledge and understanding of the principles of animal production.

A- Cognitive objectives

A1- The possibility of working in agricultural land projects

A2- The possibility of working in milk production livestock fields

A3- Managing dairy cattle care and nutrition projects

A4- The possibility of genetic improvement of dairy cattle herds

B - The skills objectives of the course.

B1 - Conduct daily and seasonal field operations

B2 - Using production field records.

B3 - Learning how to create tables for judging animals.

B4- Learning how to dry milk animals

Teaching and learning methods

Lecture, laboratory, systematic training, summer training

Evaluation methods

(Oral and written exams, semester and final exams, and daily evaluation).

C- Emotional and value obgectives

C1- Planning and adopting successful ideas

C2- Adopting future visions in the field of specialization

C3- Mastering field work for dairy cattle field management projects

C4- Mastering field work in dairy cattle fields

D - General and qualifying transferable skills (other skills related to employability and personal development).

D1- The possibility of working in dairy cattle breeding projects

D2- The possibility of working on raising and improving dairy cattle Lectures, identifying and diagnosing problems through explanations, exercises, and classroom exercises, and practical applications so that students understand how to benefit from the specifications used and understand their application.

Evaluation methods

Direct questions, daily exams, stimulating students and pushing them to actively participate, discussing lectures, additional activities, semester exams, and actual attendance.

D - Transferable general and qualifying skills (other skills related to employability and personal development).

1. Improving their intellectual skills

2. Raising their conceptual perceptions and moving the student from the stage of teaching to learning

3. The tendency to cooperate and work

11. Course structure

the week	hours	Required learning outcomes	Unit name and/or topic	education method	Evaluation method
first	3 + 1	Factors affecti the increase ar decrease in mi levels	Factors affecting t increase and decrease in milk levels	A lecture	Questions an answers
Second	3 + 1	Dairy cattle breeds	Dairy cattle breed	A lecture	Oral evaluati
Third	3 + 1	Iraqi livestock and their milk production	Iraqi livestock an their milk production	A lecture	Student discussion
Fourth	3 + 1	Care and feeding of dair cattle	Care and feeding dairy cattle	A lecture	A short exam
Fifth	3 + 1	International and Iraqi buffalo types	International and Iraqi buffalo type	A lecture	questions an answers
Sixth	3 + 1	Milk productio in buffalo	Milk production i buffalo	Lecture and discussion	short exam
Seventh	3 + 1	Camels and m production	Camels and milk production	Lecture and discussion	questions an answers
Eighth	3 + 1	Installation an physiology of t udder	Installation and physiology of the udder	a lecture	Student discussion
Ninth	3 + 2	Hormones and their effect on milk secretion	Hormones and the effect on milk secretion	a lecture	questions an answers

Tenth	**3 + 1**	**Factors affecti milk productio in terms of chemical composition**	**Factors affecting milk production in terms of chemical composition**	**Lecture and discussion**	**short exam**
Eleventh	**3 + 1**	**Genetic improvement o dairy cattle herds**	**Genetic improvement of dairy cattle herds**	**a lecture**	**questions and answers**
Twelfth	**3 + 1**	**Selection methods for dairy cattle**	**Selection methods for dairy cattle**	**Lecture and discussion**	**short exam**
Thirteenth	**3 + 1**	**Establishing dairy cattle farms**	**Establishing dairy cattle farms**	**a lecture**	**questions and answers**
fourteenth	**3 + 1**	**Storing and producing healthy milk**	**Storing and producing healthy milk**	**Lecture and discussion**	**questions and answers**
Fifteenth	**3 + 1**	**Protecting mil from contamination**	**Protecting milk from contaminatio**	**a lecture**	**short exam**

26.Course Evaluation	
Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc	
27.Learning and Teaching Resources	
Required textbooks (curricular books, if an	**Curriculum**

Main references (sources)	**Methodological decision** **Production of milk cattle, Aziz Cabrohan + Atallah Saeed, 1986**
Electronic References, Websites	**Specialized websites**

12. Course development plan

*** Providing academic support capabilities in organizing field visits**

*** Providing an appropriate classroom environment that enables the teacher to diversify teaching strategies**

*** Providing information technology in the campus library**

*** Hosting experts from outside the institute, or from the work environment for which they are preparing, to benefit from their expertise in developing the course according to the actual need of the labor market**

Course Description Form

This course description provides a brief summary of the most important characteristics of the course and the learning outcomes expected of the student to achieve, demonstrating whether he has made the most of the available learning opportunities. It must be linked to the description of the program.

Course Name : Animal Health
Course Code:
Semester / Year : / spring semester
Description Preparation Date : 2024
Available Attendance Forms : Section
Number of Credit Hours (Total) / 75

Course administrator's name (mention all, if more than one name)	
Name: **Email:**	
Course Objectives	
Course Objectives	**Course objectives:** **Teaching the student about the health conditions that mu be available in (air, drinking water, and environmental conditions in animal pens) and the health importance of a components (air pollutants, dust infection, ventilation, an the role of water in transmitting pathogens and draining waste and liquids from pens)**
Teaching and Learning Strategies	

9- Course outcomes and teaching, learning and evaluation methods

A- Knowledge and understanding of the principles of animal production.

A- Cognitive objectives

1- Identifying environmental conditions suitable for animal health

2- Identify the causes of diseases and infections that affect animals

3- Identifying healthy ways to dispose of waste in barns

4- Identify the general specifications of livestock barn systems

5- Identify the general specifications of milking parlors

B - The skills objectives of the course.

1. Identify methods for measuring microbial pollution in the air

2. Learn about methods for estimating humidity

3. Microscopic and bacteriological examination of drinking water

4 Methods of using pesticides, immersion and baths, dangers of immersion

Teaching and learning methods

1. Scientific lecture.

2. Discussion among students.

3. Preparing reports related to the lecture

Evaluation methods

1. Daily exams

2. Ask some questions

3. Giving homework

C- Emotional and value goals

1. Benefit from scientific material in understanding the course of events.

2. The ability to deal with urgent developments.

3. Choose the best solution from among the available solutions and options.

4. The ability to lead and confront challenges.

5. Developing students' abilities to analyze the content of social variables to identify thinking skills and problem-solving skills.

Teaching and learning methods

Lectures, identifying and diagnosing problems through explanations, exercises, and classroom exercises, and practical applications so that students understand how to benefit from the specifications used and understand their application.

Evaluation methods

Direct questions, daily exams, stimulating students and pushing them to actively participate, discussing lectures, additional activities, semester exams, and actual attendance.

D - Transferable general and qualifying skills (other skills related to employability and personal development).

1. Improving their intellectual skills

2. Raising their conceptual perceptions and moving the student from the stage of teaching to learning

3. The tendency to cooperate and work together

12. Course structure

the week	hours	Required learning outcomes	Unit name and/or topic	education method	Evaluation method
first	3 + 2	Air, the health importance of air component air pollutants inside animal housing and their health importance	Air, the health importance of air components, air pollutants inside animal housing an their health importance	Continuous guidance of students by th professor during the lecture	Questions an answers
Second	3 + 2	The role of air transmitting pathogens, droplet infection, dust infection, and the health importance of air speed, sun, and light.	The role of air in transmitting pathogens, droplet infection, dust infection, and the health importance of air speed, sun, and light.	Lecture and discussion	Oral evaluati
Third	3 + 2	Ventilation, air exchange and air volume, ventilation methods in animal housing	Ventilation, air exchange and air volume, ventilation methods in animal housing...	Lecture and discussion	Student discussion
Fourth	3 + 2	Water, water sources: rainwater, surface water, seas and groundwater...	Water, water sources: rainwater surface water, seas and groundwater.	Lecture and discussion	A short exam

Fifth	**3 + 2**	**Sanitary conditions that must be met in drinking water and watering animals**	**Sanitary condition that must be met i drinking water an watering animals**	**a lecture**	**questions and answers**
Sixth	**3 + 2**	**The role of water in transmitting pathogens, pathogenic microbes, animal parasit and chemical toxins**	**The role of water i transmitting pathogens, pathogenic microbes, animal parasites, and chemical toxins**	**Lecture and discussion**	**short exam**
Seventh	**3 + 2**	**Purifying drinking water the purpose of which is natur and artificial purification, including the addition of chloride, trace element powde and potassium permanganate**	**Purifying drinking water, the purpose of which is natura and artificial purification, including the addition of chloric trace element powder, and potassium permanganate.**	**Discussion an mini-lesson**	**questions and answers**
Eighth	**3 + 2**	**Animal pens, building location, roof construction a thermal insulation**	**Animal pens, building location, roof construction and thermal insulation**	**Lecture and discussion**	**Student discussion**
Ninth	**3 + 2**	**Drainage of waste and liquids from pens and the**	**Drainage of waste and liquids from pens and the liqui manure reservoir,**	**Lecture and discussion**	**questions and answers**

		liquid manure reservoir, drai pipes and trap	drain pipes and traps		
Tenth	3 + 2	Healthy ways t dispose of wast from barns	Healthy ways to dispose of waste from barns	Lecture and discussion	short exam
Eleventh	3 + 2	Air, the health importance of air component air pollutants inside animal housing and their health importance	Air, the health importance of air components, air pollutants inside animal housing an their health importance	a lecture	questions and answers
Twelfth	3 + 2	The role of air transmitting pathogens, droplet infection, dust infection, and the health importance of air speed, sun, and light.	The role of air in transmitting pathogens, droplet infection, dust infection, and the health importance of air speed, sun, and light.	Lecture and discussion	short exam
thirteenth	3 + 2	Ventilation, ai exchange and volume, ventilation methods in animal housing	Ventilation, air exchange and air volume, ventilatio methods in anima housing...	a lecture	questions and answers
fourteenth	3 + 2	Water, water sources: rainwater, surface water, seas and groundwater..	Water, water sources: rainwater surface water, sea and groundwater.	Lecture and discussion	questions and answers

Fifteenth	**3 + 2**	**Sanitary conditions that must be met in drinking water and watering animals**	**Sanitary condition that must be met i drinking water an watering animals**	**a lecture**	**short exam**

28.Course Evaluation	
Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc	
29.Learning and Teaching Resources	
Required textbooks (curricular books, if an	**Curriculum**
Main references (sources)	**Animal Health Dr. Mahmoud Ahmed Nadim + Saadi Ahmed Ghannawi 1982**
Recommended books and references (scientific journals, reports...)	**Basics of veterinary medicine Dr. Wahab Amin Hassan 1990**
Electronic References, Websites	**Specialized websites**

12. Course development plan

*** Providing academic support capabilities in organizing field visits**

*** Providing an appropriate classroom environment that enables the teacher to diversify teaching strategies**

*** Providing information technology in the campus library**

*** Hosting experts from outside the institute, or from the work environment for which they are preparing, to benefit from their expertise in developing the course according to the actual need of the labor market**

Course Description Form

This course description provides a brief summary of the most important characteristics of the course and the learning outcomes expected of the student to achieve, demonstrating whether he has made the most of the available learning opportunities. It must be linked to the description of the program.

Course Name : fish breeding
Course Code:
Semester / Year : / spring semester
Description Preparation Date : 2024
Available Attendance Forms : Section
Number of Credit Hours (Total) / 75
Course administrator's name (mention all, if more than one name)
Name:

Email:	
Course Objectives	
Course Objectives	**Course objectives:** **Teaching the student an idea about fish science, its importance, the emergence of the most important fish spread locally, studying the internal and external structu of the fish, the different types of the aquatic environment and water pollution in Iraq, and the method of fish reproduction and fingerling production.**
Teaching and Learning Strategies	

9- Course outcomes and teaching, learning and evaluation methods

A- Cognitive objectives

1- Identifying the digestive, reproductive and respiratory systems of fish

2- Identify laboratory equipment and how it works, such as the pH device and the oxygen measuring device.

3- Identify the method of reproduction in fish and the production of fingerlings

4- Identifying the external appearance of the fish and its body parts

5- Learn about collecting traces of river and stream water and measuring dissolved oxygen, salinity and transparency.

B - The skills objectives of the course.

1- Identifying the digestive, reproductive and respiratory systems of fish

2- Identify laboratory equipment and how it works, such as the pH device and the oxygen measuring device.

3- Identify the method of reproduction in fish and the production of fingerlings

4- Identifying the external appearance of the fish and its body parts

5- Learn about collecting traces of river and stream water and measuring dissolved oxygen, salinity and transparency.

Teaching and learning methods

1. Scientific lecture.

2. Discussion among students.

3. Preparing reports related to the lecture

Evaluation methods

1. Daily exams

2. Ask some questions

3. Giving homework

C- Emotional and value goals

1. Benefit from scientific material in understanding the course of events.

2. The ability to deal with urgent developments.

3. Choose the optimal solution from among the available solutions and options.

4. The ability to lead and confront challenges.

5. Developing students' abilities to analyze the content of social variables to identify thinking skills and problem-solving skills.

Teaching and learning methods

Lectures, identifying and diagnosing problems through explanations, exercises, and classroom exercises, and practical applications so that students understand how to benefit from the specifications used and understand their application.

Evaluation methods

Direct questions, daily exams, stimulating students and pushing them to actively participate, discussing lectures, additional activities, semester exams, and actual attendance.

D - Transferable general and qualifying skills (other skills related to employability and personal development).

1. Improving their intellectual skills

2. Raising their conceptual perceptions and moving the student from the stage of teaching to learning

3. The tendency to cooperate and work together

13. Course structure

the week	hours	Required learning outcomes	Unit name and/or topic	education method	Evaluation method
first	3 + 2	Introduction t fish productio the science of studying fish, t importance of fish, and the characteristics fish	Introduction to fis production, the science of studying fish, the importan of fish, and the characteristics of fish	Continuous guidance of students by th professor during the lecture	Questions an answers
Second	3 + 2	The external appearance of fish, body shap body openings scales, and fins	The external appearance of fish body shape, body openings, scales, a fins	Lecture and discussion	Oral evaluati
Third	3 + 2	Internal structures of fish: respirato digestive, reproductive, circulatory, sense organs, and urinary system.	Internal structure of fish: respiratory digestive, reproductive, circulatory, sense organs, and urina system.	Lecture and discussion	Student discussion
Fourth	3 + 2	Secretion and osmotic regulation of fish, nervous system	Secretion and osmotic regulatio of fish, nervous system	Lecture and discussion	A short exam
Fifth	3 + 2	Classification fish (length an weight measurements	Classification of fi (length and weigh measurements, methods used to	a lecture	questions an answers

		methods used t classify fish).	classify fish).		
Sixth	3 + 2	Taxonomic characteristics some importan and common Iraqi fish	Taxonomic characteristics of some important an common Iraqi fish	Lecture and discussion	short exam
seventh	3 + 2	Methods for estimating age fish, the relationship between length and weight in fish	Methods for estimating age in fish, the relationsh between length an weight in fish	Discussion an mini-lesson	questions and answers
Eighth	3 + 2	Reproduction: reproductive strategies, factors affectin reproduction: internal and external, reproductive systems, sexua differentiation and sex differences.	Reproduction: reproductive strategies, factors affecting reproduction: internal and external, reproductive systems, sexual differentiation and sex differences.	Lecture and discussion	Student discussion
Ninth	3 + 2	Aquatic environment: physicochemic factors that affect the grow and life of fish	Aquatic environment: physicochemical factors that affect the growth and lif of fish	Lecture and discussion	questions and answers
Tenth	3 + 2	Fish migration (breeding migration, feeding migration,	Fish migration (breeding migrati feeding migration, wintering	Lecture and discussion	short exam

		wintering migration).	migration).		
Eleventh	3 + 2	Zooplankton and phytoplankton trophic pyram (production stage, consumption stage, death stage, recovery stage)	Zooplankton and phytoplankton, trophic pyramid, (production stage, consumption stage death stage, recovery stage)	a lecture	questions and answers
Twelfth	3 + 2	Fertility (absolute, relative), reproductive function	Fertility (absolute, relative), reproductive function	Lecture and discussion	short exam
Thirteenth	3 + 2	Pollution: (its types and sources), its effect on aquat organisms	Pollution: (its type and sources), its effect on aquatic organisms	a lecture	questions and answers
fourteenth	3 + 2	Water resourc in Iraq: rivers, lakes, marshes seas	Water resources i Iraq: rivers, lakes, marshes, seas	Lecture and discussion	questions and answers
Fifteenth	3 + 2	Ways to impro internal water productivity	Ways to improve internal water productivity	a lecture	short exam

Course Evaluation
Distributing the score out of 100 according to the tasks assigned to the student such as

daily preparation, daily oral, monthly, or written exams, reports .... etc	
Learning and Teaching Resources	
Required textbooks (curricular books, if an	**Curriculum**
Main references (sources)	**Modern fish farming methods** **Abdel Hamid Mohamed Abdel Hamid**
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	**Specialized websites**

12. Course development plan

*** Providing academic support capabilities in organizing field visits**

*** Providing an appropriate classroom environment that enables the teacher to diversify teaching strategies**

*** Providing information technology in the campus library**

*** Hosting experts from outside the institute, or from the work environment for which they are preparing, to benefit from their expertise in developing the course according to the actual need of the labor market**

Course Description Form

This course description provides a brief summary of the most important characteristics of the course and the learning outcomes expected of the student to achieve, demonstrating whether he has made the most of the available learning opportunities. It must be linked to the description of the program.

Course Name : poultry feeding

Course Code:
Semester / Year : / spring semester
Description Preparation Date : 2024
Available Attendance Forms : Section
Number of Credit Hours (Total) / 60
Course administrator's name (mention all, if more than one name)
Name: **Email:**
Course Objectives

Course Objectives	**Course objectives:** **Teaching the student the concept of nutrition and the bas nutritional elements that birds need, learning about the energy and protein needs of poultry, how to calculate thes**

	needs, composition and mixing of feed, and the effect of nutrition on the production of eggs and meat.
Teaching and Learning Strategies	

9- Course outcomes and teaching, learning and evaluation methods

A- Cognitive objectives

1- Identify the concept of nutrition, the basic elements that birds need, and the functions of these elements

2- Identify the concept of energy, its sources, and the relationship between energy and feed density

3- Identify the factors affecting the energy needs of broilers and chickens during different life stages and the symptoms of energy deficiency and excess in poultry diets.

4- Identifying the needs of poultry for protein and essential amino acids and the symptoms of deficiency and excess of protein in poultry diets.

5- Identifying nutritional and non-food additives in poultry feed

6- Identify the relationship of nutrition to the quality of the egg, the quality of the shell, and the quality of the egg white.

7- Identify the nutritional value of eggs, the quality and color of the yolk, nutrition, size and production of eggs

B - The skills objectives of the course.

1. Calculating the nutritional energy needs of broilers and laying hens

2. Calculating the digestive percentage of protein and the relationship between it and the digestible percentage of protein

3. Applied calculations to measure growth speed, methods used to measure growth speed of chickens

4. Calculating the fodder needs of poultry

5- Practical examples of calculating the cost of fodder for birds

Teaching and learning methods

1. Scientific lecture.

2. Discussion among students.

3. Preparing reports related to the lecture

Evaluation methods

1. Daily exams

2. Ask some questions

3. Giving homework

C- Emotional and value goals

1. Benefit from scientific material in understanding the course of events.

2. The ability to deal with urgent developments.

3. Choose the best solution from among the available solutions and options.

4. The ability to lead and confront challenges.

5. Developing students' abilities to analyze the content of social variables to identify thinking skills and problem-solving skills.

Teaching and learning methods

Lectures, identifying and diagnosing problems through explanations, exercises, and classroom exercises, and practical applications so that students understand how to benefit from the specifications used and understand their application.

Evaluation methods

Direct questions, daily exams, stimulating students and pushing them to actively participate, discussing lectures, additional activities, semester exams, and actual attendance.

D - Transferable general and qualifying skills (other skills related to employability and personal development).

1. Improving their intellectual skills

2. Raising their conceptual perceptions and moving the student from the stage of teaching to learning

3. The tendency to cooperate and work together

14. Course structure

the week	hours	Required learning outcomes	Unit name and/or topic	education method	Evaluation method
first	2 + 2	Learn about th concept of nutrition, the basic nutrients that birds need and their functions	Learn about the concept of nutritio the basic nutrients that birds need an their functions	Continuous guidance of students by th professor during the lecture	Questions an answers
Second	2 + 2	Learn about th concept of energy, the ma sources of energy, and th digestion and absorption of fats and carbohydrates	Learn about the concept of energy, the main sources o energy, and the digestion and absorption of fats and carbohydrate	Lecture and discussion	Oral evaluati
Third	2 + 2	Identify the relationship between energ and feed densi and the factors affecting energ needs	Identify the relationship between energy an feed density and th factors affecting energy needs	Lecture and discussion	Student discussion
Fourth	2 + 2	Identify the symptoms of energy deficiency and excess in poult diets and the energy needs o broilers and laying hens	Identify the symptoms of energ deficiency and excess in poultry diets and the energ needs of broilers and laying hens during different li stages.	Lecture and discussion	A short exam

		during differe life stages.			
Fifth	2 + 2			a lecture	questions and answers
Sixth	2 + 2			Lecture and discussion	short exam
Seventh	2 + 2	Identifying the needs of poultr for protein and essential amin acids	Identifying the needs of poultry fo protein and essent amino acids	Discussion an mini-lesson	questions and answers
Eighth	2 + 2	Identify the symptoms of protein deficiency and excess in poult diets	Identify the symptoms of prote deficiency and excess in poultry diets	Lecture and discussion	Student discussion
Ninth	2 + 2	Identify the factors affectin the protein needs of poultr and the ratio o energy to prot	Identify the factor affecting the prote needs of poultry a the ratio of energy to protein	Lecture and discussion	questions and answers
Tenth	2 + 2	Identify nutritional nee for vitamins a inorganic elements and t factors affectin them	Identify nutritiona needs for vitamins and inorganic elements and the factors affecting them	Lecture and discussion	short exam
Eleventh	2 + 2			a lecture	questions and answers

Twelfth	**2 + 2**	**Identify nutritional and non-food additives in poultry diets**	**Identify nutritiona and non-food additives in poultr diets**	**Lecture and discussion**	**short exam**
Thirteenth	**2 + 2**			**a lecture**	**questions and answers**
fourteenth	**2 + 2**	**Identify the relationship of nutrition to the quality of the egg, the quality of the shell, the quality of the egg white, the nutritional val of the egg, the quality and col of the yolk, nutrition, size and productio of eggs.**	**Identify the relationship of nutrition to the quality of the egg, the quality of the shell, the quality o the egg white, the nutritional value o the egg, the quality and color of the yolk, nutrition, siz and production of eggs.**	**Lecture and discussion**	**questions and answers**
Fifteenth	**2 + 2**	**Learn about th concept of nutrition, the basic nutrients that birds need and their functions**	**Learn about the concept of nutritio the basic nutrients that birds need an their functions**	**a lecture**	**short exam**

Course Evaluation
Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc

Learning and Teaching Resources	
Required textbooks (curricular books, if an	**Curriculum**
Main references (sources)	**basics of poultry nutrition.. Dr. Ismail Khalil Ibrahim and Dr. Abdul Ilah Hamic 2007** **Mycotoxins in poultry feed.. Dr. Muhammad Ali Makki 2022** **Poultry health management..Dr. Saad Abdel Hussein Naji and colleagues 2009**
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	**Specialized websites**

12. Course development plan

*** Providing academic support capabilities in organizing field visits**

*** Providing an appropriate classroom environment that enables the teacher to diversify teaching strategies**

*** Providing information technology in the campus library**

*** Hosting experts from outside the institute, or from the work environment for which they are preparing, to benefit from their expertise in developing the course according to the actual need of the labor market**

Course Description Form

This course description provides a brief summary of the most important characteristics of the course and the learning outcomes expected of the student to achieve, demonstrating whether he has made the most of the available learning opportunities. It must be linked to the description of the program.

Course Name : Animal Diseases
Course Code:
Semester / Year : / spring semester
Description Preparation Date : 2024
Available Attendance Forms : Section
Number of Credit Hours (Total) / 60
Course administrator's name (mention all, if more than one name)
Name: **Email:**
Course Objectives

Course Objectives	**Course objectives:**

	Teaching the student about the disease, its ways of spreading, the most important diseases that affect cows, calves, and sheep, and learning about diseases that affect the digestive and urinary systems, smallpox, foot-and-mouth disease, rabies, milk fever, and mastitis, their pathological causes, symptoms, and methods of treatment **9. Course outcomes and methods of teaching, learning an evaluation**
Teaching and Learning Strategies	

9- Course outcomes and teaching, learning and evaluation methods

A- Cognitive objectives

1- Identifying the disease, its ways of spreading, and ways to control it

2- Identify nutritional deficiency diseases

3- Identify the diseases that cause miscarriage

4- Identifying skin diseases

4- Identify the diseases caused by blood parasites

B - The skills objectives of the course.

1. Identifying the signs of disease in general that appear on sick field animals

2. How to diagnose and treat diseases that affect animals.

3. How to diagnose and treat symptomatic diseases.

4. How to examine blood slide samples

Teaching and learning methods

1. Scientific lecture.

2. Discussion among students.

3. Preparing reports related to the lecture

Evaluation methods

1. Daily exams

2. Ask some questions

3. Giving homework

C- Emotional and value goals

1. Benefit from scientific material in understanding the course of events.

2. The ability to deal with urgent developments.

3. Choose the optimal solution from among the available solutions and options.

4. The ability to lead and confront challenges.

5. Developing students' abilities to analyze the content of social variables to identify thinking skills and problem-solving skills.

Teaching and learning methods

Lectures, identifying and diagnosing problems through explanations, exercises, and classroom exercises, and practical applications so that students understand how to benefit from the specifications used and understand their application.

Evaluation methods

Direct questions, daily exams, stimulating students and pushing them to actively participate, discussing lectures, additional activities, semester exams, and actual attendance.

D - Transferable general and qualifying skills (other skills related to employability and personal development).

1. Improving their intellectual skills

2. Raising their conceptual perceptions and moving the student from the stage of teaching to learning

15. Course structure

3. The tendency to cooperate and work together

the week	hours	Required learning outcomes	Unit name and/or topic	education method	Evaluation method
first	3 + 1	Identify the disease, its way of spreading, and disease control	Identify the diseas its ways of spreading, and disease control	Continuous guidance of students by th professor during the lecture	Questions an answers
Second	3 + 1	Identify diseas of the digestive system: indigestion, bloating, and diarrhea	Identify diseases o the digestive syste indigestion, bloating, and diarrhea	Lecture and discussion	Oral evaluati
Third	3 + 1	Identifying urinary system diseases: nephritis, urinary retention, respiratory system disease and bronchitis	Identifying urinar system diseases: nephritis, urinary retention, respiratory system diseases, and bronchitis.	Lecture and discussion	Student discussion
Fourth	3 + 1	Identify nutritional deficiency diseases: milk fever, ketosis	Identify nutritiona deficiency diseases milk fever, ketosis	Lecture and discussion	A short exam
Fifth	3 + 1	Identify the diseases that affect calves: salmonellosis, intestinal poisoning, and dysentery in	Identify the diseas that affect calves: salmonellosis, intestinal poisonin and dysentery in lambs.	a lecture	questions and answers

		lambs.			
Sixth	3 + 1	Recognize symptomatic anthrax, tetanu and soft nephrosis	Recognize symptomatic anthrax, tetanus, and soft nephrosis	Lecture and discussion	short exam
Seventh	3 + 1	Recognize hemorrhagic septicemia, anthrax, and hoof rot	Recognize hemorrhagic septicemia, anthra and hoof rot	Discussion an mini-lesson	questions and answers
Eighth	3 + 1	Identify rinderpest, smallpox, rabi foot-and-mout disease	Identify rinderpes smallpox, rabies, foot-and-mouth disease	Lecture and discussion	Student discussion
Ninth	3 + 1	Identifying mastitis: its causes, symptoms, control and treatment	Identifying mastit its causes, symptoms, control and treatment	Lecture and discussion	questions and answers
Tenth	3 + 1	Recognizing tuberculosis, Jones disease, and hydatid cysts	Recognizing tuberculosis, Jone disease, and hydat cysts	Lecture and discussion	short exam
Eleventh	3 + 1	Identify the disease, its way of spreading, and disease control	Identify the diseas its ways of spreading, and disease control	a lecture	questions and answers
Twelfth	3 + 1	Identify diseas of the digestive	Identify diseases o the digestive syste	Lecture and discussion	short exam

		system: indigestion, bloating, and diarrhea	indigestion, bloating, and diarrhea		
Thirteenth	3 + 1	Identifying urinary system diseases: nephritis, urinary retention, respiratory system disease and bronchitis	Identifying urinar system diseases: nephritis, urinary retention, respiratory system diseases, and bronchitis.	a lecture	questions and answers
fourteenth	3 + 1	Identify nutritional deficiency diseases: milk fever, ketosis	Identify nutritiona deficiency diseases milk fever, ketosis	Lecture and discussion	questions and answers
Fifteenth	3 + 1	Identify the diseases that affect calves: salmonellosis, intestinal poisoning, and dysentery in lambs.	Identify the diseas that affect calves: salmonellosis, intestinal poisonin and dysentery in lambs.	a lecture	short exam

Course Evaluation	
Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc	
Learning and Teaching Resources	
Required textbooks (curricular books, if an	Curriculum

Main references (sources)	**Animal diseases.. Dr. Abdel Wahab Abdel Razzaq and Fikri Naguib 1989**
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	**Specialized websites**

12. Course development plan

*** Providing academic support capabilities in organizing field visits**

*** Providing an appropriate classroom environment that enables the teacher to diversify teaching strategies**

*** Providing information technology in the campus library**

*** Hosting experts from outside the institute, or from the work environment for which they are preparing, to benefit from their expertise in developing the course according to the actual need of the labor market**