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

Academic Program Specification Form for the Academic

University: Anbar
College: Agriculture
Department: Animal Production
Date Of Form Completion: 1/ 6 /2021

Dean's Name: Dr.

Idham Ali Abed

Date:1/6/2021

Signature

Dean's Assistant For Scientific Affairs: Dr. Mohammed Hamdan
Date:1/6/2021

Signature

Head of Department

Dr. Thafer Thabit Mohammed
Date :1/6/ 2021

Signature

Quality Assurance And University Performance Manager Date : 1/6/2021
Signature

TEMPLATE FOR PROGRAMME SPECIFICATION

HIGHER EDUCATION PERFORMANCE REVIEW: PROGRAMME REVIEW

PROGRAMME SPECIFICATION

This Programme Specification provides a concise summary of the main features of the programme and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. It is supported by a specification for each course that contributes to the programme.

1. Teaching Institution	University of Anbar
2. University Department/Centre	Animal Production
3. Programme Title	Agriculture Vocabulary
4. Title of Final Award	Bachelor of Agriculture
5. Modes of Attendance offered	other
6. Accreditation	Study plan for the fourth stage
7. Other external influences	Related laws and guidelines
8. Date of production/revision of this specification	1/6/2021
9. Aims of the Programme	
Providing students with knowledge of the nature and methods of diagnosing agricultural pests and combating them from an academic and professional point of view	
Understand the nature of agricultural pests and their livelihood according to scientific standards	
Understand the nature of direct and indirect economic damages caused by agricultural pests and how to deal with them according to correct applied scientific methods	
Provide students with information on how to manage IPM programs of pests	
Develop their awareness regarding dealing with chemical pesticides and how to dispose of their residues	

Training students based on the summer training system in the supportive competent authorities, such as the agricultural divisions and the agricultural quarantine

10. Learning Outcomes, Teaching, Learning and Assessment Methods

A. Knowledge and Understanding

1- Understand the concept of pest
2- Distinguish between a primary lesion and a secondary lesion
3- Distinguishing between types of insect, fungal, bacterial, viral and other pests.
4- Knowing the level of damage to the pest and when the control order is required
5- Knowing the appropriate type of pesticide or pest control and knowing the appropriate timing for the control
6-Identification of pesticides and their families and how to deal with them
7- Full knowledge of agricultural pest management.

B. Subject-specific skills

B1 - Knowing how to diagnose the pest
B 2 - Knowing how to determine the level of damage and the type as well as appropriate method and time of control .
B3 - Knowing how to manage the integrated crop

Teaching and Learning Methods

1- Adopting the method of giving lectures and linking each topic with examples from the reality of the agricultural work situation
2- Giving them some simple practical exercises that are discussed by the students and solved during the lecture with the participation of all students in the section with the professor to give the material as a kind of interaction.
3- Training students in laboratories by conducting the necessary laboratory tests for diagnosis
4- Summer training in supporting institutions such as the directorates of agriculture, silos and agricultural quarantine

Assessment Methods

1 - Through the participation of students in the lecture, based on their prior preparation of the subject.
2 - Giving them an exercise as a homework and asking for it to be solved with separate papers, collected from them in the next lecture.
3- Giving the students a case study and dividing the students into groups to write a report about such study.
4- Evaluation through periodic monthly exams.

C. Thinking Skills

C1- Instilling values and principles in the student by emphasizing the independence of the statistician when expressing his impartial opinion
C2- Emphasis on personal characteristics such as integrity, honesty, confidentiality and morals.
C3 - Statement of the importance of the rules of professional conduct and its exposure to legal penalties in case of violation
C4- Emphasizing the importance of combating financial and administrative corruption by the regulatory bodies.

Teaching and Learning Methods

1- Adopting the method of giving lectures and linking each topic with examples from the reality of the agricultural work situation 2- Giving them some simple practical exercises that are discussed by the students and solved during the lecture With the participation of all students in the section with the professor to give the material as a kind of interaction. 3- Training students in laboratories by conducting the necessary laboratory tests for diagnosis 4- Summer training in supporting institutions such as the Directorates of Agriculture, Silos and Agricultural Quarantine
Assessment Methods
1 - Through the participation of students in the lecture, based on their prior preparation of the subject. 2 - Giving them an exercise as a homework and asking for it to be solved with separate papers, collected from them in the next lecture. 3- Giving the students a case study and dividing the students into groups to write a report about that study. 4- Evaluation through monthly exams.

D. General and Transferable Skills (other skills relevant to employability andpersonal development)
D1- Determine the type of pest
D2- Determining the level of economic damage
D 3- Determining the type, method and timing of the control
D4- Integrated pest management

Teaching and Learning Methods

1- Adopting the method of giving lectures and linking each topic with examples from the reality of the agricultural work situation
2- Giving them some simple practical exercises that are discussed by the students and solved during the lecture
With the participation of all students in the section with the professor to give the material as a kind of interaction.
3- Training students in laboratories by conducting the necessary laboratory tests for diagnosis
4- Summer training in supporting institutions such as the directorates of agriculture, silos and agricultural quarantine

Assessment Methods

1 - Through the participation of students in the lecture, based on their prior preparation of the subject.
2 - Giving them an exercise as a homework and asking for it to be solved with separate papers, collected from them in the next lecture.
3- Giving the students a case study and dividing the students into groups to write a report about that study.
4- Evaluation through monthly exams.

11. Programme Structure				12. Awards and Credits
Level/Year	Course or Module Code	Course or Module Title	Credit rating	
first	APP1103	Principles of animal production		Bachelor Degree Requires (x) credits
first	APP1106	analytical chemistry		
first	APP1101	flat space		
first	APP1104	Principles of soil		
first	APP2110	Principles of field crops		
first	APP2111	Principles of Statistics		
first	APP2108	Plant Protection Principles		

first	APP2107	Principles of poultry		
first	APP2102	organic chemistry		
first	APP2113	general animal		
first	APP3109	English Language -1		
first	APP3105	Arabic Language		
first	APP3112	Human rights and public freedom		
first	APP1114	computer applications-1		
first	APP1115	computer applications-2		
first	APP2116	mathematics		
second	APP1206	Microbiology Principles		
second	APP1201	animal production mechanization		
second	APP1204	Principles of ichthyology		
second	APP1202	Biochemistry		
second	APP1203	horticultural science		
second	APP2205	Principles of Agriculture Guidance		
second	APP2002	animal health products		
second	APP2008	Genetics		
second	APP2009	Forage and pasture crops		
second	APP2010	Fish farming and production		
second	APP2011	Principles of dairy science		
second	APP3212	principles of agricultural economics		
second	APP3213	Principles of Microbiology		
second	APP3214	English language		
second	APP3215	freedom and democracy		
second	APP1218	computer 1		

second	APP1219	computer 2		
third	APP2220	economics of animal production		
third	APP2221	Animal nutrition		
third	APP2222	Hatching and hatchery management		
third	APP3216	Animal environment and behavior		
third	APP3217	Design and analysis of experiments		
third	APP3301	poultry physiology		
third	APP3302	Poultry Products Technology		
third	APP3303	animal diseases		
third	APP3304	Animal breeding		
third	APP3305	Reproductive physiology and artificial insemination		
third	APP3306	animal physiology		
fourth	APP3307	poultry breeding		
fourth	APP3308	meat production		
fourth	APP3309	Sheep and goat production		
fourth	APP3310	poultry nutrition		
fourth	APP3311	Management and production of poultry		
fourth	APP3312	pasture management		
fourth	APP3313	Graduation Research Project 1		
fourth	APP3314	poultry diseases		
fourth	APP3315	Molecular Biology		
fourth	APP3316	production of milk cows		
fourth	APP3317	hovering science		
fourth	APP3318	buffalo production		

fourth	APP3319	seminars		
fourth	APP3320	Graduation Research Project 2		

13. Personal Development Planning
Encouraging students to achieve the highest grades during the study stages in the college, so that they can be the first in order to achieve their dreams by completing their studies in postgraduate studies and encouraging them to enroll in postgraduate studies.
14. Admission criteria .
The average of the student in the high school, taking into account the desire of the student
15. Key sources of information about the programme
Methodological books (books, magazines, periodicals, and websites) specialized in the animal production

Curriculum Skills Map

please tick in the relevant boxes where individual Programme Learning Outcomes are being assessed

				Programme Learning Outcomes															
Year / Level	Course Code	Course Title	Core (C) Title or Option (O)	Knowledge and understanding				Subject-specific skills				Thinking Skills				General and Transferable Skills (or) Other skills relevant to employability and personal development			
				A1	**A2**	**A3**	**A4**	**B1**	**B2**	**B3**	**B4**	**C1**	**C2**	**C3**	**C4**	**D1**	**D2**	**D3**	**D4**
first	APP1103	Human rights; freedom &Democracy	Basic	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
first	APP1106	English language 1	Basic	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
first	APP1101	English language 2	Basic	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
first	APP1104	Computer Science 1	Basic	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
first	APP2110	Computer Science 2	Basic	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
first	APP2111	General chemistry	Basic	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
first	APP2108	Principles of horticulture	Basic	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
first	APP2107	Principle of agricultural economic	Basic	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
first	APP2102	Principle of food industries	Basic	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√

first	APP2113	Principle of prevention	Basic	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
first	APP3109	Botany	Basic	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
first	APP3105	General entomology 1	Basic	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
first	APP3112	General entomology 2	Basic	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
first	APP1114	Physical education	elective	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
first	APP1115	Band aid	elective	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
first	APP2116	Organic chemistry	elective	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
first	APP2117	Engineering drawing	elective	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
first	APP3118	Zoology	elective	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
second	APP1206	Arabic language	Basic	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
second	APP1201	English language 3	Basic	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
second	APP1204	English language 4	Basic	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
second	APP1202	Computer Science 3	Basic	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
second	APP1203	Computer Science 4	Basic	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
second	APP2205	Mathematics	Basic	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
second	APP2002	Machinery & equipment control	Basic	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√

second	APP2008	Principles of field crops	Basic	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
second	APP2009	Principles of soil	Basic	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
second	APP2010	Principles of animal production	Basic	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
second	APP2011	Principles of statistics	Basic	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
second	APP3212	Insects taxonomy	Basic	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
second	APP3213	Medical &veterinary insects	Basic	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
second	APP3214	Plant nutrition	Basic	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
second	APP3215	Plant physiology	Basic	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
second	APP1218	Human development	elective	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
second	APP1219	Civil defense	elective	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
second	APP2220	Flat level	elective	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
second	APP2221	Analytic chemistry	elective	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
second	APP2222	Agricultural extension	elective	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
second	APP3216	Plant taxonomy	elective	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
second	APP3217	Microbiology	elective	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
third	APP3301	Plant genetic	Basic	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√

third	APP3302	Experimental design &analysis	Basic	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
third	APP3303	Mycology 1	Basic	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
third	APP3304	Mycology 2	Basic	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
third	APP3305	Insect physiology	Basic	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
third	APP3306	Plant ecology	Basic	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
third	APP3307	Weed & control methods	Basic	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
third	APP3308	Plant pathology	Basic	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
third	APP3309	Bee breeding	Basic	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
third	APP3310	Nematodes	Basic	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
third	APP3311	Plant breeding	Basic	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
third	APP3312	Biochemistry	Basic	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
third	APP3313	Biotechnology	Basic	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
third	APP3314	The Nano technique	elective	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
third	APP3315	Remote sensing	elective	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
fourth	APP3401	Field crops diseases	Basic	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
fourth	APP3404	Pesticides	Basic	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
fourth	APP3405	Insect ecology	Basic	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√

fourth	APP3403	Storage pests	Basic	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
fourth	APP3406	Diseases of vegetables & protected agriculture	Basic	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
fourth	APP3402	Biological control	Basic	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
fourth	APP3408	Fruit diseases	Basic	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
fourth	APP3409	Plant virology	Basic	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
fourth	APP3407	Agriculture mites	Basic	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
fourth	APP3410	Field crops insects	Basic	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
fourth	APP3411	Horticultures insects	Basic	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
fourth	APP3412	Integrated pest management	Basic	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
fourth	APP3413	Ecology pollution	Basic	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
fourth	APP3417	Seminar	Basic	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
fourth	APP3418	Research project	Basic	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
fourth	APP3414	Bacteria &plant pathogenic phytoplasma	elective	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
fourth	APP3415	Technology for the production	elective	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√

		of mushroom																	

TEMPLATE FOR COURSE SPECIFICATION

HIGHER EDUCATION PERFORMANCE REVIEW: PROGRAMME REVIEW

COURSE SPECIFICATION

This Course Specification provides a concise summary of the main features of the course and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. It should be cross-referenced with the programme specification.

1. Teaching Institution	College of agriculture /university of anbar
2. University Department/Centre	Animal production
3. Course title/code	Dairy buffalo
4. Programme(s) to which it contributes	Agricultural and veterinary
5. Modes of Attendance offered	Electronic and class
6. Semester/Year	Winter 2021-2022
7. Number of hours tuition (total)	80
8. Date of production/revision of this Specification	22/9/2021
9. Aims of the Course	
Introducing the student to the different types of milk-producing Iraqi and international buffalo and how to benefit from them Including, ways of raising them, taking care of them, knowing how to reproduce them, appropriate nutrition for them, and developing them to obtain a good product Which returns the profit to the breeder and can be used in the market for the consumer.	

10· Learning Outcomes, Teaching ,Learning and Assessment Methode

A- Knowledge and Understanding

A1.white board

A2. Electronic class

A3. Meeting

A4. Intranet

A5. Lab.

A6 . farm show

B. Subject-specific skills

B1. Quiz

B2. Oral exam

B3. Home work

Teaching and Learning Methods

Attendance education in the classroom as well as e-learning using electronic classes and meetings on the Internet. As well as going out to the field to complete the practical part.

Assessment methods

The paper exam and the electronic exam, then the practical exam, the daily quotations, the student's participation during the lesson, attendance and individual skills.

C. Thinking Skills

C1. Brainstorm

C2.intellectual questions

C3. Preparing reports

C4. Lesson topics

Teaching and Learning Methods

Using the board and pen, then using the data show projector, as well as field observations

Assessment methods

Daily and monthly attendance and electronic exams, field tests, scientific reports.

D. General and Transferable Skills (other skills relevant to employability and personal development)
D1. The ability to conduct
D2. Practical part
D3. Creative in ideas
D4. Develop learned

11. Course Structure					
Week	Hours	ILOs	Unit/Module or Topic Title	Teaching Method	Assessment Method
First	5	Breeds	Introduction to buffalo	Presentation	Quiz
Second	5	Local breeds	Type cow in world	Presentation	Questions
Third	5	buffalo reproduction	Reproductive systems	Presentation	Monthly exam
Fourth	5	buffalo feed	Type of nutrition	Presentation	Practical exam
Fifth	5	Dairy management	Dairy station department	Presentation	Quiz
Sixth	5	Milk production	Milk machine	Presentation	Conversation
Seventh	5	buffalo disease	FMD , blot, hypocalcemia	Presentation	Monthly exam

12. Infrastructure	
Required reading: · CORE TEXTS · COURSE MATERIALS · OTHER	-Milk production buffalo .text book -reproduction in dairy buffalo - special lectures
Special requirements (include for example workshops, periodicals, IT software, websites)	-cows farm -milk lab. -class room -electronic class.
Community-based facilities (include for example, guest Lectures , internship , field studies)	-local study for the privet farm -workshop

13. Admissions	
Pre-requisites	38
Minimum number of students	25
Maximum number of students	50

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COURSE SPECIFICATION

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1. Teaching Institution	Anbar University
2. University Department/Centre	College of Agriculture/University of Anbar
3. Course title/code	General Zoology/practical
4. Programme(s) to which it contributes	Bachelor
5. Modes of Attendance offered	semester courses
6. Semester/Year	semester
7.Other external inflences	The field of animal production, scientific sites, electronic libraries, laboratories
8. Date of production/revision of this specification	15/9/2021
9. Aims of the Course	
Develop personal thinking and analysis	
Activate and activate scientific skills	
Stimulating self-development skills	

10· Learning Outcomes, Teaching ,Learning and Assessment Methode

A- Knowledge and Understanding

B-

A1. To distinguish between the aspects

A2. That the student understand the meaning of linking sciences

A3. Stimulating self-development skills in research and sequential investig

A4. To have the knowledge of the importance of animal classification

A5. To distinguish the student's importance of studying animal people and their

A6 . The student should have the ability to analyze, relate and draw conclusions

B. Subject-specific skills

B1. To distinguish between the types of classification phylumanimal and its importance

B2. To identify the importance of cellular organelles and the chemistry of an animal cell tissues

B3. To discover the role of organic evolution in sustaining life

Teaching and Learning Methods

Developing the curriculum in line with the field work

Applying scientific materials in practice and linking them to public health laws

Enable the student to direct conclusion and speed of intuition

Activating the student's role in discussion, conclusion and creative interaction

Motivate the student to link scientific concepts with field operations, animal breeding condition

Assessment methods

Conducting weekly exams with the tasks and duties of the previous lecture

Applying scientific materials in practice and linking them to public health laws

Enable the student to direct conclusion and the ability to creative interaction

Activating the student's role in competition, reproduction and the ability to creative

C. Thinking Skills

C1. Providing the student with the scientific basics of zoology and linking them to the sciences of animal production

C2. Strengthening the investigative side to enable the student to move to the practical

C3. Visiting the scientific laboratories at the college and university

C4. Conducting field visits to animal breeding fields and animal museums at the university

Teaching and Learning Methods

panel discussion

Assessment methods

-Weekly exams with electronic class assignments

-Oral monthly exams

-Multiple choice online exams

-The degree of attendance, participation, continuous interaction and

D. General and Transferable Skills (other skills relevant to employability and personal development)
D1. Preparing the student for post-graduation so that he is able to manage fields and cultures
D2. To be alert and quick to make a decision
D3. He has the ability to pass job interviews in his field of specialization and to highlight his scientific skills
D4To use rapid analysis and treatment of field operations and the surrounding .

11. Course Structure					
Week	Hours	ILOs	Unit/Module or Topic Title	Teaching Method	AssessmentMethod
Week1	2	To identify the importance of the synergy of sciences	Phylum: protozoa	electronic	Online class assignments + quick test
Week 2	2	They are primitive multicellular animals and have **cellular level of organisation**	Phylum:porifera	electronic	Online class assignments + oral test
Week 3	2	To distinguish the scientific importance of Platyhelminthes are more complexly designed than the earlier groups	Phylum:Platyhelminthes	electronic	Online class assignments + feedback test
Week 4	2	The student understands the most important structural	Phylum:Annelida	electronic	Online class assignments + quick test

		foundations in the classification of animals warm			
Week 5	2	Platyhelminthes are more complexly designed than the earlier groups. They are bilaterally symmetrical.	**Phylum – Aschelminthes (Nemotoda)**	electronic	Online class assignments + oral report
Week 6	2	The name cnidaria is derived from the cnidoblasts or cnidocytes (which contain the stinging capsules or nematocytes) present on the tentacles and the body.	Coclenterata(Cnidaria)	electronic	Online class assignments + oral report
Week 7	2	Insects, arachnids and crustaceans are members of the largest category of creatures on the planet: arthropods.	Arthropod	electronic	Online class assignments + oral report
Week 8	2	Mollusca are the second largest animal phylum. They are terrestrial or aquatic	Mollusca	electronic	electronic tasks
Week 9	2	These animals have an endoskeleton of calcareous ossicles	Echinodermata	electronic	oral questions

		[calcium carbonate structures] and, hence, the name Echinodermata (**spiny skinned organisms**			
Week 10	2		Components of a living animal cell	electronic	electronic
Week 11	2	The student distinguishes its components Animals belonging to phylum Chordata are fundamentally characterised by the presence of a notochord, a dorsal hollow nerve cord and paired pharyngeal gill slits.	cordate	electronic	electronic
Week 12	2	The importance and function of each type	Types of cell and animal tissues	electronic	Electronic class assignments
Week13	2		**epithelial tissues**	electronic	Online class assignments + oral report
Week14	2	The importance of each stage	**connective tissues**	electronic	Online class assignments + oral report
Week15	2	The importance of studying biological evolution	**muscular tissues**	electronic	Online class assignments + oral report
Week 16	2	Its importance in terms of inference	**nervous tissues**	electronic	Online class assignments + oral report

12. Infrastructure	
Required reading: · CORE TEXTS · COURSE MATERIALS · OTHER	
Special requirements (include for example workshops, periodicals, IT software, websites)	
Community-based facilities (include for example, guest Lectures , internship , field studies)	

13. Admissions	
Pre-requisites	
Minimum number of students	
Maximum number of students	

TEMPLATE FOR COURSE SPECIFICATION

HIGHER EDUCATION PERFORMANCE REVIEW: PROGRAMME REVIEW

COURSE SPECIFICATION

This Course Specification provides a concise summary of the main features of the course and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. It should be cross-referenced with the programme specification.

1. Teaching Institution	University of Anbar
2. University Department/Centre	Animal Production
3. Course title/code	Animal Physiology / AAPP301
4. Programme(s) to which it contributes	Attendance and blend learning
5. Modes of Attendance offered	Undergraduates student
6. Semester/Year	Fall Semester / 2020-2021
7. Number of hours tuition (total)	35 hrs
8. Date of production/revision of this Specification	17-07-2021
9. Aims of the Course	
Students will learn to understand the basic principles of animal physiology.	
They will learn on the body's systems, starting from the cell and ending with the organ body.	
Teaching them how to conduct blood tests, transfusion and keep blood, and then conduct the tests.	
Identify the types of food entering the digestive system and how to maintain internal stability.	

10· Learning Outcomes, Teaching ,Learning and Assessment Method
A- Knowledge and Understanding A1. Interaction between practical reality and scientific expertise and providing the best service to society. A2. Possesses the cognitive ability to evaluate agricultural projects in the animal field. A3. Preparing a generation of researchers with scientific and laboratory skills. A4. Learn how to plan projects and find appropriate solutions. A5. Know the physiological changes associated with external influences A6. Introducing students to the skills acquired in the laboratory and linking them to practical reality.
B. Subject-specific skills B1. Gain the ability to represent educational institutions in the areas of the course. B2. Enabling students to solve knots associated with topics related to animal physiology. B3. Giving skill of using cognitive tools in the field of animal physiology.
Teaching and Learning Methods
1. Active Learning 2. Cooperative learning 3. Discussions 4. Reports
Assessment methods
1. Evaluation within the lecture 2. Short exams 3. Written exams for essay questions 4. Weekly reports 5. Assignments
C. Thinking Skills C1- Listening and asking intellectual questions C2- Students participate in preparing scientific lectures C 3- Adheres to information and science C4- Presents scientific points of view
Teaching and Learning Methods
1. Active Learning 2. Cooperative learning 3. Discussions 4. Reports
Assessment methods

1. Evaluation within the lecture
2. Short exams
3. Written exams for essay questions
4. Weekly reports
5. Assignments

D. General and Transferable Skills (other skills relevant to employability and personal development)
D1. Communication
D 2- The skill of presenting oral questions
D 3- Team work
D 4- Initiative at work

11. Course Structure

Week	Hours	ILOs	Unit/Module orTopic Title	Teaching Method	AssessmentMethod
Week1	2	Knowledge of general laws within scientific laboratories	General rules in laboratories	Lecture	Oral exam
Week2	2	Knowing how to handle chemicals in the laboratory	Materials Safety Data Sheet, MSDS	Lecture	Report
Week3	2	Understand the structures of bone material and bone function in the body.	Skeletal System	Lecture	Short exam
Week4	2	Describe the basic functions of each part of the digestive system	Digestive System	Lecture	Report
Week5	2	First Exam			
Week6	2	Understand the changes that occur in the internal environment of the rumen.	Examination of Rumen Liquor	Lecture	Oral Exam
Week7	2	Autopsy methods used in large animals.	Necropsy	Lecture	Short exam
Week8	2	Describe the steps of tissue sections.	Animal Histology	Lecture	Assignment
Week9	2	Knowing how to determine blood types	Blood test	Lecture	Report

Week10	2	Second Exam			
Week11	2	Distinguish between the internal and external anatomy of the udder	Necropsy of Mammary Gland in Agricultural Animals	Lecture	Report
Week12	2	How to do laboratory experiment	in vitro trail	Lecture	Oral exam
Week13	2	Student learns how to measure respiration in ruminants	Respiratory system and measurement of respiratory rate and respiratory capacity	Lecture	Oral exam
Week14	2	Motivation to learn	Seminar	Lecture	Report
Week15	2	Re-lectures		Lecture	

12. Infrastructure	
Required reading: · CORE TEXTS · COURSE MATERIALS · OTHER	Anatomy and physiology of farm animals 7nd Edition 2009
Special requirements (include for example workshops, periodicals, IT software, websites)	Furr, A. K. (2000). CRC handbook of laboratory safety. CRC press.
Community-based facilities (include for example, guest Lectures , internship , field studies)	PAGE, I. Laboratory Safety Standard and General Safety Rules. Policy, 1, 2.

13. Admissions	
Pre-requisites	Developing the curriculum by adding new and important topics for students
Minimum number of students	7
Maximum number of students	20

EMPLATE FOR COURSE SPECIFICATION

HIGHER EDUCATION PERFORMANCE REVIEW: PROGRAMME REVIEW

COURSE SPECIFICATION

This Course Specification provides a concise summary of the main features of the course and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. It should be cross-referenced with the programme specification.

1. Teaching Institution	University of Anbar
2. University Department/Centre	Animal Production
3. Course title/code	Animal Reproduction / AAPP301
4. Programme(s) to which it contributes	Attendance and blend learning
5. Modes of Attendance offered	Undergraduates student
6. Semester/Year	Spring Semester / 2020-2021
7. Number of hours tuition (total)	35 hrs
8. Date of production/revision of this Specification	17-07-2021
9. Aims of the Course	
Reproduction in females and its importance and the study of related hormones.	
Oestrus cycles in farm animals and spawning.	

Fertilization and the mechanism of acrosome interaction - and the acquisition of the ability for sperm to fertilize.
The postpartum period and the return of the animal to its normal reproductive state.

10· Learning Outcomes, Teaching ,Learning and Assessment Methode
A- Knowledge and Understanding A1. Introducing students to the skills acquired in the laboratory and linking them to practical reality. A2. Interaction between practical reality and scientific expertise and providing the best service to society. A3. Having the cognitive ability to evaluate agricultural projects in the animal field. A4. Preparing a generation of researchers with scientific and laboratory skills. A5. Contribute to building a scientific base for graduates.
B. Subject-specific skills B1. - Enabling students to solve contracts related to topics related to animal physiology. B2 - Gain the ability to represent educational institutions in the areas of the course. B3 - Using brainstorming in essay writing.
Teaching and Learning Methods
1. Active Learning 2. Cooperative learning 3. Discussions 4. Reports
Assessment methods
1. Evaluation within the lecture 2. Short exams 3. Written exams for essay questions 4. Weekly reports 5. Assignment
C. Thinking Skills C1- Listening and asking intellectual questions. C2- Students participate in preparing scientific lectures. C 3- Adheres to information and science. C4- Presents scientific points of view.
Teaching and Learning Methods
1. Evaluation within the lecture 2. Short exams 3. Written exams for essay questions 4. Weekly reports 5. Assignments
Assessment methods

1. Evaluation within the lecture
2. Short exams
3. Written exams for essay questions
4. Weekly reports
5. Assignments

D. General and Transferable Skills (other skills relevant to employability and personal development)
D1- Communication
D 2- The skill of presenting oral questions
D 3- Team work
D 4- Initiative at work

11. Course Structure					
Week	Hours	ILOs	Unit/Module orTopic Title	Teaching Method	AssessmentMethod
Week1	2	The ability to distinguish between components of the male reproductive system	Anatomy and Physiology of Mammalian Male Reproduction Systems	Lecture	Oral exam
Week2	2	Describe the basic functions of each part of the female reproductive system	Anatomy and Physiology of Mammalian Female Reproduction Systems	Lecture	Report
Week3	2	Know how to collect semen	Semen Collection of Farm Animals	lecture	Short exam
Week4	2	Know how to collect semen	Evaluation of Semen	Lecture	Report
Week5	2	First Exam			
Week6	2	Know how to evaluate semen	Evaluation of Semen	Lecture	Oral exam
Week7	2	Knowing how to detect estrus in different animals	Heat Detection	Lecture	Short exam
Week8	2	Knowing how to diagnose pregnancy in farm animals	Pregnancy Diagnosis	Lecture	Report
Week9	2	Knowing how to prepare semen for preservation	Semen preparation for preservation	Lecture	Report
Week10	2	Second Exam			
Week11	2	Knowing how	Artificial	Lecture	Report

		to perform artificial insemination	Insemination in Cow		
Week12	2	Knowing the causes of abortions	Abortion in agricultural animals	Lecture	Oral exam
Week13	2	Determining the possible mechanisms in improving reproductive functions in fertilized males	Appropriate modifications of male reproductive functions	Lecture	Oral exam
Week14	2	Motivation for collaborative learning	Seminar	Lecture	Report
Week15	2	Review of lectures		lecture	Short exam

12. Infrastructure	
Required reading: · CORE TEXTS · COURSE MATERIALS · OTHER	Sejrsen, K., Hvelplund, T., & Nielsen, M. O. (Eds.). (2006). Ruminant physiology: digestion, metabolism and impact of nutrition on gene expression, immunology and stress. Wageningen Academic Publishers.
Special requirements (include for example workshops, periodicals, IT software, websites)	https://study.com/academy/topic/animal-reproduction-and-development.html
Community-based facilities (include for example, guest Lectures , internship , field studies)	

13. Admissions	
Pre-requisites	Using scientific methods based on the principle of teaching and learning
Minimum number of students	7
Maximum number of students	20

TEMPLATE FOR COURSE SPECIFICATION

HIGHER EDUCATION PERFORMANCE REVIEW: PROGRAMME REVIEW

COURSE SPECIFICATION

This Course Specification provides a concise summary of the main features of the course and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. It should be cross-referenced with the programme specification.

1. Teaching Institution	University of Anbar
2. University Department/Centre	Animal Production
3. Course title/code	Biochemistry
4. Programme(s) to which it contributes	Attendance and blend learning
5. Modes of Attendance offered	graduates student/ MSC
6. Semester/Year	Spring Semester / 2021-2022
7. Number of hours tuition (total)	75 hrs
8. Date of production/revision of this Specification	30-09-2021
9. Aims of the Course	
• Introducing students to the concept of biochemistry, its importance and its various sections. • Introducing students to the types of cells and components of living cells and their vital roles in the body. • Introducing students with enzymes, organizing enzymes, their reactive behavior and the factors affecting it. • Introducing students to the different energy sources that the body needs, its components and types. • Introducing students to how to benefit from indigestible nutrients. • Introducing students to the metabolic pathways of carbohydrates, proteins and fats. • Introducing students to nucleic acids and and their vital roles.	

10· Learning Outcomes, Teaching ,Learning and Assessment Methode
a. Develop cognitive skills by perceiving information and concepts. b. Develop students' intellectual skills. c. Develop personal skills. d. Develop communication skills twitch the information network, the Internet and computers. e. Develop communication skills between students among themselves on the one hand, and with the community and the professor on the other.
B. Subject-specific skillsB1 - Develop students' Theoretical lectures. Practical lectures in the college poultry farm. Electronic communication. Abstract of books, resources and research.
Teaching and Learning Methods
1. Active Learning 2. Cooperative learning 3. Discussions 4. Reports
Assessment methods
1. Evaluation within the lecture 2. Short exams 3. Written exams for essay questions 4. Weekly reports 5. Assignments
C. Thinking Skills C1- Listening and asking intellectual questions C2- Students participate in preparing scientific lectures C 3- Adheres to information and science C4- Presents scientific points of view
Teaching and Learning Methods
1. Active Learning 2. Cooperative learning 3. Discussions 4. Reports
Assessment methods
1. Evaluation within the lecture 2. Short exams 3. Written exams for essay questions 4. Weekly reports 5. Assignments

D. General and Transferable Skills (other skills relevant to employability and personal development)

a. Familiarize students with the concept of biochemistry and its importance in our practical life.
b.Introducing students to the metabolic pathways of carbohydrates, proteins and fats.
c. Knowing the body's utilization of nutrients and the subtraction of the byproducts of digestion and metabolism.
d. Introducing students to research in the nutrition metabolite and their products.
e. The ability to criticize and debate on sound grounds..

11. Course Structure

Week	Hours	ILOs	Unit/Module or Topic Title	Teaching Method	AssessmentMethod
Week1	5	a. Cognitive skills b. intellectual skills c. personal skills d. Network and Internet skills e.ommunication and Connection skills	cell components	Lecture	Oral exam
Week2	5	. Cognitive skills b. intellectual skills c. personal skills d. Network and Internet skills e.ommunication and Connection skills	amino acids	Lecture	Report
Week3	5	. Cognitive skills b. intellectual skills c. personal skills d. Network and Internet skills e.ommunication and Connection skills	Proteins, structure and properties and role it	Lecture	Short exam
Week4	5	. Cognitive skills b. intellectual skills c. personal skills d. Network and Internet skills	enzymes	Lecture	Report

		e.ommunication and Connection skills			
Week5	5	regulatory enzymes +First Exam			
Week6	5	a. Cognitive skills b. intellectual skills c. personal skills d. Network and Internet skills e.ommunication and Connection skills	carbohydrates	Lecture	Oral exam
Week7	5	a. Cognitive skills b. intellectual skills c. personal skills d. Network and Internet skills e.ommunication and Connection skills	Fats	Lecture	Short exam
Week8	5	a. Cognitive skills b. intellectual skills c. personal skills d. Network and Internet skills e.ommunication and Connection skills	Carbohydrate metabolism	Lecture	Report
Week9	5	Review	Protein metabolism	Lecture	Report
Week10	5	a. Cognitive skills b. intellectual skills c. personal skills d. Network and Internet skills e.ommunication and Connection skills	Fat metabolism	Lecture	Oral exam
Week11	5	nucleic acids +Second Exam			
Week12	5	a. Cognitive skills b. intellectual skills	protein synthesis	Lecture	Oral exam

		c. personal skills d. Network and Internet skills e.ommunication and Connection skills			
Week13	5	a. Cognitive skills b. intellectual skills c. personal skills d. Network and Internet skills e.ommunication and Connection skills	Hormones and their role in metabolism	Lecture	Oral exam
Week14	5	a. Cognitive skills b. intellectual skills c. personal skills d. Network and Internet skills e.ommunication and Connection skills	vitamins and nutrition		
Week15	5	a. Cognitive skills b. intellectual skills c. personal skills d. Network and Internet skills e.ommunication and Connection skills	Blood biochemistry		

12. Infrastructure	
Required reading: · CORE TEXTS · COURSE MATERIALS · OTHER	a. Abstract in Biochemistry by: Albert L. Lininger. 2004. b. Agricultural biochemistry. Written by Dr. Basil Kamel Dalaly 2002.
Special requirements (include for example workshops, periodicals, IT software, websites)	a. Recent studies and studies. b. The Internet of Information (Internet)

Community-based facilities (include for example, guest Lectures , internship , field studies)	a. Giving some awareness and educational lectures to students. b.visits to see the college farms of laying hens and broiler and the diets factories in the governorate

13. Admissions	
Pre-requisites	35
Minimum number of students	30
Maximum number of students	70

TEMPLATE FOR COURSE SPECIFICATION

HIGHER EDUCATION PERFORMANCE REVIEW: PROGRAMME REVIEW

COURSE SPECIFICATION

This Course Specification provides a concise summary of the main features of the course and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. It should be cross-referenced with the programme specification.

1. Teaching Institution	University of Anbar
2. University Department/Centre	Animal Production / agriculture College
3. Course title/code	Animal Breeding
4. Programme(s) to which it contributes	
5. Modes of Attendance offered	Electronic theoretical study + practical and theoretical study
6. Semester/Year	Spring Semester / 2020-2021
7. Number of hours tuition (total)	2 hours theoretical + 3 hours practical
8. Date of production/revision of this Specification	6/6/2021
9. Aims of the Course	

10· Learning Outcomes, Teaching ,Learning and Assessment Methode
A- Knowledge and Understanding 1- Developing the student's scientific and cognitive level 2- The ability to analyze and understand the process of genetic improvement of birds 3- Teaching students the methods of evaluating and improving the productive performance of poultry flocks 4- Teaching students the methods of evaluating the economic feasibility and methods of managing poultry fields
B. Subject-specific skills 1- The ability to distinguish breeds 2- The ability to measure productive qualities 3- The ability to develop plans for the management of animal projects
Teaching and Learning Methods
Electronic lectures / illustrations / diagrams / educational video / educational commitment for students in the lecture and educational institution
Assessment methods
Attendance during the lecture / performing homework and reports / performing exams / class activity / participating in the lecture and scientific discussions
C. Thinking Skills 1- Develop student knowledge and access to knowledge sources 2- Develop scientific analysis of the problem and ways to solve or avoid it from the ground up 3- Skill in formulating a scientific research hypothesis 4- Flexibility in dealing with emergency situations at work by adapting information to find alternatives
Teaching and Learning Methods
Learn the ability to analyze and infer / learn the ability to deduce / analyze the problem on scientific grounds
Assessment methods
daily tests / Monthly tests / Questions and discussion in lectures Scientific Reports / Attending lectures

D. General and Transferable Skills (other skills relevant to employability and personal development)

possessing knowledge

How to manage the scientific debate

The ability to clarify scientific ideas

Learn to manage fields

11. Course Structure

Week	Hours	ILOs	Unit/Module or Topic Title	Teaching Method	Assessment Method
1	5	Animal breeding	Introduction Animal Improvement	Scientific lecture	Class attendance / discussion / report
2	5	Variance and Variation	Genetic and phenotypic variance	Scientific Lecture	Class attendance / discussion / report
3	5	Quantitative and qualitative traits	Types of traits and their importance	Scientific Lecture	Class attendance / discussion / report
4	5	Population Genetic	Population and their types	Scientific Lecture	Class attendance / discussion / report
5	5	Gene expression	Arithmetic problems	Scientific Lecture	Class attendance / discussion / report
6	5	Breeding value	general concepts	Scientific Lecture	Class attendance / discussion / report
7	5	Monozygotic twins	twins inbreeding / outbreeding	Scientific Lecture	Class attendance / discussion / report
8	5	Repeatability	general concepts	Scientific Lecture	Class attendance / discussion / report
9	5	Selection types	genetic selection	Scientific Lecture	Class attendance / discussion / report
10	5	Breeding type	Types of Selection	Scientific Lecture	Class attendance / discussion / report
11	5	Line breeding	Types of Selection	Scientific Lecture	Class attendance / discussion / report
12	5	Cross breeding	Types of Cross breeding	Scientific Lecture	Class attendance / discussion / report
13	5	Relationship	degree of kinship	Scientific Lecture	Class attendance / discussion / report
14	5	genetic clues	genetic clues	Scientific lecture	Class attendance / discussion / report

12. Infrastructure	
Required reading: · CORE TEXTS · COURSE MATERIALS · OTHER	Animal Breeding Dr. Salah Jalal Dr. Hassan Karam 2003 Research, scientific reports and scientific journals
Main references (sources) (include for example workshops, periodicals, IT software, websites)	Scientific books, scientific periodicals and research
Recommended science books (include for example, guest Lectures , internship , field studies)	Modern books for the precise specialization
Electronic references, websites	Reputable scientific sites

13. course development plan
Providing modern books Existence of scientific trips to specialized agricultural fields for genetic improvement

HIGHER EDUCATION PERFORMANCE REVIEW: PROGRAMME REVIEW

COURSE SPECIFICATION

This Course Specification provides a concise summary of the main features of the course and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. It should be cross-referenced with the programme specification.

1. Teaching Institution	University of Anbar
2. University Department/Centre	Animal Production
3. Course title/code	English / AAPE107 - AAPE115
4. Programme(s) to which it contributes	Attendance and blend learning
5. Modes of Attendance offered	Undergraduates student
6. Semester/Year	Fall Semester / 2020-2021
7. Number of hours tuition (total)	35 hrs
8. Date of production/revision of this Specification	17-07-2021
9. Aims of the Course	
1. Enable students to achieve reasonable language proficiency to work in academic and professional settings.	
2. To develop students' abilities to use the English language orally and in writing to communicate with both native and non-native speakers of English.	
3. Providing students with the required language skills as well as the basic academic, study and research skills to pursue university education in their fields of study.	
4. Develop concepts and respect for the cultures in which English is used.	

10· Learning Outcomes, Teaching ,Learning and Assessment Methode
A- Knowledge and Understanding A1- The student learns the most frequently used vocabulary in his field of specialization. A2- He learns how to write his personal biography in the English language. A3- Mention the scientific terms and the possibility of defining them using the English language. A 4- Know the appropriate terms used in different fields A5- Students understand the important rules of writing and speaking in the English language.
B. Subject-specific skills B1. Enabling students to solve the complexities associated with learning other languages. B2 - Gaining the ability to correspond with educational institutions. B3 - Skilled in communicating with native English speakers. B4 - Using brainstorming in essay writing.
Teaching and Learning Methods
1. Active learning 2. Cooperative learning 3. Discussions 4. Reports
Assessment methods
1. Evaluation within the lecture 2. Short exams 3. Written exams for essay questions 4. Weekly reports 5. Assignment
C. Thinking Skills C1- Listening and asking intellectual questions. C2- Students participate in preparing scientific lectures. C 3- Adheres to information and science. C4- Presents scientific points of view.
Teaching and Learning Methods
1. Evaluation within the lecture 2. Short exams 3. Written exams for essay questions 4. Weekly reports 5. Assignments
Assessment methods

1. Evaluation within the lecture
2. Short exams
3. Written exams for essay questions
4. Weekly reports
5. Assignments

D. General and Transferable Skills (other skills relevant to employability and personal development)
D1- Communication
D 2- The skill of presenting oral questions
D 3- Team work
D 4- Initiative at work

11. Course Structure					
Week	Hours	ILOs	Unit/Module orTopic Title	Teaching Method	AssessmentMethod
Week1	2	Learn most vocabulary that relevant to students study field	Agricultural Terms	Lecture	Oral exam
Week2	2	Learn to how to greet or farewells	Greetings and Farewells	Lecture	Report
Week3	2	The student learns how to write his personal information	Personal Information	Lecture	Short exam
Week4	2	The ability to use the tenses in the English language	Tenses in English Language	Lecture	Report
Week5	2	First Exam			
Week6	2	knowing the adjectives and how to use them in the English language	Adjectives	Lecture	Oral exam
Week7	2	Distinguish between the uses of each	ENGLISH GRAMMAR Uses of A / AN SOME / ANY	Lecture	Short exam
Week8	2	Learn to use prepositions in sentences	PREPOSITIONS	Lecture	Report
Week9	2	The student learns how to write	Academic Writing	Lecture	Report

		academically			
Week10	2	The student learns to write an essay in English	Essay Writing	Lecture	Oral exam
Week11	2	Second Exam			
Week12	2	The ability to listen and distinguish between words	Listening	Lecture	Oral exam
Week13	2	The student learns to read the article and focus on the important words in it	Reading	Lecture	Oral exam
Week14	2	Motivation for collaborative learning	Discussion Phase	Lecture	Report
Week15	2	Review all lectures		Lecture	Short exam

12. Infrastructure	
Required reading: · CORE TEXTS · COURSE MATERIALS · OTHER	**Soars, L., & Soars, J. (2002). New headway English course. Beginner. Student's book/Liz and John Soars.**
Special requirements (include for example workshops, periodicals, IT software, websites)	https://learnenglish.britishcouncil.org/online-english-level-test
Community-based facilities (include for example, guest Lectures , internship , field studies)	

13. Admissions	
Pre-requisites	Developing the curriculum by adding new and important topics for students
Minimum number of students	7
Maximum number of students	20

TEMPLATE FOR COURSE SPECIFICATION

HIGHER EDUCATION PERFORMANCE REVIEW: PROGRAMME REVIEW

COURSE SPECIFICATION

This Course Specification provides a concise summary of the main features of the course and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. It should be cross-referenced with the programme specification.

1. Teaching Institution	University of Anbar
2. University Department/Centre	Animal Production
3. Course title/code	Molecular Biology / AAPM409
4. Programme(s) to which it contributes	Attendance and blend learning
5. Modes of Attendance offered	Undergraduates student
6. Semester/Year	Spring Semester / 2020-2021
7. Number of hours tuition (total)	35 hrs
8. Date of production/revision of this Specification	17-07-2021
9. Aims of the Course	
A. Learn the basic principles of molecular biology.	
B. Acquiring higher level thinking skills in the field of molecular science.	
C. Gene expressions in eukaryotic organisms and factors affecting transcription.	
D. Knowing how proteins are synthesized in eukaryotic organisms.	

10· Learning Outcomes, Teaching ,Learning and Assessment Methode
A- Knowledge and Understanding A1- Understand the basics of molecular biology and the future aspirations for its development. A2- Focusing on the important techniques that develop the practical concept of students. A3- Preparing a generation of researchers with scientific and laboratory skills. A 4- Learn how to plan projects and find appropriate solutions A5- Knowledge and familiarity with the biological risks that may occur in laboratories.
B. Subject-specific skillsB1 - Develop students' B1. Ability to master the skills of molecular techniques in oral and written form, in a lecture, in a laboratory and in an examination B2 - Gain the ability to represent educational institutions in the areas of the course. B3 - Using brainstorming in essay writing. B4- Acquire information skills and work on them in the field of molecular biology
Teaching and Learning Methods
1. Active Learning 2. Cooperative learning 3. Discussions 4. Reports
Assessment methods
1. Evaluation within the lecture 2. Short exams 3. Written exams for essay questions 4. Weekly reports 5. Assignments
C. Thinking Skills C1- Listening and asking intellectual questions C2- Students participate in preparing scientific lectures C 3- Adheres to information and science C4- Presents scientific points of view
Teaching and Learning Methods
1. Active Learning 2. Cooperative learning 3. Discussions 4. Reports
Assessment methods

1. Evaluation within the lecture
2. Short exams
3. Written exams for essay questions
4. Weekly reports
5. Assignments

D. General and Transferable Skills (other skills relevant to employability and personal development)
D1- Communication
D 2- The skill of presenting oral questions
D 3- Team work
D 4- Initiative at work

11. Course Structure

Week	Hours	ILOs	Unit/Module or Topic Title	Teaching Method	AssessmentMethod
Week1	2	Know the types of eukaryotic and primitive organisms	Basics of Molecular Biology	Lecture	Oral exam
Week2	2	The student learns the differences between the types of transport across cell membranes	Transport Across Cell Membrane	Lecture	Report
Week3	2	The student understands the necessary procedures when using the laboratory	Instructions of Molecular Biology Laboratory	Lecture	Short exam
Week4	2	Define biotechnology and its importance	Applications of Biotechnology for Animal Production	Lecture	Report
Week5	2	First Exam			
Week6	2	Knowledge of the mechanisms of purification and measurement of DNA concentration	Nucleic Acids Quantification	Lecture	Oral exam
Week7	2	Requirements for the polymerase chain reaction	Polymerase Chain Reaction	Lecture	Short exam
Week8	2	Learn how is genetic control	Gene Expression	Lecture	Report

		in body	Control Methods		
Week9	2	Review		Lecture	Report
Week10	2	Knowing the steps of designing a primer	Primer Design	Lecture	Oral exam
Week11	2	Second Exam			
Week12	2	Knowledge of the basics of protein synthesis and secretion	Protein synthesis and transcription	Lecture	Oral exam
Week13	2	Determination possible methods of developing genetic engineering	Recombinant DNA and genetic engineering	Lecture	Oral exam
Week14	2	Seminar		Lecture	Report
Week15	2	Review all lectures		Lecture	Short exam

12. Infrastructure	
Required reading: · CORE TEXTS · COURSE MATERIALS · OTHER	قازانجي، محمد عمر؛ جبر، حميد عبود. (2017). علم الحياة الجزيئي. الطبعة الاولى. جامعة بغداد، كلية الزراعة. الدار الجامعية للطباعة والنشر والترجمة
Special requirements (include for example workshops, periodicals, IT software, websites)	https://blast.ncbi.nlm.nih.gov/Blast.cgi
Community-based facilities (include for example, guest Lectures , internship , field studies)	

13. Admissions	
Pre-requisites	Developing the curriculum by adding new and important topics for students
Minimum number of students	7
Maximum number of students	20

TEMPLATE FOR COURSE SPECIFICATION

HIGHER EDUCATION PERFORMANCE REVIEW: PROGRAMME REVIEW

COURSE SPECIFICATION

This Course Specification provides a concise summary of the main features of the course and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. It should be cross-referenced with the programme specification.

1. Teaching Institution	Agriculture college
2. University Department/Centre	Animal production
3. Course title/code	Sheep and Goats production
4. Programme(s) to which it contributes	Attendance and Electronic
5. Modes of Attendance offered	Attendance and Electronic
6. Semester/Year	2020 – 2021
7. Number of hours tuition (total)	80 h.
8. Date of production/revision of this Specification	21 / 9/ 2021
9. Aims of the Course	
Introducing the student to the different types of milk-producing Iraqi and international sheep and how to benefit from them, ways of raising them, taking care of them, knowing how to breed them, appropriate nutrition for them, and developing them to obtain a good product that brings profit to the breeder and can be used in the market for the consumer.	

10· Learning Outcomes, Teaching ,Learning and Assessment Methode

A- Knowledge and Understanding A1.

1. The outputs are summarized in the ability to manage sheep and goat breeding projects.
2. Full knowledge of the needs of sheep and goat breeding projects and ways to develop them to increase production and obtain the highest return from them. .

B. Subject-specific skills

Teaching students the skills of raising and caring for sheep and goats.

Teaching and Learning Methods

Attendance education in the classroom as well as e-learning using electronic classes and meetings on the Internet. As well as going out to the field to complete the practical part.

Assessment methods

The paper exam and the electronic exam, then the practical exam, the daily quizzes, and the student's participation during the course of the exam
Lesson, attendance and individual skills.

C. Thinking Skills

Brainstorming and intellectual questions as well as preparing reports on lesson topics.

Teaching and Learning Methods

Using the board and pen, then using the data show projector, as well as field observations.

Assessment methods

The paper exam and the electronic exam, then the practical exam, the daily quizzes, and the student's participation during the course of the exam
Lesson, attendance and individual skills.

D. General and Transferable Skills (other skills relevant to employability and personal development)

. The ability to conduct the practical part of the lesson, the ability to be creative in ideas and to develop what has been learned.

11. Course Structure

Week	Hours	ILOs	Unit/Module or Topic Title	Teaching Method	Assessment Method
1	5	local breed	introduction of Iraqi sheep	presentation	quizzes
2	5	pure breed	types of sheep in the world	presentation	quizzes
3	5	sheep and goats reproduction	reproductive system male and female	presentation	quizzes
4	5	sheep and goats nutrition	feed stuff and this making	presentation	quizzes
5	5	management of sheep farm	records and farming	presentation	quizzes
6	5	milk production	Milking machine and milk storage	presentation	quizzes

12. Infrastructure

Required reading: · CORE TEXTS · COURSE MATERIALS · OTHER	sheep and goats production Mudafer Al-Saeg . AL-BASRA University College of Agriculture
Special requirements (include for example workshops, periodicals, IT software, websites)	sheep and goats production Mudafer Al-Saeg . AL-BASRA University College of Agriculture

Community-based facilities (include for example, guest Lectures , internship , field studies)	Sheep and Goats production

13. Admissions	
Pre-requisites	38
Minimum number of students	25
Maximum number of students	50

TEMPLATE FOR COURSE SPECIFICATION

HIGHER EDUCATION PERFORMANCE REVIEW: PROGRAMME REVIEW

COURSE SPECIFICATION

This Course Specification provides a concise summary of the main features of the course and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. It should be cross-referenced with the programme specification.

1. Teaching Institution	University of Anbar
2. University Department/Centre	Animal Production
3. Course title/code	organic chemistry
4. Programme(s) to which it contributes	Attendance and blend learning
5. Modes of Attendance offered	Undergraduates student
6. Semester/Year	Spring Semester / 2021-2022
7. Number of hours tuition (total)	75 hrs
8. Date of production/revision of this Specification	30-09-2021
9. Aims of the Course	
• Introducing students to the concept of organic chemistry, its sources and properties. • Introducing students to the difference between inorganic and organic chemistry. • Recognize the importance of chemistry • Identifying organic compounds, their classification and the types of their bonds. • Identifying of preparing organic compounds and their interactions, as well as their chemical and physical properties.	

10· Learning Outcomes, Teaching ,Learning and Assessment Methode
a. . To familiarize the student with the concept of organic chemistry. b. The student should classify the sources of organic chemistry. c. The student should determine the difference between organic chemistry and other branches of chemistry. d. That the student understand the concept of hydrocarbons, their interactive behavior and their features, develop the student's skills in determining their families and functional groups of their compounds.
B. Subject-specific skillsB1 - Develop students' Theoretical lectures. Practical lectures in the college poultry farms. Electronic communication. Abstract of books, resources and research.
Teaching and Learning Methods
1. Active Learning 2. Cooperative learning 3. Discussions 4. Reports
Assessment methods
1. Evaluation within the lecture 2. Short exams 3. Written exams for essay questions 4. Weekly reports 5. Assignments
C. Thinking Skills C1- Listening and asking intellectual questions C2- Students participate in preparing scientific lectures C 3- Adheres to information and science C4- Presents scientific points of view
Teaching and Learning Methods
1. Active Learning 2. Cooperative learning 3. Discussions 4. Reports
Assessment methods
1. Evaluation within the lecture 2. Short exams 3. Written exams for essay questions 4. Weekly reports 5. Assignments

D. General and Transferable Skills (other skills relevant to employability and personal development)

a. Familiarize students with the concept of organic chemistry and its importance.
b. Introduce students to the most important organic compounds.
c. Know the divisions of hydrocarbons common in nature.
d. Introduce students to sources of saturated and unsaturated organic reactions with hydrogen.

11. Course Structure

Week	Hours	ILOs	Unit/Module or Topic Title	Teaching Method	AssessmentMethod
Week1	5	a. Cognitive skills b. intellectual skills c. personal skills d. Network and Internet skills e.ommunication and Connection skills	Definition of chemistry and bonds and their dissolution + preparation of cyclohexane and identification of the distillation device	Lecture	Oral exam
Week2	5	. Cognitive skills b. intellectual skills c. personal skills d. Network and Internet skills e.ommunication and Connection skills	Saturated hydrocarbons (alkanes) + tert-butyl preparation	Lecture	Report
Week3	5	. Cognitive skills b. intellectual skills c. personal skills d. Network and Internet skills e.ommunication and Connection skills	unsaturated hydrocarbons (Alkenes) + the experience and behavior of alcohols and phenols	Lecture	Short exam
Week4	5	. Cognitive skills b. intellectual skills	Mechanical addition to the interior +	Lecture	Report

		c. personal skills d. Network and Internet skills e.ommunication and Connection skills	preparation of acetone		
Week5	5	Unsaturated compounds containing more than one double bond + preparation and behavior of aldehydes and ketones +First Exam			
Week6	5	a. Cognitive skills b. intellectual skills c. personal skills d. Network and Internet skills e.ommunication and Connection skills	Aromatic compounds + unknown substance identification test	Lecture	Oral exam
Week7	5	a. Cognitive skills b. intellectual skills c. personal skills d. Network and Internet skills e.ommunication and Connection skills	Aromatic reactions: halogenation, alkylation, sulfonation and nitration + preparation of benzoic acid.	Lecture	Short exam
Week8	5	a. Cognitive skills b. intellectual skills c. personal skills d. Network and Internet skills e.ommunication and Connection skills	Aromatic aliphatic halides + ether acetate preparation	Lecture	Report
Week9	5	Review	Alcohols and phenols + preparation of aspirin	Lecture	Report
Week10	5	a. Cognitive skills b. intellectual skills c. personal skills d. Network and Internet skills e.ommunication	Ethers + soap preparation	Lecture	Oral exam

		and Connection skills			
Week11	5	Aldehydes and ketones +Second Exam			
Week12	5	a. Cognitive skills b. intellectual skills c. personal skills d. Network and Internet skills e.ommunication and Connection skills	Carboxylic acids + preparation of cellulose acetate	Lecture	Oral exam
Week13	5	a. Cognitive skills b. intellectual skills c. personal skills d. Network and Internet skills e.ommunication and Connection skills	carboxylic acid derivatives Esters + Disclosure of a substance for each student separately	Lecture	Oral exam
Week14	5	a. Cognitive skills b. intellectual skills c. personal skills d. Network and Internet skills e.ommunication and Connection skills	Halides and anhydrides of carboxylic acids + transactions of acid anhydrides		
Week15	5	a. Cognitive skills b. intellectual skills c. personal skills d. Network and Internet skills e.ommunication and Connection skills	Amines + interactions of formation of amines		

12. Infrastructure	
Required reading: · CORE TEXTS · COURSE MATERIALS · OTHER	a.Al-Fattah Youssef Ali (1989). Foundations of organic chemistry. A curriculum for students of the Faculty of Agriculture and Life Sciences. Ministry of Higher Education. University of

	Baghdad, House of Wisdom. b. Practical organic chemistry lectures - Basic Sciences Division - College of Agriculture - University of Baghdad. c.Organic Chemistry, 4th ed. Allyn and Bacon Inc. Boston, USA. d.Louis F. Fieser, Kenneth, I. Williamson (1983). Organic Experiments, 5th ed . e.Walter W. Linstromberg and Henry E. Baumgarten(1983).Organic Experiments, 5th ed
Special requirements (include for example workshops, periodicals, IT software, websites)	b. Recent studies and studies. b. The Internet of Information (Internet)
Community-based facilities (include for example, guest Lectures , internship , field studies)	a. Giving some awareness and educational lectures to students. b.visits to see the college farms of laying hens and broiler and the diets factories in the governorate

13. Admissions	
Pre-requisites	35
Minimum number of students	30
Maximum number of students	70

TEMPLATE FOR COURSE SPECIFICATION

HIGHER EDUCATION PERFORMANCE REVIEW: PROGRAMME REVIEW

COURSE SPECIFICATION

This Course Specification provides a concise summary of the main features of the course and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. It should be cross-referenced with the programme specification.

1. Teaching Institution	University of Anbar
2. University Department/Centre	Animal Production
3. Course title/code	Molecular Biology / AAPM409
4. Programme(s) to which it contributes	Attendance and blend learning
5. Modes of Attendance offered	Undergraduates student
6. Semester/Year	Spring Semester / 2021-2022
7. Number of hours tuition (total)	75 hrs
8. Date of production/revision of this Specification	30-09-2021
9. Aims of the Course	
• Introducing students to the sources of energy included in the composition of diets and ways to obtain it.	
• Designing fodder mixtures for domestic birds, their types, ages and the purpose of their reproduction.	
• Providing the main and secondary nutrients needed by the bird according to its type and age.	
• Identify the processes of digestion, absorption and representation of nutrients	

10· Learning Outcomes, Teaching ,Learning and Assessment Methode
a. To familiarize the student with the concept of poultry nutrition. b. The student should classify the sources of feed materials and nutrients. c. To identify the difference between the ancient and modern methods of nutrition. d. That the student understand the concept of healthy and sound feeding management of poultry in order to achieve the highest production at the lowest costs. e. Develop the student's skills in designing diets and calculating their costs.
B. Subject-specific skillsB1 - Develop students' Theoretical lectures. Practical lectures in the college poultry farms. Electronic communication. Abstract of books, resources and research.
Teaching and Learning Methods
1. Active Learning 2. Cooperative learning 3. Discussions 4. Reports
Assessment methods
1. Evaluation within the lecture 2. Short exams 3. Written exams for essay questions 4. Weekly reports 5. Assignments
C. Thinking Skills C1- Listening and asking intellectual questions C2- Students participate in preparing scientific lectures C 3- Adheres to information and science C4- Presents scientific points of view
Teaching and Learning Methods
1. Active Learning 2. Cooperative learning 3. Discussions 4. Reports
Assessment methods

1. Evaluation within the lecture
2. Short exams
3. Written exams for essay questions
4. Weekly reports
5. Assignments

D. General and Transferable Skills (other skills relevant to employability and personal development)

a. Familiarize students with the concept of poultry nutrition and its importance.
b. Familiarize students with the nutritional needs of poultry.
c. Knowing the types of diet mixtures for poultry .,
d.. Introducing students to the available and appropriate sources of feed materials and nutrients for birds raised in Iraq.
e. The ability to criticize and debate on sound grounds.
. Motivating students for excellent readings on poultry nutrition.

11. Course Structure

Week	Hours	ILOs	Unit/Module or Topic Title	Teaching Method	AssessmentMethod
Week1	5	a. Cognitive skills b. intellectual skills c. personal skills d. Network and Internet skills e.ommunication and Connection skills	Introduction to the concept of poultry nutrition and its importance	Lecture	Oral exam
Week2	5	. Cognitive skills b. intellectual skills c. personal skills d. Network and Internet skills e.ommunication and Connection skills	Types of forage sources	Lecture	Report
Week3	5	. Cognitive skills b. intellectual skills c. personal skills d. Network and Internet skills e.ommunication and Connection skills	Digestive system of poultry	Lecture	Short exam
Week4	5	. Cognitive skills b. intellectual skills c. personal skills d. Network and Internet skills	The concept of energy and its forms and types	Lecture	Report

		e.ommunication and Connection skills			
Week5	5	First Exam			
Week6	5	a. Cognitive skills b. intellectual skills c. personal skills d. Network and Internet skills e.ommunication and Connection skills	Energy metabolism in the poultry body	Lecture	Oral exam
Week7	5	a. Cognitive skills b. intellectual skills c. personal skills d. Network and Internet skills e.ommunication and Connection skills	Proteins and their importance	Lecture	Short exam
Week8	5	a. Cognitive skills b. intellectual skills c. personal skills d. Network and Internet skills e.ommunication and Connection skills	Protein metabolism	Lecture	Report
Week9	5	Review		Lecture	Report
Week10	5	a. Cognitive skills b. intellectual skills c. personal skills d. Network and Internet skills e.ommunication and Connection skills	Vitamins and their types	Lecture	Oral exam
Week11	5	Second Exam			
Week12	5	a. Cognitive skills b. intellectual skills c. personal skills	Vitamin metabolism	Lecture	Oral exam

		d. Network and Internet skills e.ommunication and Connection skills			
Week13	5	a. Cognitive skills b. intellectual skills c. personal skills d. Network and Internet skills e.ommunication and Connection skills	Mineral elements and their importance	Lecture	Oral exam
Week14	5	a. Cognitive skills b. intellectual skills c. personal skills d. Network and Internet skills e.ommunication and Connection skills	Mycotoxins and their types		
Week15	5	a. Cognitive skills b. intellectual skills c. personal skills d. Network and Internet skills e.ommunication and Connection skills	diets factories and manufacture of granulated diets		

12. Infrastructure	
Required reading: · CORE TEXTS · COURSE MATERIALS · OTHER	. Basics of poultry nurition. by Dr. Ismail Khalil Ibrahim, Mosul University, 2000. b. poultry nutrition. by Prof. Dr. Ali Al-Yassin and Prof. Dr. Muhammad Hassan. Baghdad University, 2010. c. Nutrition science. Written by Dr. Jamal Abdel-Rahman and Professor Dr. Shaker Al-Attar. Baghdad University. 2014. d.Book Feature : Scotts Nutrition of the Chicken.4th ed. Canadian .1999.

Special requirements (include for example workshops, periodicals, IT software, websites)	c. Recent studies and studies. b. The Internet of Information (Internet)
Community-based facilities (include for example, guest Lectures , internship , field studies)	a. Giving some awareness and educational lectures to students. b.visits to see the college farms of laying hens and broiler and the diets factories in the governorate

13. Admissions	
Pre-requisites	35
Minimum number of students	30
Maximum number of students	70

TEMPLATE FOR COURSE SPECIFICATION

HIGHER EDUCATION PERFORMANCE REVIEW: PROGRAMME REVIEW

COURSE SPECIFICATION

This Course Specification provides a concise summary of the main features of the course and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. It should be cross-referenced with the programme specification.

1. Teaching Institution	College of Agriculture
2. University Department/Centre	Animal Production Department
3. Course title/code	Principles of Statistics
4. Programme(s) to which it contributes	Presence + electronic communication
5. Modes of Attendance offered	Face to face
6. Semester/Year	semesters
7. Number of hours tuition (total)	75 hours
8. Date of production/revision of this Specification	2021 \ 9 \ 20
9. Aims of the Course	
• The ability to agricultural statistical analysis and the importance of testing results	
• Knowledge of the extent of the impact of the materials used	
• The amount of the expected herd productivity increase.	

10· Learning Outcomes, Teaching ,Learning and Assessment Methode

A- Knowledge and Understanding

A1. Enable the student to familiarize himself with the science of statistics, and its functions.
A2. Enable the student to use the data to describe the phenomena under study.
A3. Training the student on how to apply statistical methods in his field of specialization.
A4. Enable the student to conduct statistical analyzes, and how to interpret the results.

B. Subject-specific skills

B1. Students know the concept of modern technologies and systems
B2. The student's ability to evaluate modern systems and compare them with traditional systems
B3. enable students to analyze the cost of production and the amount of which yield

Teaching and Learning Methods

- Explanation and clarification
- method of lecture
- Student groups
- Practical lessons in agricultural fields

Assessment methods

* theory tests
* Practical tests
* Reports and studies

C. Thinking Skills

C1. Observing and perceiving
C2. Analysis and interpretation
C3. Preparation and calendar
C4. Critical thinking strategy in learning

Teaching and Learning Methods

- Brainstorming
- Thinking strategy according to the student's ability
- The strategy of critical thinking in learning (which aims to pose a problem and then analyze it logically to reach the desired solution)

Assessment methods

* Theoretical tests
* Practical tests
* Reports and studies

D. General and Transferable Skills (other skills relevant to employability and personal development)

D1. Verbal communication (the ability to express ideas clearly and confidently in speech).

D2. Teamwork (working with confidence within a group)

D3. Investigation analysis (collecting information in a systematic and scientific way to establish facts and principles as a solution to a specific problem)

D4. Written communication (the ability to express yourself clearly in writing)

11. Course Structure

Week	Hours	ILOs	Unit/Module orTopic Title	Teaching Method	Assessment Method
1	5	Introduction to Statistics	statistics Science	Explanation, presentation	Exam, homework,reports
2	5	Data collection methods	statistics Science	Explanation, presentation	Exam, homework,reports
3	5	descriptive and quantitative variable	statistics Science	Explanation, presentation	Exam, homework,reports
4	5	Graphic display	statistics Science	Explanation, presentation	Exam, homework,reports
5	5	Measures of Central Tendency	statistics Science	Explanation, presentation	Exam, homework,reports
6	5	scattering metrics	statistics Science	Explanation, presentation	Exam, homework,reports
7	5	Some other metrics	statistics Science	Explanation, presentation	Exam, homework,reports
8	5	Regression and correlation	statistics Science	Explanation, presentation	Exam, homework,reports
9	5	Some concepts of probability	statistics Science	Explanation, presentation	Exam, homework,reports
10	5	Methods of possibilities	statistics Science	Explanation, presentation	Exam, homework,reports
11	5	Probability Distributions	statistics Science	Explanation, presentation	Exam, homework,reports

12. Infrastructure	
Required reading: · CORE TEXTS · COURSE MATERIALS · OTHER	
Special requirements (include for example workshops, periodicals, IT software, websites)	
Community-based facilities (include for example, guest Lectures , internship , field studies)	

13. Admissions	
Pre-requisites	
Minimum number of students	
Maximum number of students	

TEMPLATE FOR COURSE SPECIFICATION

HIGHER EDUCATION PERFORMANCE REVIEW: PROGRAMME REVIEW

COURSE SPECIFICATION

This Course Specification provides a concise summary of the main features of the course and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. It should be cross-referenced with the programme specification.

1. Teaching Institution	University of Anbar
2. University Department/Centre	Department of Animal Production
3. Course title/code	Microbiology AP2F6
4. Programme(s) to which it contributes	
5. Modes of Attendance offered	Attendance is in person and electronic
6. Semester/Year	First Semester / 2021-2022
7. Number of hours tuition (total)	75 Hours
8. Date of production/revision of this Specification	24/9/2021
9. Aims of the Course	
This course is designed to enable students to understand and learn the basic principles of microbiology, its relationship with animals, its pathogenic and non-pathological effects, in addition to its relationship to antibiotics.	

10· Learning Outcomes, Teaching ,Learning and Assessment Methode

A- Knowledge and Understanding

A1. The importance of microorganisms in animal diseases
A2. The relationship of microorganisms to health
A3. Knowing the organisms that cause some of them, whether human or animal, to cause pain
A4. Study of coexisting microorganisms and their importance in the health status
A5. How the immune system works to resist microorganisms
Antibiotics
A6 . The effect of antibiotics and how resistance to those antibiotics occurs

B. Subject-specific skills
B1. How are microorganisms diagnosed?
B2. Laboratory lessons on ways to deal with these microorganisms
B3. Appropriate sterilization methods for each type of living organisms

Teaching and Learning Methods

interactive lectures
Reports provided by students about these neighborhoods
Practical practical lessons

Assessment methods

Take exams after each group of lectures
Use the daily exam method
The interviews are exams in the laboratory to determine the extent to which students benefit from the practical lessons

C. Thinking Skills
C1. Alert students to the dangers of microorganisms
C2. Knowing that microorganisms are beneficial and harmful
C3. Using different prevention methods
C4. Resistance to various diseases

Teaching and Learning Methods

Assessment methods

D. General and Transferable Skills (other skills relevant to employability and personal development)

D1. Transferred general and rehabilitative skills (skills corresponding to employability and personal development).

D2. Possibility to work in microbiology laboratories

D3. Distinguishing between pathogenic and unsatisfactory microorganisms

D4. Use of antibiotics to treat infected cases

11. Course Structure

Week	Hours	ILOs	Unit/Module orTopic Title	Teaching Method	Assessment Method
First Week	5	Understand microbiology and its importance in our daily life in a simplified and concise manner	An overview of microorganisms, classification of microorganisms, naming of microorganisms	theoretical and practical lectures	Interactive exam during lectures
Second Week	5	Understand microbiology and its importance in our daily life in a simplified and concise manner	Cellular structures and the importance of each structure, pigmentation	theoretical and practical lectures	Interactive exam during lectures
Third Week	5	Understand microbiology and its importance in our daily life in a simplified and concise manner	Microorganism nutrition, water, sulfur, carbon, energy sources, growth factors	theoretical and practical lectures	Interactive exam during lectures
Fourth Week	5	Understand microbiology and its importance in our daily life in a simplified and concise manner	Bacterial growth, growth stages, bacteria counting methods	theoretical and practical lectures	Interactive exam during lectures
Fifth Week	5	Understand microbiology and its importance in our daily life in a simplified and concise manner	Microbiology Cultivation	theoretical and practical lectures	Interactive exam during lectures
Sixth Week	5	Understand microbiology and its importance in our daily life in a simplified and concise manner	Microbiology Physiology	theoretical and practical lectures	Interactive exam during lectures
Seventh Week	5	Understand microbiology and its importance in our daily life in a simplified and concise manner	Bacteria inheritance	theoretical and practical lectures	Interactive exam during lectures
Eighth Week	5	Understand microbiology and its importance in our daily life in a	Microbiology control	theoretical and practical lectures	Interactive exam during lectures

		simplified and concise manner			
Nineth Week	5	Understand microbiology and its importance in our daily life in a simplified and concise manner	microorganisms in water	theoretical and practical lectures	Interactive exam during lectures
Tenth Week	5	Understand microbiology and its importance in our daily life in a simplified and concise manner	Microorganisms in food	theoretical and practical lectures	Interactive exam during lectures
Eleventh Week	5	Understand microbiology and its importance in our daily life in a simplified and concise manner	Viruses	theoretical and practical lectures	Interactive exam during lectures
Twelfth Week	5	Understand microbiology and its importance in our daily life in a simplified and concise manner	pathogenic microbiology	theoretical and practical lectures	Interactive exam during lectures
Thirteenth Week	5	Understand microbiology and its importance in our daily life in a simplified and concise manner	Genetic Engineering	theoretical and practical lectures	Interactive exam during lectures
Fourteenth Week	5	Understand microbiology and its importance in our daily life in a simplified and concise manner	immunity	theoretical and practical lectures	Interactive exam during lectures
Fifteenth Week	5	Understand microbiology and its importance in our daily life in a simplified and concise manner	antibiotics	theoretical and practical lectures	Interactive exam during lectures

12. Infrastructure	
Required reading: · CORE TEXTS · COURSE MATERIALS · OTHER	
Special requirements (include for example workshops, periodicals, IT software, websites)	1-Veterinary microbiology and the basics of bacteriology, authored by Dr. Jaseb Jassem Haddad 2- Veterinary Microbiology, authored by Dr. Farouk Khaled Al-Hassan 3- Veterinary Microbiology, written by Dr. Farouk Khaled Hassan, Dr. Khalifa Ahmed

	Khalifa, Dr. Hamed Hassan Tantawy, and Dr. Jassim Muhammad Al-Abdullah 4- Principles of Microbiology, written by Dr. Wahab Amin Hassan and Dr. Ghazi Musa Al-Khatib 5- The foundations of immunology written by Dr. Khalifa Ahmed Khalifa
Community-based facilities (include for example, guest Lectures , internship , field studies)	

13. Admissions	
Pre-requisites	Lecture hall and laboratory
Minimum number of students	20
Maximum number of students	50

TEMPLATE FOR COURSE SPECIFICATION

HIGHER EDUCATION PERFORMANCE REVIEW: PROGRAMME REVIEW

COURSE SPECIFICATION

This Course Specification provides a concise summary of the main features of the course and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. It should be cross-referenced with the programme specification.

1. Teaching Institution	University of Anbar/College of Agriculture
2. University Department/Centre	Department of Animal Production
3. Course title/code	Veterinary Medical Entomology AP3F7
4. Programme(s) to which it contributes	
5. Modes of Attendance offered	in person and electronically
6. Semester/Year	Autumn semester/year 2021-2022
7. Number of hours tuition (total)	75
8. Date of production/revision of this Specification	9/24/2021
9. Aims of the Course	
Students learned the most important insects related to animals, their impact on health status and animal production, and their importance in transmitting diseases to animals	

10· Learning Outcomes, Teaching ,Learning and Assessment Methode
A- Knowledge and Understanding A1. Knowing the most important insects that are related to animals A2. Types of external insects A3. The most important diseases transmitted by these insects A4. Its effect on health A5. Its effect on the productive state A6 . How is it transmitted between different animals
B. Subject-specific skills B1. How to diagnose these insects B2. Practical lessons in the laboratory B3. Collect samples from different sources B4. Moving to animal farms and observing their relationship to insects
Teaching and Learning Methods
Weekly theoretical lessons and laboratory practical lessons
Assessment methods
Multiple weekly and monthly theoretical and practical exams and the end of the course
C. Thinking Skills C1. Noting the importance of the relationship between animals and insects C2. The relationship between the host and the host C3. the relationships between harmful and harmed between insects and animals C4. Synergistic and coexisting relationships between some parasites and some animals

D. General and Transferable Skills (other skills relevant to employability and personal development)

D1. Knowing the most important insects related to animal farms

D2. How to manage the relationship between insects and animals to promote positivity and prevent negativity

D3. The ability to deal with these insects

D4. The most important therapeutic materials that are used to reduce the effect of these insects

11. Course Structure

Week	Hours	ILOs	Unit/Module or Topic Title	Teaching Method	Assessment Method
First Week	5	Conclusion of the importance of veterinary insects	Introduction to veterinary entomology	Theoretical and practical	Interactive direct questions
Second Week	5	Know the spread of insects in the world	Epidemiology and transmission of insects	Theoretical and practical	Interactive direct questions
Third Week	5	Learn the importance of veterinary insects in transmitting diseases	Transmission of pathogens	Theoretical and practical	Interactive direct questions
Fourth Week	5	Knowing the important ranks in animal farms	The most important ranks of health importance	Theoretical and practical	Interactive direct questions
Fifth Week	5	The role of black flies and invasive margins	black flies ominous margins	Theoretical and practical	Interactive direct questions
Sixth Week	5	The importance of the sand fly	sand fly	Theoretical and practical	Interactive direct questions
Seventh Week	5	The role of the Tibandi and the Glossidi races	tepande and glossedi	Theoretical and practical	Interactive direct questions

Eighth Week	5	The importance of house flies and stable flies	House flies and stable flies	Theoretical and practical	Interactive direct questions
Ninth Week	5	The role of the Kalifordi and Sarcovid families The importance of gastroveldi	Califordi and Sarcovidi	Theoretical and practical	Interactive direct questions
Tenth Week	5	The role of the hidden wings in the transmission of diseases	gastroveldi	Theoretical and practical	Interactive direct questions
Eleventh Week	5	The importance of half wings	hidden wings	Theoretical and practical	Interactive direct questions
Twelfth Week	5	The importance of half wings	half wings	Theoretical and practical	Interactive direct questions
Thirteenth Week	5	Tick and Mites	Tick and dream	Theoretical and practical	Interactive direct questions
Fourteenth Week	5	The importance of ticks and how to treat them	The medical importance of ticks and mites	Theoretical and practical	Interactive direct questions
Fifteenth Week	5	The most important arthropod toxins	Toxins secreted by arthropods	Theoretical and practical	Interactive direct questions

12. Infrastructure	
Required reading: · CORE TEXTS · COURSE MATERIALS · OTHER	Medical and Veterinary Entomology, Kettle, Debs (2001) King Saud University Press / Saudi Arabia. Medical and veterinary entomology in Iraq (1971), Jalil Abu Al-Hob, Baghdad University Press The Guide to Medical Insects (1984) Ali Muhammad Salit, Zuhair Younis Al-Saffar and Riyadh Ahmed Al-Iraqi, Mosul University Press.

Special requirements (include for example workshops, periodicals, IT software, websites)	.Life 3rd .ed. by lewise R.(2001)U.S.A 976 pp Andesir A.(2008)Biology with physiology life .on earth U.S.A.2000 pp Beard ,R.L.(1963)Insect toxins &venoms .,A.Rev.Ent.,8,1-28 Bucherl , W.&Buckley ,E.(1971) Venomous ,Animals &their venoms ,Vol.3 (Academic press ,New york), 537 pp Frazier , C.A.(1969) Insect Allergy (Warren .H.Green , st . Louis)493 pp
Community-based facilities (include for example, guest Lectures , internship , field studies)	

13. Admissions	
Pre-requisites	Lecture hall and laboratory
Minimum number of students	20
Maximum number of students	50

TEMPLATE FOR COURSE SPECIFICATION

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COURSE SPECIFICATION

This Course Specification provides a concise summary of the main features of the course and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. It should be cross-referenced with the programme specification.

1. Teaching Institution	University of Anbar/College of Agriculture
2. University Department/Centre	Department of Animal Production
3. Course title/code	Animal Diseases **ANRE307**
4. Programme(s) to which it contributes	Building experiences that contribute to managing farms according to health conditions
5. Modes of Attendance offered	Presence and electronic
6. Semester/Year	Second Semester 2021-2022
7. Number of hours tuition (total)	75
8. Date of production/revision of this Specification	2/10/2021
9. Aims of the Course	
Knowing the importance of diseases in animal husbandry	
Study of the most important diseases that affect animals, especially ruminants	
Study of common diseases transmitted between humans and animals	
Knowing how the disease is dealt with and prevented before it occurs	
How to treat diseases and what are the most important treatments used with each disease	
Vaccination program used for various diseases and in different animals	

10· Learning Outcomes, Teaching ,Learning and Assessment Methode

A- Knowledge and Understanding
A1. What is disease and how does it affect production?
A2. The most important diseases that affect animals
A3. The role of good management by the agricultural supervisor in reducing the incidence of diseases
A4. The role of workers in the field of animal production in transmitting diseases and how to avoid administrative errors
A5. The appropriate veterinary vaccination program for each animal or farm
A6 . 6- Cooperation between the veterinarian and the agricultural engineer in prevention and treatment

B. Subject-specific skills
B1. How are the different diseases diagnosed?
B2. What is the appropriate way to prevent disease?
B3. The role of veterinary vaccines in disease control
B4. 4- Good management and its relationship to the health status of the animal farm

Teaching and Learning Methods

Weekly theory lessons
Practical lessons in the animal farm
Visits to the veterinary hospital and field case studies

Assessment methods

Daily exams during the lecture and open discussions to evaluate each student
Exam every end of three lectures
Practical exam in the field

C. Thinking Skills
C1. Disease and its importance in animal husbandry
C2. The importance of proper health prevention
C3. The importance of animal diseases in the health status of humans, especially those working in the field of animal production
C4. Contaminated animal products and their importance in transmitting disease

D. General and Transferable Skills (other skills relevant to employability and personal development)
D1- Recognize good management and its importance in preventing disease
D2- The role of the agricultural engineer in managing healthy, disease-free farms
D3 - Diagnosis of the disease and its importance in good management
D4- How to treat different diseases and ways to give medicine

11. Course Structure

Week	Hours	ILOs	Unit/Module Topic Title	Teaching Method	Assessment Method
Week 1	5	The importance of animal diseases	Introduction	Theoretical and practical	Interactive during the lecture
Week 2	5	The importance of animal diseases	Vaccines	Theoretical and practical	Interactive during the lecture
Week 3	5	The importance of animal diseases	Zoonoses	Theoretical and practical	Interactive during the lecture
Weeke 4	Exam				
Week 5	5	The importance of animal diseases	Bacterial Diseases	Theoretical and practical	Interactive during the lecture
Week 6	5	The importance of animal diseases	Viruses	Theoretical and practical	Interactive during the lecture
Week 7	5	The importance of animal diseases	blood parasites	Theoretical and practical	Interactive during the lecture
Week 8	Exam				
Week 9	5	The importance of animal diseases	Ectoparasites	Theoretical and practical	Interactive during the lecture
Week 10	5	The importance of animal diseases	Endoparasites	Theoretical and practical	Interactive during the lecture
Week 11	5	The importance of animal diseases	Sheep diseases	Theoretical and practical	Interactive during the lecture
Week 12	Exam				
Week 13	5	The importance of animal diseases	Sheep diseases	Theoretical and practical	Interactive during the lecture
Week 14	5	The importance of animal diseases	non-communicable diseases	Theoretical and practical	Interactive during the lecture
Week 15	Exam				

12. Infrastructure

Required reading: · CORE TEXTS · COURSE MATERIALS · OTHER	

Special requirements (include for example workshops, periodicals, IT software, websites)	TEXTBOOK OF VETERINARY INTERNAL MEDICINE BY Stephen J Ettenger 1989 موسوعة الطب الباطني تاليف إسماعيل الحسيني 2004 Textbook of Veterinary Medicine by Shovonial Moitra 2009 Textbook of Clinical Veterinary Medicine By Prof. M.C.Sharma ,Prof. Mahesh Kumar , Prof. R.D.Sharma Veterinary Medicine A textbook of the diseases of cattle, horses, sheep, pigs and goats TENTH EDITION o. M. Radostits C.C.Gay K. W. Hinchcliff P. D. Constable Clinical medicine by Amalandu Chakrabharti VMR Veterinary Medical Review N. G Elwer 1979 The Merck Veterinary Manual 11edition 2016 Susan D Eiello and Michel A Moses
Community-based facilities (include for example, guest Lectures , internship , field studies)	

13. Admissions	
Pre-requisites	Classroom, laboratory and animal production field
Minimum number of students	20
Maximum number of students	50

TEMPLATE FOR COURSE SPECIFICATION

HIGHER EDUCATION PERFORMANCE REVIEW: PROGRAMME REVIEW

COURSE SPECIFICATION

This Course Specification provides a concise summary of the main features of the course and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. It should be cross-referenced with the programme specification.

1. Teaching Institution	College of Agriculture
2. University Department/Centre	Animal Production Department
3. Course title/code	Experiment design and analysis
4. Programme(s) to which it contributes	Presence + electronic communication
5. Modes of Attendance offered	Face to face
6. Semester/Year	semesters
7. Number of hours tuition (total)	75 hours
8. Date of production/revision of this Specification	2021 \ 9 \ 20
9. Aims of the Course	
1) Presenting statistical terms and concepts used in designing experiments.	
2) Study the general foundations and rules on which the experimental design is based.	
3) How to determine the appropriate design for the experiment and implement it using the computer	
4) Using some statistical programs to obtain the results of the experiment.	
5) Interpreting the results and extracting the facts in a sound statistical manner	

10· Learning Outcomes, Teaching ,Learning and Assessment Methode

B- Knowledge and Understanding

A1- Knowledge of statistical terms used in designing experiments.
A2- Knowledge of the general principles and rules underlying the experimental design.
A3- Knowing how to design, plan and implement simple experiments, and put the results into tables.
A4- Identify the steps of statistical analysis of experiments.
A 5- Learn how to interpret the results of experiments and extract facts in a sound statistical manner

B. Subject-specific skills

B1 - The ability to design and conduct experiments and analyze data, taking into account the different specialization.
B2 - The ability to determine and choose the appropriate statistical design for the conditions of conducting the experiment.
B3 - The ability to design and work statistical tables with the application on the computer.

Teaching and Learning Methods

- Explanation and clarification
- method of lecture
- Student groups
- Practical lessons in agricultural fields

Assessment methods

* theory tests
* Practical tests
* Reports and studies

C. Thinking Skills

C1. Observing and perceiving
C2. Analysis and interpretation
C3. Preparation and calendar
C4. Critical thinking strategy in learning

Teaching and Learning Methods

- The skill of thinking according to the student's ability and that the goal of this skill is for the student to believe in what is tangible and understand when, what and how he should think and work to improve the ability to think reasonably.
- Observation and Perception
- Analysis and interpretation
- Preparation and calendar
- Critical thinking strategy in learning

Assessment methods
* Theoretical tests * Practical tests * Reports and studies
D. General and Transferable Skills (other skills relevant to employability and personal development) D1. Verbal communication (the ability to express ideas clearly and confidently in speech). D2. Teamwork (working with confidence within a group) D3. Investigation analysis (collecting information in a systematic and scientific way to establish facts and principles as a solution to a specific problem) D4. Written communication (the ability to express yourself clearly in writing)

11. Course Structure					
Week	Hours	ILOs	Unit/Module orTopic Title	Teaching Method	Assessment Method
1	5	Introduction to Experiment Design	design and analysis	Explanation, presentation	Exam, homework,reports
2	5	Data types	design and analysis	Explanation, presentation	Exam, homework,reports
3	5	Measures of Central Tendency and Dispersion	design and analysis	Explanation, presentation	Exam, homework,reports
4	5	Correlation and regression	design and analysis	Explanation, presentation	Exam, homework,reports
5	5	CRD design	design and analysis	Explanation, presentation	Exam, homework,reports
6	5	Multiple comparisons	design and analysis	Explanation, presentation	Exam, homework,reports
7	5	RCBD Design	design and analysis	Explanation, presentation	Exam, homework,reports
8	5	Multiple comparisons	design and analysis	Explanation, presentation	Exam, homework,reports
9	5	latin square design	design and analysis	Explanation, presentation	Exam, homework,reports

10	5	global experiments	design and analysis	Explanation, presentation	Exam, homework,reports
11	5	chi square	design and analysis	Explanation, presentation	Exam, homework,reports

12. Infrastructure	
Required reading: · CORE TEXTS · COURSE MATERIALS · OTHER	Adnan Hassan Mohammed (1982) Fundamentals of heredity. Book house for printing and publishing. Mosul.
Special requirements (include for example workshops, periodicals, IT software, websites)	
Community-based facilities (include for example, guest Lectures , internship , field studies)	

13. Admissions	
Pre-requisites	
Minimum number of students	
Maximum number of students	