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

Academic Program Specification Form For The Academic

University:
College :
Department :
Date Of Form Completion :

Dean 's Name
Prof.Dr.Nasra Jadwe
Date : / /
Signature

Dean 's Assistant ForScientific Affairs
Asst. Prof. Dr.Firas Fadhil Ali
Date 2/6/2021
Signature

د. نضال ابراهيم لطيف
رئيس قسم علوم الحياة
Head of Department
Asst. Prof. Dr.Nedhal Ibrihem Lateff
Date : 2/6/2021
Signature

Quality Assurance And University Performance Manager
Prof.Dr.Ahmed Abdel Sattar Shailal
Date : 2/6/2021
Signature

جامعة الانبار كلية التربية للبنات قسم علوم الحياة
University of Anbar Education College For Women

جامعة الانبار/كلية التربية للبنات
University Of Anbar
Education College For Women
مكتب العميد
DEAN OFFICE

Academic program description

Reviewing the performance of higher education institutions ((Review the academic program))

This academic program description provides a necessary summary of the most important characteristics of the program and the learning outcomes that the student is expected to achieve, demonstrating whether he has made the most of the available opportunities. It is accompanied by a description of each course within the program

1. Teaching Institution	University of Anbar - Education College for Women
2. University Department/Centre	Department of Biology
3. Name of the academic program	Biology
4. Name of the final certificate	Bachelor of Biology
5. The academic system	quarterly
6. Accredited accreditation program	ABET
7. Other external influences	
8. Date the description was prepared	1/1/2021

9. Objectives of the academic program

1- Preparing graduates with high theoretical and practical skills for the purpose of keeping pace with scientific development in the service of society.
2-Providing graduates with applied scientific skills and using modern teaching methods.
3-Preparing female graduates with a high level of competence for the purpose of meeting the needs of society and contributing to preparing a distinguished generation.
4-Preparing graduates to continue postgraduate studies.
5- Attracting faculty members with distinguished experiences.

10. Program structure

10. Required learning outcomes and teaching, learning and evaluation methods

١.A. Knowledge and understanding

-The student will have the ability to know and understand the basics of life sciences

-The student will have the ability to understand modern topics of science

-The student will have the ability to know the operation of laboratory equipment, especially the microscope

-The student will have the ability to learn pathological analyses

-The student will have the ability to become familiar with modern means of illustration and teaching methods

B- Methods of assessing knowledge and understanding:

1- Monthly exams

2- Daily exams

3- Writing scientific reports

C- Teaching and learning methods:

1- Theoretical lectures

2- Practical lectures in laboratories and conducting laboratory experiments

-٣Graduation projects for the completed stages and their discussion

B. Subject-specific skills

thinking skills :

A- Description and understanding of scientific applications

B- Using modern means of presentation for the purpose of explaining some scientific concepts and applications

Practical skills :

1- The student's ability to give a lecture or lesson

2- The student's ability to use laboratory equipment

3- The ability to write and draft scientific reports

Professional and scientific skills:

1- Various educational activities, wall publications specializing in science and scientific festivals, writing research papers

2- Other skills related to employability and personal development.

3- Creative skills related to learning to operate laboratory equipment and read analyses.

	.11 Program structure
	11.1 First academic year

Hours and credit units	Hours and credit units	Course Name	Course code	Level/year
1	1	**human rights**	Ewb1101	quarterly
2	2	**Arabic Language**	Ewb 1102	quarterly
١	**١**	**Freedoms**	Ewb 1103	quarterly
٢	**2**	**English**	EWb1104	quarterly
٢	2	**Educational psychology**	Ewb 2101	quarterly
٢	**2**	**Foundations of education**	EWb2102	quarterly
٢	**3**	**Calculators**	EWb2103	quarterly
٣	**٢**	**Cell biology 1**	EWb3101	quarterly
٣	**٢**	**Cell biology 2**	EWb3102	quarterly
٤	**3**	**Basics of zoology**	EWb3103	quarterly
٤	**3**	**Basics of botany**	EWb3104	quarterly
٣	**2**	**Analytical chemistry**	EWb3105	quarterly
٢	**٢**	**Earth science**	EWb3106	quarterly
٣	**٢**	**organic chemistry**	EWb3107	quarterly
٣٦	**٢٩**	**Number of total units**		

11. 2 Second academic year

Hours and credit units	Hours and credit units	Course Name	Course code	Level/year
2	2	**Scientific research method**	EWb2201	quarterly
2	2	**Developmental psychology**	EWb2202	quarterly
2	**2**	**educational administration**	EWb2203	quarterly
4	**3**	**Invertebrates 1**	EWb3201	quarterly
4	**3**	**Invertebrates 2**	EWb3202	quarterly
4	**3**	**Comparative plant anatomy**	EWb3203	quarterly
4	**3**	**Algae science**	EWb3204	quarterly
4	**3**	**Histology**	EWb3205	quarterly
4	**3**	**Archicons**	EWB32O6	quarterly
4	**3**	**Biochemistry**	EWB3207	quarterly
4	**3**	**Life statistics**	EWB3208	quarterly
4	**3**	**Embryology**	EWB3209	quarterly
42	**33**	**Number of total units**		

	11. 3 Third academic year			
Hours and credit units	Hours and credit units	Course Name	Course code	Level/year
2	٢	Counseling and mental health	EWB2301	quarterly
2	**2**	Teaching methods	EWB2302	quarterly
4	**3**	Chordates and comparative anatomy	EWB3301	quarterly
4	**3**	General insects	EWB3302	quarterly
٤	**3**	Genetics 1	EWB3303	quarterly
٤	**3**	Genetics 2	EWB3304	quarterly
٤	٣	Microbiology	EWB3305	quarterly
4	**3**	Plant morphology	EWB3306	quarterly
٣	٢	Microscopic preparations	**EWB3307**	quarterly
4	**3**	Applied insects	EWB3308	quarterly
٤	**3**	Fungi	EWB3309	quarterly
4	**3**	Plant classification	EWB3310	quarterly
4	٣	Biotechnology	EWB3311	quarterly
4	**3**	Animal physiology	**WEB3312**	quarterly
٥٢	**39**	**Number of total units**		
	11.4 Fourth academic year			
Hours and credit units	Hours and credit units	Course Name	Course code	**Level/year**
4	**2**	**Educational applications**	**EWB2401**	quarterly
2	**2**	**Measurement and evaluation**	**EWB2402**	quarterly
4	**2**	**School applications**	**EWB2404**	quarterly
	3	**Graduation research**	**EWB2403**	quarterly
٤	٣	**Parasites 1**	**EWB3401**	quarterly
٤	**3**	**Parasites 2**	**EWB3402**	quarterly
4	**3**	**Applied bacteriology**	**EWB3403**	quarterly
4	٣	**Ecology**	**EWB3404**	quarterly
4	**3**	**Plant physiology**	**EWB3405**	quarterly
4	**3**	**Molecular biology**	**EWB3406**	quarterly
4	**3**	**Cellular metabolism**	**EWB3407**	quarterly
4	**3**	**Environmental pollution**	**EWB3408**	quarterly
٤	٣	**Immunology**	**EWB3409**	quarterly
3	**3**	**Public Health**	**EWB3410**	quarterly
٢	٢	**Optional**	**EWB3411**	quarterly
				quarterly
56	**40**	**Number of total units**		

Program structure

11. Planning for personal development
• 12. **Admission standard (establishing regulations related to admission to the college or institute)** • Approving admission conditions for students in accordance with the regulations of the Ministry of Higher Education and Scientific Research (central admission) • He must have a personal interview with the department. • Must be fit for medical examination. • High school average. • The college's absorptive capacity.
13-The most important sources of information about the program. • Market needs. • Local trends of the governorate. • Studies and questionnaires

Program structure

Program structure

Program structure

Curriculum skills chart																			
Please check the boxes corresponding to the individual learning outcomes from the program subject to evaluation																			
Learning outcomes required from the programme																The first stage			
General and transferable skills (or) Other skills related to employability and personal development				thinking skills				Subject-specific skills				Knowledge and understanding				Basic or optional	Course Name	Course Code	Year/level
D4	D3	D2	D1	C4	C3	C2	C1	B4	B3	B2	B1	A4	A3	A2	A1				
	\	\	\		\	\	\		\	\	\	/	/	/	/	Basic	human rights	EWB1101	quarterly
	\	\	\		\	\	\		\	\	\	\	\	\	\	general	Arabic Language	EWB1102	quarterly
	\	\	\		\	\	\		\	\	\	\	\	\	\	general	Freedoms	EWB1103	quarterly
	\	\	\		\	\	\		\	\	\	\	\	\	\	general	English language	EWB1104	quarterly

Program structure

																	First stage	
	\	\	\		\	\	\		\	\	\	/	/	/	/	Basic	Educational Psychology	**EWB2101**	quarterly
	\	\	\		\	\	\		\	\	\	\	\	\	\	Optional	Foundations of education	**EWB2102**	quarterly
	\	\	\		\	\	\		\	\	\	\	\	\	\	Optional	Calculators	**EWB2103**	quarterly
	\	\	\		\	\	\		\	\	\	\	\	\	\	Basic	Cell biology 1	**EWB3101**	quarterly
	\	\	\		\	\	\		\	\	\	/	/	/	/	Basic	Cell biology 2	**EWB3102**	quarterly
	\	\	\		\	\	\		\	\	\	\	\	\	\	Basic	Zoology	**EWB3103**	quarterly
	\	\	\		\	\	\		\	\	\	\	\	\	\	Basic	General plant	**EWB3104**	quarterly
	\	\	\		\	\	\		\	\	\	\	\	\	\	Assistance	analytical chemistry	**EW3105**	quarterly

Program structure

	\	\	\		\	\	\		\	\	\	/	/	/	/	Basic	Earth science	**EWB3106**	quarterly
	\	\	\		\	\	\		\	\	\	\	\	\	\	Assistance	organic chemistry	**EWB3107**	quarterly
																		second stage	
	\	\	\		\	\	\		\	\	\	\	\	\	\	Basic	Scientific research method	**EWB2201**	quarterly
	\	\	\		\	\	\		\	\	\	\	\	\	\	Optional	Developmental psychology	**EWB2202**	quarterly
	\	\	\		\	\	\		\	\	\	/	/	/	/	Optional	Educational administration	**EWB2203**	quarterly
	\	\	\		\	\	\		\	\	\	\	\	\	\	Basic	Invertebrates 1	**EWB3201**	quarterly
	\	\	\		\	\	\		\	\	\	\	\	\	\	Basic	Invertebrates 2	**EWB3202**	quarterly

Program structure

	\	\	\		\	\	\		\	\	\	\	\	\	\	Basic	Comparative plant anatomy	**EWB3203**	quarterly
	\	\	\		\	\	\		\	\	\	/	/	/	/	Basic	Algae science	**EWB3204**	quarterly
	\	\	\		\	\	\		\	\	\	\	\	\	\	Basic	Histology	**EWB3205**	quarterly
	\	\	\		\	\	\		\	\	\	\	\	\	\	Basic	Archicons	**EWB3206**	quarterly
	\	\	\		\	\	\		\	\	\	\	\	\	\	Basic	Biochemistry	**EWB3207**	quarterly
	\	\	\		\	\	\		\	\	\	/	/	/	/	Basic	Life statistics	**EWB3208**	quarterly
	\	\	\		\	\	\		\	\	\	\	\	\	\	Basic	Embryology	**EWB3209**	quarterly
																		third stage	
	\	\	\		\	\	\		\	\	\	\	\	\	\	**Optional**	**Counseling and mental health**	**EWB2301**	quarterly

Program structure

	\	\	\		\	\	\		\	\	\	\	\	\	\	**Optional**	Teaching methods	**EWB2302**	quarterly
	\	\	\		\	\	\		\	\	\	/	/	/	/	Basic	Chordates	**EWB3301**	quarterly
	\	\	\		\	\	\		\	\	\	\	\	\	\	Basic	General insects	**EWB3302**	quarterly
	\	\	\		\	\	\		\	\	\	\	\	\	\	Basic	Genetics 1	**EWB3303**	quarterly
	\	\	\		\	\	\		\	\	\	\	\	\	\	Basic	Genetics2	**EWB3304**	quarterly
	\	\	\		\	\	\		\	\	\	/	/	/	/	Basic	Microbiology	**EWB3305**	quarterly
	\	\	\		\	\	\		\	\	\	\	\	\	\	Basic	Plant morphology	**EWB3306**	quarterly
	\	\	\		\	\	\		\	\	\	\	\	\	\	**Basic**	Microscopic preparations	**EWB3307**	quarterly

Program structure

	\	\	\		\	\	\		\	\	\	\	\	\	\	Basic	Applied insects	**EWB3308**	quarterly
	\	\	\		\	\	\		\	\	\	/	/	/	/	Basic	Fungi	**EWB3309**	quarterly
	\	\	\		\	\	\		\	\	\	\	\	\	\	Basic	Plant classification	**EWB3310**	quarterly
	\	\	\		\	\	\		\	\	\	\	\	\	\	Basic	Life technology	**EWB3311**	quarterly
	\	\	\		\	\	\		\	\	\	\	\	\	\	Basic	Animal physiology	**EWB3312**	
																		Fourth stage	
	\	\	\		\	\	\		\	\	\	/	/	/	/	Optional	Teaching applications	**EWB2401**	quarterly
	\	\	\		\	\	\		\	\	\	\	\	\	\	Optional	Measurement and evaluation	**EW2402**	quarterly
	\	\	\		\	\	\		\	\	\	\	\	\	\	**Basic**	Graduation research	**EW2403**	quarterly

Program structure

	\	\	\		\	\	\		\	\	\	\	\	\	\	Basic	**School applications**	**EW2404**	quarterly
	\	\	\		\	\	\		\	\	\	/	/	/	/	Basic	Parasites 1	**EWB3401**	quarterly
	\	\	\		\	\	\		\	\	\	\	\	\	\	Basic	Parasites 2	**EW3402**	quarterly
	\	\	\		\	\	\		\	\	\	\	\	\	\	Basic	Applied bacteriology	**EWB3403**	quarterly
	\	\	\		\	\	\		\	\	\	\	\	\	\	Basic	Ecology	**EWB3404**	quarterly
	\	\	\		\	\	\		\	\	\	/	/	/	/	Basic	Plant physiology	**EWB3405**	quarterly
	\	\	\		\	\	\		\	\	\	\	\	\	\	Basic	Molecular biology	**EWB3406**	quarterly
	\	\	\		\	\	\		\	\	\	\	\	\	\	**Basic**	Cellular metabolism	**EWB3407**	quarterly

Program structure

	\	\	\		\	\	\		\	\	\	\	\	\	\	Basic	**Environmental pollution**	**EWB3408**	quarterly
	\	\	\		\	\	\		\	\	\	/	/	/	/	Basic	Immunology	**EWB3409**	quarterly
	\	\	\		\	\	\		\	\	\	\	\	\	\	Basic	Public Health	**EWB3410**	quarterly
	\	\	\		\	\	\		\	\	\	\	\	\	\	Basic	Optional	**EWB3411**	quarterly

Program structure

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	Education College For Women- Biology
3. Course title/code	pathogenic bacteria
4. Programme(s) to which it contributes	Weekly
5. Modes of Attendance offered	
6. Semester/Year	Second semester / fourth year
7. Number of hours tuition (total)	30 hours
8. Date of production/revision of this Specification	٢٠٢٠/٢٠٢١
9. Aims of the Course	
Study of pathogenicity, yeasts, and toxins that were found by bacteria -	
Study of the sex of Staphylococcus, Streptococcus, Corynebacterium, Bacillus, Clostridium and Bacteria -Intestinal bacteria and pseudomonas	
Knowing the importance of these germs, their cultivation, diagnosis, pathology, and how to treat and eliminate them	

Program structure

10· Learning Outcomes, Teaching ,Learning and Assessment Methode
11- Knowledge and Understanding A1. A2. The student should be able to recognize the importance of the information he learned A3. To familiarize the student with modern technologies in the field of medical bacteriology A4. A5. A6 .
B. Subject-specific skills B1. To familiarize the student with modern technologies in the field of medical bacteriology B2. B3.
Teaching and Learning Methods
Assessment methods
C. Thinking Skills C1. C2. C3. C4.
Teaching and Learning Methods
a. Theoretical lectures. B. Scientific lessons and practical application. c. writing reports. Dr.. Lab visits at local hospitals. e. Presentation of lectures via modern projectors and projectors.
Assessment methods

D. General and Transferable Skills (other skills relevant to employability and personal development) D1. D2. D3. D4.

11. Course Structure					
Week	Hours	ILOs	Unit/Module orTopic Title	Teaching Method	Assessment Method
1	2	Pathogens and staphylococci	pathogenic bacteria	Scientific Lecture	Daily exam and monthly exam
2	2	**Streptococcus**	=	=	=
3	2	Corynebacteria	=	=	=
4	2	*Bacillus anthracis*	=	=	=
5	2	Clostridium	=	=	=
6	2	Pseudomonas	=	=	=
7	2	Enterobacteriacea	=	=	=
8	2	Exm.	=	=	=
9	2	Escherichieae	=	=	=
10	2	Klebsiella	=	=	=
11	2	Salmonellae	=	=	=
12	2	***Proteus***	=	=	=
13	2	brucella	=	=	=
14	2	Exm.	=	=	=
15	2	plague	=	=	=

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

13. Admissions	75
Pre-requisites	٧
Minimum number of students	٧٥
Maximum number of students	١٨٠

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	Education College for Girls
2. University Department/Centre	Biology
3. Course title/code	Basics of general entomology - EWB3302
4. Programme(s) to which it contributes	Display
5. Modes of Attendance offered	Weekly
6. Semester/Year	Semester (First Sem.) - Third Stage
7. Number of hours tuition (total)	30 hour
8. Date of production/revision of this specification	21-12-2021
9. Aims of the Course	
❖ Adding new sciences to students for future benefit	
❖ Keeping pace with scientific development	
❖ The student acquainted the student with the types of insects found in nature and studying their medical importance and their relationship in the transmission of pathogens to humans and other organisms	

10· Learning Outcomes, Teaching ,Learning and Assessment Methode
A- Knowledge and Understanding A1. Adding a new scientific aspect A2. Familiarity with modern methods of diagnosis
B. Subject-specific skills B1. Teaching the student to use websites in biological diagnosis B2. Teaching the student to use modern laboratory techniques B3. - Using new methods for some of the lectures
Teaching and Learning Methods
1. lecture 2. Display 3. Practical laboratory 4. discreet scientific books
Assessment methods
1. exams 2. daily tests 3. Making scientific reports 4. semester exam
C. Thinking Skills C1. Creating a spirit of competition among students C2- Enhancing the student's self-confidence C 3- Linking science to the events of daily life
Teaching and Learning Methods
1. practical exam 2. Application for in-lab experiments 3. semester exam
Assessment methods
D1. Ability to read relevant research and scientific literature D2 . Expanding the student’s thinking and awareness of linking science with modern devices D 3. The student does not depend on the instructor only D 4. Using accuracy in the scientific answer

D 5. Investing in modern programs to reach special biological results

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

D1.

D2.

D3.

D4.

11. Course Structure					
Week	Hours	ILOs	Unit/Module or Topic Title	Teaching Method	Assessment Method
1.	4	Basics of general entomology	**Introduction**		
2.	4	Basics of general entomology	**Morphology of insects**		
3.	4	Basics of general entomology	**The thorax and appendages**		
4.	4	Basics of general entomology	**The abdominal and appendages**		
5.	4	Basics of general entomology	**The first exam**		
6.	4	Basics of general entomology	**The Respiratory system**		
7.	4	Basics of general entomology	**Digestive System**		
8.	1	Basics of general entomology	**The excretory organs**		

Program structure

9.	4	Basics of general entomology	**The Reproductive System**		
10.	4	Basics of general entomology	**The Nervous System**		
11.	4	Basics of general entomology	**The Circulatory System**		
12.	4	Basics of general entomology	**Sensory organs in insects**		
13.	4	Basics of general entomology	**Development & metamorphosis**		
14.	4	Basics of general entomology	**Classification of insects**		
15.	1	Basics of general entomology	**The second exam**		

12. Infrastructure	
Required reading: · CORE TEXTS · COURSE MATERIALS · OTHER	General entomology Written by: Hussein Abbas Al-Ali, d. Nidal Mahdi Al Fund Practical Entomology Book, Abdul Latif Mulan
Special requirements (include for example workshops, periodicals, IT software, websites)	Principle Of General Entomology By Pr. Bedir M. Al. Azawi

Community-based facilities (include for example, guest Lectures , internship , field studies)	

13. Admissions	
Pre-requisites	Communicating in curriculum development based on recent versions of books and references
Minimum number of students	
Maximum number of students	

Dr. Imtithal Ismael Jaloot
Lecture Of subject

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	Education College for Girls
2. University Department/Centre	Biology
3. Course title/code	Applied Entomology- EWB3308
4. Programme(s) to which it contributes	Display
5. Modes of Attendance offered	Weekly
6. Semester/Year	Semester (second Sem.) - Third Stage
7. Number of hours tuition (total)	30 hour
8. Date of production/revision of this specification	21-12-2021
9. Aims of the Course	
❖ Adding new sciences to students for future benefit	
❖ Keeping pace with scientific development	
❖ The student acquainted the student with the types of insects found in nature and studying their medical importance and their relationship in the	

Program structure

transmission of pathogens to humans and other organisms

10· Learning Outcomes, Teaching ,Learning and Assessment Methode
A- Knowledge and Understanding A1. Adding a new scientific aspect A2. Familiarity with modern methods of diagnosis
B. Subject-specific skills B1. Teaching the student to use websites in biological diagnosis B2. Teaching the student to use modern laboratory techniques B3. - Using new methods for some of the lectures
Teaching and Learning Methods
1. lecture 2. Display 3. Practical laboratory 4. discreet scientific books
Assessment methods
1. exams 2. daily tests 3. Making scientific reports 4. semester exam
C. Thinking Skills C1. Creating a spirit of competition among students C2- Enhancing the student's self-confidence C 3- Linking science to the events of daily life
Teaching and Learning Methods
1. practical exam 2. Application for in-lab experiments 3. semester exam
Assessment methods
D1. Ability to read relevant research and scientific literature D2 . Expanding the student’s thinking and awareness of linking science with modern devices D 3. The student does not depend on the instructor only D 4. Using accuracy in the scientific answer

D 5. Investing in modern programs to reach special biological results

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

D1.

D2.

D3.

D4.

11. Course Structure					
Week	Hours	ILOs	Unit/Module or Topic Title	Teaching Method	Assessment Method
1.	4	Applied Entomology	**Introduction of Economic & medical entomology meaning…importance…etc.**		
2.	4	Applied Entomology	**Important economic insects in Iraq**		
3.	4	Applied Entomology	**Pest Control Methods**		
4.	4	Applied Entomology	**Methods of transmitting pathogenic microbes for humans and animals**		
5.	4	Applied Entomology	***Pulex* types of medicinal and veterinary importance**		
6.	4	Applied Entomology	**Culicidae family, types of Culex and control methods**		
7.	4	Applied Entomology	**Annulatus types of medicinal and veterinary importance**		
8.	1	Applied Entomology	**First month exam**		
9.	4	Applied Entomology	**Diptera order of medicinal and veterinary importance**		
10.	4	Applied Entomology	**House fly, life cycle, types of fly and control methods**		
11.	4	Applied Entomology	**Insecticides**		
12.	4	Applied	**Insects behavior**		

		Entomology			
13.	4	Applied Entomology	**Social relationships between insects**		
14.	4	Applied Entomology	**Insect environment**		
15.	1	Applied Entomology	**Second month exam**		

12. Infrastructure	
Required reading: · CORE TEXTS · COURSE MATERIALS · OTHER	Specialization book Environmental Protection - Theoretical medical and veterinary insects https://drive.google.com/file/d/1PC4zEC7nBYIcI4oDR4sK-CEZpveERdF7/view Environmental Protection Specialization Book - Practical Medical and Veterinary Insects https://drive.google.com/file/d/1F8PgpvGoaNrSgo8AhFjA3g3dUEgcJ8ue/view1-Practical Medical Entomology By Pr. Dr. Abdul-lateef Molan
Special requirements (include for example workshops, periodicals, IT software, websites)	Fundamentals of medical and veterinary entomology Written by Prof. Dr.: Mr. Hassan Shorb Professor Zo, Head of Entomology Department, Faculty of Science - Cairo University 2013
Community-based facilities (include for example, guest Lectures , internship , field studies)	

13. Admissions	
Pre-requisites	Communicating in curriculum development based on recent versions of books and references
Minimum number of students	

Maximum number of students	

Dr. Imtithal Ismael Jaloot
Lecture Of subject

Program structure

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	College of Education for women, Department of biology
3. Course title/code	immunology
4. Programme(s) to which it contributes	PowerPoint + Google Meet
5. Modes of Attendance offered	Weekly
6. Semester/Year	second Semester - Academic Year 2022/2023
7. Number of hours tuition (total)	30 practical hours + 30 theoretical hours
8. Date of production/revision of this specification	17-9-2023
9. Aims of the Course	
Introducing students to what is meant by immunology and the sections of natural immunity and acquired immunity	
Identify the cellular components of the immune system such as white blood cells, macrophages, and T and B cells	

10· Learning Outcomes, Teaching ,Learning and Assessment Methode
A- Cognitive goals A1- That the student recognize the importance of studying immunology by studying the immune system in the human body. 2a- Knowing the main types of immunity and factors affecting natural immunity 3a- Identifying the types of cells and lymphoid organs that contribute to the immune system. 4a- Identifying antigens and antibodies and how antibodies interact with antigens 5a- Identifying various immunological information such as complement system, hypersensitivity, tissue rejection, and some immune diseases
B - The soft skills objectives of the course. B1- Developing the scientific concept of the study material by the student. B2- Developing the preventive concept of the student to avoid the damages resulting from the entry of foreign bodies inside The human body by sterilizing wounds and eating uncontaminated food. B3- Introducing the student to some important diseases related to the immune system
Teaching and Learning Methods
• Explanation and clarification (lecture). • Presentation of selected models of explanatory questions and their solutions. • Self-learning method (assigning students to complete learning some skills after giving them the basics). • Labs. • Discussions • Brainstorming • Examples and problems used to achieve the objectives • google meet, classroom
Assessment methods

Daily exams.
• Sudden Exams
• Documented exams, semester exams
• Cooperative education (groups)
Oral exams
• Oral questions and discussions
• Homework

C. Thinking Skills

C 1-Observation and perception.

C 2 - analysis and interpretation.

C 3- Conclusion and evaluation.

C 4 - numbers and calendar.

C 5 - Testing students' attention through surprise questions during the explanation.

C6 - Breaking the stereotypical aspect of the lecture using different methods to transform the student from the role of the passive recipient to the role of active participation.

Teaching and Learning Methods

• Employing the faculty's ability and experience in communicating the scientific material to the student and informing the student of the importance of time.
• Assigning students to prepare reports on a particular subject, thus motivating students to learn the basic principles of scientific research
• Assigning students to conduct laboratory experiments on their own after the teacher has given a simple explanation of how to conduct the experiment, thus giving the student the opportunity to elicit and analyze the results
• Continuous discussions in all multimedia applications.

Assessment methods

Program structure

1. Daily exams
2. • Sudden Exams
3. • Documented exams, semester exams
4. • Cooperative education (Groups)
5. Oral exams
6. • Oral questions and discussions
7. • Homework

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

• Increasing communication between individuals, which contributes to building a learning community
• Develop multiple emotional aspects such as curiosity, positive attitude towards learning, social values, independence in learning and self-confidence
• Develop the skill aspects of students
• Learn to set the right priorities for any problem
• Develop respect for time for the completion and implementation of work
• Develop a spirit of honest competition between work groups in pursuit of quality work, excellence and diversity in performance
• Develop the spirit of creation and creativity
• Develop work appreciation, responsibility and commitment.

11. Course Structure

Week	Hours	ILOs	Unit/Module or Topic Title	Teaching Method	Assessment Method
1-	2 hours of theory 2 hours of work	As mentioned in paragraph 10	Introduction and definition of immunology	immunology	Exams (quarterly, daily), class activity and positive participation, preparing reports and clarifications (not binding on the student, but optional)
2-	2 hours of theory 2 hours of work	As mentioned in paragraph 10	Types of immunity	Immunology	
3-	2 hours of theory 2 hours of work	As mentioned in paragraph 10	Cellular, chemical and mechanical mechanisms	Immunology	
4-	2 hours of theory 2 hours of work	As mentioned in paragraph 10	Components of the cellular immune system	Immunology	
5-	2 hours of theory 2 hours of work	As mentioned in paragraph 10	lymphoid organs	Immunology	
6-	2 hours of	As	Components of	immunology	

	theory 2 hours of work	mentioned in paragraph 10	molecular immunoglobulins		
7-	2 hours of theory 2 hours of work	As mentioned in paragraph 10	Inflammation	Immunology	
8-	2 hours of theory 2 hours of work	As mentioned in paragraph 10	Vaccines	Immunology	
9-	2 hours of theory 2 hours of work	As mentioned in paragraph 10	first month exam	Immunology	
10-	2 hours of theory 2 hours of work	As mentioned in paragraph 10	antigens	Immunology	
11-	2 hours of theory 2 hours of work	As mentioned in paragraph 10	characteristics of antigens	Immunology	
12-	2 hours of theory 2 hours of work	As mentioned in paragraph 10	antibody	Immunology	
13-	2 hours of theory 2 hours of work	As mentioned in paragraph 10	complement system	Immunology	
14-	2 hours of theory 2 hours of work	As mentioned in paragraph 10	Allergies	Immunology	
15-	2 hours of theory 2 hours of work	As mentioned in paragraph 10	Second mounth exam	Immunology	

12. Infrastructure	
Required reading: · CORE TEXTS · COURSE MATERIALS · OTHER	Dr.. Hassan, Alia Ghahraman, and others. (1990). Foundations of immunology. Ministry of Higher Education and Scientific Research, Dar Al-Kutub for Printing and Publishing - Baghdad Dr.. Al-Saad, Maha Raouf. (1990). Immunology, Ministry of Higher Education and Scientific Research, University of Baghdad. Delves,P. J.; Martin, S.J.; Burton, D.R. & Roitt, I.M. (2017). Roitt's Essential Immunology. 13th edition. WileyBlackwell.
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	Programming language
Minimum number of students	100
Maximum number of students	200

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	College of Education for Woman, University of Anbar
3. Course title/code	plant morphology
4. Programme(s) to which it contributes	Net plant
5. Modes of Attendance offered	The electronic attendance of the theoretical side and the actual presence of the practical side
6. Semester/Year	First Semester - Academic Year 2021/2022
7. Number of hours tuition (total)	45
8. Date of production/revision of this specification	1-9-2021
9. Aims of the Course	
• To better understand the biological basis of plant speciation 2. To make practical use of computer and non-compute rmethods of expressing morphological, anatomical, chromosomal, geographical, and ecological variation in closely related plant species. 3. .To better understand the value of herbarium collections in solving taxonomic problems..	

10· Learning Outcomes, Teaching ,Learning and Assessment Methode
A- Students are expected to be present and on time for all class meetings. Unavoidable absences such as those due to illness and deaths in the family should be reported to the instructor as soon as possible. More than B- two absences are considered excessive. Students are responsible for making up missed work, missed exams C- and picking up class handouts. Lab exams can be made up only if prior notice is given. Field quizzes cannot be D- made up. If a field quiz is missed, the following quiz grade will be used to calculate the one missed. Where E- absences are excessive, no consideration will be given for borderline grades
B. Subject-specific skills B1 - To better understand the biological basis of plant speciation 2. To make practical use of computer and non-computermethods of expressing morphological, anatomical, chromosomal, geographical, and ecological variation in closely related plant species. 3. .To better understand the value of herbarium collections in solving taxonomic problem
Teaching and Learning Methods
• Explanation and clarification (lecture). • Presentation of selected models of explanatory questions and their solutions. • Self-learning method (assigning students to complete learning some skills after giving them the basics). • Labs. • Discussions • Brainstorming • Examples and problems used to achieve the objectives • google meet, classroom
Assessment methods
Daily exams. • Sudden Exams • Documented exams, semester exams • Cooperative education (groups) Oral exams • Oral questions and discussions • Homework

C. Thinking Skills

C 1-Observation and perception.

C 2 - analysis and interpretation.

C 3- Conclusion and evaluation.

C 4 - numbers and calendar.

C 5 - Testing students' attention through surprise questions during the explanation.

C6 - Breaking the stereotypical aspect of the lecture using different methods to transform the student from the role of the passive recipient to the role of active participation.

Teaching and Learning Methods
• This course presents a study of variation in plant species and numerical)computer and non-computer) and other laboratory methods for interpreting the importance of variation in species determination. Herbarium collections will be employed in determining species variations. Students will undertake to define variation in closely related species and to demonstrate their research in writing and oral presentation.
Assessment methods
8. Daily exams 9. • Sudden Exams 10.• Documented exams, semester exams 11.• Cooperative education (Groups) 12.Oral exams 13.• Oral questions and discussions 14.• Homework

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

• Increasing communication between individuals, which contributes to building a learning community
• Develop multiple emotional aspects such as curiosity, positive attitude towards learning, social values, independence in learning and self-confidence
• Develop the skill aspects of students
• Learn to set the right priorities for any problem
• Develop respect for time for the completion and implementation of work
• Develop a spirit of honest competition between work groups in pursuit of quality work, excellence and diversity in performance
• Develop the spirit of creation and creativity
• Develop work appreciation, responsibility and commitment.

11. Course Structure

Week	Hours	ILOs	Unit/Module or Topic Title	Teaching Method	Assessment Method
16-	2 hours of theory 2 hours of work	As mentioned in paragraph 10	Root mor.	Understanding and analyzing the part of plant	Exams (quarterly, daily), class activity and positive participation, preparing reports and clarifications (not binding on the student, but optional)
17-	2 hours of theory 2 hours of work	As mentioned in paragraph 10	The importance of morphology and its relationship to other sciences.		
18-	2 hours of theory 2 hours of work	As mentioned in paragraph 10	.root type		
19-	2 hours of theory 2 hours of work	As mentioned in paragraph 10	Stem of plant type		
20-	2 hours of theory 2 hours of work	As mentioned in paragraph 10	Stem morphology		
21-	2 hours of	As	Leaves of plant		

	theory 2 hours of work	mentioned in paragraph 10			
22-	2 hours of theory 2 hours of work	As mentioned in par-agraph 10-	The function and shape of plant		
23-	2 hours of theory 2 hours of work	As mentioned in paragraph 10	The flower	-	
24-	2 hours of theory 2 hours of work	As mentioned in paragraph 10	The flower type	-	
25-	2 hours of theory 2 hours of work	As mentioned in paragraph 10	The flower parts	-	
26-	2 hours of theory 2 hours of work	As mentioned in paragraph 10	Variations in flowers	-	
27-	2 hours of theory 2 hours of work	As mentioned in paragraph 10	Variations in all part of flowers	-	
28-	2 hours of theory 2 hours of work	As mentioned in paragraph 10	Reproductive parts anatomically and morphologically	-	
29-	2 hours of theory 2 hours of work	As mentioned in paragraph 10	fruits	Understanding and analyzing the part of plant	
30-	2 hours of theory 2 hours of work	As mentioned in paragraph 10	seed	Understanding and analyzing the part of plant	

12. Infrastructure	
Required reading: · CORE TEXTS · COURSE MATERIALS · OTHER	Stuessy, T. 1994. Case Studies in Plant Taxonomy. Columbia University Press, NY.
Special requirements (include for example workshops, periodicals, IT software, websites)	Selected Journal Readings. Reprints on file in the lab.
Community-based facilities (include for example, guest Lectures , internship , field studies)	

13. Admissions	
Pre-requisites	Dry and soft vegetable models
Minimum number of students	200
Maximum number of students	300

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	
2. University Department/Centre	
3. Course title/code	
4. Programme(s) to which it contributes	
5. Modes of Attendance offered	
6. Semester/Year	
7. Number of hours tuition (total)	
8. Date of production/revision of this Specification	
9. Aims of the Course	

10· Learning Outcomes, Teaching ,Learning and Assessment Methode
A- Knowledge and Understanding A1. A2. A3. A4. A5. A6 .
B. Subject-specific skills B1. B2. B3.
Teaching and Learning Methods
Assessment methods
C. Thinking Skills C1. C2. C3. C4.
Teaching and Learning Methods
Assessment methods

D. General and Transferable Skills (other skills relevant to employability and personal development) D1. D2. D3. D4.

11. Course Structure					
Week	Hours	ILOs	Unit/Module or Topic Title	Teaching Method	Assessmen tMethod

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	150
Maximum number of students	170

Program structure

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	Education College For Women- Biology
3. Course title/code	Microbiology
4. Programme(s) to which it contributes	Weekly
5. Modes of Attendance offered	
6. Semester/Year	First semester / third year
7. Number of hours tuition (total)	30 hours
8. Date of production/revision of this specification	٢٠٢٠/٢٠٢١
9. Aims of the Course	
That the student understand what is meant by microbiology, its origin and development as a science of life.	
To know what are the divisions of microbiology	
That the student knows the isolation and diagnosis of microorganisms.	

To know the structure of the bacterial cell, whether positive or negative for the gram stain, and the function of each of the structures of the bacterial cell

10· Learning Outcomes, Teaching ,Learning and Assessment Methode
12- Knowledge and UnderstandingA1. A2. The student should have the ability to properly learn the concept of scientific research A3. That the student knows the most important scientific terms and how to deal with them A4. A5. A6 .
B. Subject-specific skills B1. The student shall have the ability and ability to deal with microbial contamination and its seriousness in various fields of knowledge B2. B3.
Teaching and Learning Methods
Theoretical lectures. B. Scientific lessons and practical experiments. c. writing reports. Dr.. Lab visits at local hospitals. e. Presentation of lectures via modern projectors and projectors.
Assessment methods

C. Thinking Skills C1. C2. C3. C4.
Teaching and Learning Methods
Assessment methods
D. General and Transferable Skills (other skills relevant to employability and personal development) D1. D2. D3. D4.

11. Course Structure					
Week	Hours	ILOs	Unit/Module orTopic Title	Teaching Method	Assessment Method
1	2	Introduction to microbiology	microbiology	Scientific Lecture	Daily exam and monthly exam
2	2	**Classification of microorganisms**	=	=	=
3	2	Bacterial isolation and identification	=	=	=
4	2	cellular structures	=	=	=
5	2	Fungi	=	=	=
6	2	Viruses	=	=	=

Program structure

7	2	Exam	=	=	=
8	2	**Nutrition of Microorganisms**	=	=	=
9	2	**Cultivation of Microorganism**	=	=	=
10	2	Bacterial growth and growth curve	=	=	=
11	2	**Microbial physiology**	=	=	=
12	2	Exam	=	=	=
13	2	**Control of Microorganisms by physical**	=	=	=
14	2	Control of microorganisms by chemical means:	=	=	=
15	2	Antibiotics	=	=	=

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

13. Admissions	
Pre-requisites	7

Minimum number of students	100
Maximum number of students	230

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 - Education College for Women
2. University Department/Centre	Department of Biology
3. Course title/code	Fungi
4. Programme (s) to which it contributes	stage I
5. Modes of Attendance offered	weekly
6. Semester/Year	Second Semester \ 2021
7. Number of hours tuition (total)	30 hours Semester / theoretical
8. Date of production/revision of this Specification	5/29/2021
9. Aims of the Course	
Introduce the student in detail about the meaning of Fungi. Introduce the student to the different pathological species of the fungi.	

Program structure

Introduce students to the most important characteristics of fungi. Introduce students to the most important principles adopted in the classification of fungi . Introduce students to the most important classes of pathogenic fungi .

10· Learning Outcomes, Teaching ,Learning and Assessment Methods
A1- To familiarize the student with the basic concepts of mycology. A2. - That the student learn about the most important types of fungi that are medically important and ways to prevent them A3.. - To distinguish between the different types and methods of their diagnosis A4. To familiarize the student with the different life cycles of fungi A5. - That the student understand the method and how to deal with the different samples of the models studied in the laboratory A6. To familiarize the student with the most important characteristics adopted in naming the different people of fungi
B. Subject-specific skills B1.. Microscopically distinguishing between types of fungi. B 2-. Microscopic identification of the components of some mycellium. B-3 Preparation of a number of slides for some species of the fungi and their diagnosis.
Teaching and Learning Methods
1- Explanation and clarification 2- The method of the lecture 3- Student groups 4- Practical lessons in the laboratory and scientific trips

Assessment methods
Daily, semester and yearly exams Feedback from students for assessment through classroom and extra-curricular activities (discussions, attendance, interaction, interventions, answers, additions, comments, and special points of view. Reports and Research.
C. Thinking Skills C1. Enhancing the student's self-confidence, abilities and specialization. C2. Desire to work after graduation in the field of specialization. C3 Strengthening work and cooperation in a team spirit. C4. Accept and receive knowledge and science with desire without boredom.
Teaching and Learning Methods
1- Explanation and clarification 2- The method of the lecture 3- Student groups 4- Practical lessons in the laboratory 5- Scientific trips 6- The method of self-learning
Assessment methods
-Self-evaluation of the student by the professor, which is determined through observation and continuity of work. -Adherence to scientific and other directives from the professor and management regarding the scientific subject. -The student's interaction with the lecture and classroom and extra-curricular activities.

-Written exam.
-Discussions and interaction.

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 team work 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 clearly in writing).

11. Course Structure

Week	Hours	ILOs	Unit/Module or Topic Title	Teaching Method	Assessmen tMethod
١	٤	Define mycology	Fungi	Explanation - model presentation slides - and lecture	Theoretical Tests Practical tests Reports
٢	٤	Introduction to mycology	Fungi	Explanation - model presentation slides - and lecture	Theoretical Tests Practical tests Reports
٣	٤	Introduction to mycology	Fungi	Explanation - model presentation slides - and lecture	Theoretical Tests Practical tests Reports
٤	٤	Study of the components of the fungal cell	Fungi	Explanation - model presentation slides - and lecture	Theoretical Tests Practical tests Reports
٥	٤	The basis for the classification of fungi	Fungi	Explanation - model presentation slides - and lecture	Theoretical Tests Practical tests Reports
٦	٤	Study of oomycetes	Fungi	Explanation - model presentation slides - and lecture	Theoretical Tests Practical tests Reports
٧	٤	Study of downy	Fungi	Explanation - model	Theoretical Tests Practical tests

		mildew diseases		presentation slides - and lecture	Reports
٨	٤	The study of Zygomycota	Fungi	Explanation - model presentation slides - and lecture	Theoretical Tests Practical tests Reports
٩	4	The study of Ascomycota	Fungi	Explanation - model presentation slides - and lecture	Theoretical Tests Practical tests Reports
١٠	٤	Study of Discomycota	Fungi	Explanation - model presentation slides - and lecture	Theoretical Tests Practical tests Reports
١١	٤	Study of Loculoascomycota	Fungi	Explanation - model presentation slides - and lecture	Theoretical Tests Practical tests Reports
١٢	٤	Study of Basidiomycota	Fungi	Explanation - model presentation slides - and lecture	Theoretical Tests Practical tests Reports
١٣	٤	Study of Smith fungi	Fungi	Explanation - model presentation slides - and lecture	Theoretical Tests Practical tests Reports
١٤	٤	Study of Rust fungi	Fungi	Explanation - model presentation slides - and lecture	Theoretical Tests Practical tests Reports
١٥	٤	Study of Deuttomycota	Fungi	Explanation - model presentation slides - and lecture	Theoretical Tests Practical tests Reports

12. Infrastructure

Required reading: · CORE TEXTS · COURSE MATERIALS · OTHER	Fundamentals of medical mycology Ahmed Sami Salman Faza . Introduction to mycology Abdul Aziz Majid Nakhilan . Fundamentals of mycology Abdul Aziz Majid Nakhilan
Special requirements (include for example workshops, periodicals, IT software, websites)	Practical mycology Abdul Reda Taha Sarhan . Practical book on medicinal fungi Ibrahim Ali Al-Tayyar
Community-based facilities (include for example, guest Lectures , internship , field studies)	guest Lectures from other country or University, internship , field studies

13. Admissions	
Pre-requisites	
Minimum number of students	20
Maximum number of students	30

TEMPLATEFORCOURSESPECIFICATION

HIGHEREDUCATIONPERFORMANCEREVIEW:PROGRAMMEREVIEW

COURSESPECIFICATION

This Course Specification provides a concise summary of the main features of thecourseandthelearningoutcomesthatatypicalstudentmightreasonablybeexpected to achieve anddemonstrate if he/she takes full advantage of the learningopportunities that are provided. It should be cross-referenced with the programmespecification.

1.TeachingInstitution	Al anbar University
2.UniversityDepartment/Centre	College of Education for Girls - Department of Biology
3.Coursetitle/code	
4.Programme(s)towhichitcontributes	Microscopes preparation
5.ModesofAttendanceoffered	weekly
6.Semester/Year	second semester / second year
7.Numberofhourstuition(total)	30 hours theoretical / 30 hours practical
8.Dateofproduction/revisionofthis specification	2021
9.AimsoftheCourse	
1. Course Objectives: Introduse students to the type of tissue that make up the body of an organism. How to obtain plant and animal samples. Examine the steps involved in routine histological microscopy preparation Installation, its importance and materials used Follow all the sequential steps to staining ,loading and microscope.	

Program structure

10·LearningOutcomes,Teaching,LearningandAssessmentMethode

A-KnowledgeandUnderstanding

A1. Standard method (lectures).

A2. Text method

A3. Experimental method

B. Subject-specific skillsB1.

B2.

B3.

TeachingandLearningMethods

Standard method (lectures).

Text method

Experimental method

Assessmentmethods

- Constructive (formative) calendar with daily exams, student's notes on home deals and follow-up, and class calendar.

_ Diagnostic evaluation of the quarterly and final exams to pass and fail judgments.

C. Thinking Skills

C1– The students aspire to love scientific research

C 2 - Knowing references from abroad from external exhibition

TeachingandLearningMethods

Standard method (lectures).

Text method

Experimental method

Assessmentmethods

- Constructive (formative) calendar with daily exams, student's notes on home deals and follow-up, and class calendar.

_ Diagnostic evaluation of the quarterly and final exams to pass and fail judgments.

D.GeneralandTransferableSkills(otherskillsrelevanttoemployabilityandpersonal development)
D1. Assigning students to conduct laboratory experiments
D 2- Making educational posters

11.CourseStructure					
Week	Hours	ILOs	Unit/Module orTopicTitle	Teaching Method	Assessment Method
The first	4	Tissue components of a living organism	Microscopic preparation	theoretical lecture	Daily test
2	=	How to get samples,installatio ,its characteristic importance and type of stabilizers , advantages and disadvatages	Microscopic preparation		
3	=	Washing ,materials used and time requird	Microscopic preparation		
4	=	Monthly exam	Microscopic preparation		
5	=	Clarification ,its importance,materials used in it, and imperegnation	Microscopic preparation		
6	=	First month exam	Microscopic preparation		
7	=	Dyeing and loading examination under a microscope and	Microscopic preparation		

8 10 11		distinguishing histological sections Siloden technology and freezing technology electron microscope Second month exam			

12.Infrastructure	
Requiredreading: · CORETEXTS · COURSEMATERIALS · OTHER	Online educational lectures
Special requirements (include forexample workshops, periodicals,ITsoftware,websites)	Scientific journals in basic specialties Electronic biology sciences library
Community-based facilities(include for example, guestLectures,internship,field studies)	

13.Admissions	
Pre-requisites	
Minimumnumber of students	100
Maximumnumber ofstudents	300

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	College of Education for women, Department of biology
3. Course title/code	Zoology
4. Programme(s) to which it contributes	PowerPoint + Google Meet
5. Modes of Attendance offered	Weekly
6. Semester/Year	First Semester - Academic Year 2020/2021
7. Number of hours tuition (total)	48
8. Date of production/revision of this specification	9-5-2021
9. Aims of the Course	
It aims to introduce the student to the science of zology, its importance, the relationship of the body's organs with each other functionally and who use the lab	
Knowing some medical conditions that accompany organs as a result of dysfunction	

10· Learning Outcomes, Teaching ,Learning and Assessment Methode
F- Introduce students to zology and its relationship to other sciences, how organs function completely, and the dysfunction that occurs as a result of some pathological conditions. And how to maintain the internal environment of the body in a state of complete homeostasis.
Learning Outcomes, Teaching, Learning and Assessment Methods
Teaching and Learning Methods
• Explanation and clarification (lecture). • Presentation of selected models of explanatory questions and their solutions. • Self-learning method (assigning students to complete learning some skills after giving them the basics). • Labs. • Discussions • Brainstorming • Examples and problems used to achieve the objectives • google meet, classroom
Assessment methods
Daily exams. • Sudden Exams • Documented exams, semester exams • Cooperative education (groups) Oral exams • Oral questions and discussions • Homework
C. Thinking Skills C 1-Observation and perception. C 2 - analysis and interpretation. C 3- Conclusion and evaluation. C 4 - numbers and calendar. C 5 - Testing students' attention

through surprise questions during the explanation.
C6 - Breaking the stereotypical aspect of the lecture using different methods to transform the student from the role of the passive recipient to the role of active participation.

Teaching and Learning Methods
• Employing the faculty's ability and experience in communicating the scientific material to the student and informing the student of the importance of time. • Assigning students to prepare reports on a particular subject, thus motivating students to learn the basic principles of scientific research • Assigning students to conduct laboratory experiments on their own after the teacher has given a simple explanation of how to conduct the experiment, thus giving the student the opportunity to elicit and analyze the results • Continuous discussions in all multimedia applications.
Assessment methods
15.Daily exams 16.• Sudden Exams 17.• Documented exams, semester exams 18.• Cooperative education (Groups) 19.Oral exams 20.• Oral questions and discussions 21.• Homework

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

• Increasing communication between individuals, which contributes to building a learning community
• Develop multiple emotional aspects such as curiosity, positive attitude towards learning, social values, independence in learning and self-confidence
• Develop the skill aspects of students
• Learn to set the right priorities for any problem
• Develop respect for time for the completion and implementation of work
• Develop a spirit of honest competition between work groups in pursuit of quality work, excellence and diversity in performance
• Develop the spirit of creation and creativity
• Develop work appreciation, responsibility and commitment.

11. Course Structure

Week	Hours	ILOs	Unit/Module or Topic Title	Teaching Method	Assessment Method
31-	٤		**Branch of zology**	Zoology	Exams (quarterly, daily), class activity and positive participation, preparing reports and clarifications (not binding on the student, but optional)
32-	٤		**Manifestaions of life**	Zoology	
33-	٤		**Zology cell**	Zoology	
34-	٤		**Shape of zoology cell**	Zoology	
35-	٤		**Structure of animal cell**	Zoology	
36-	٤		**Cell wall**	Zoology	
37-	٢		**First exam**	Zoology	
38-	٤		**Animal Tissue**	Zoology	
39-	٤		**Integumentary system**	Zoology	
40-	٤		**Digestive system**	Zoology	
41-	٤		**Respiratory system Genital system**	Zoology	
42-	٤		**Circulatory system Excretory system**	Zoology	
43-	٤		**Nervous system**	Zoology	
44-	٤		**Embryonic development in**	Zoology	

			animalia		
45-	۲		**Second exam**	Zoology	

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

13. Admissions	
Pre-requisites	Programming language
Minimum number of students	100
Maximum number of students	376

TEMPLATEFORCOURSESPECIFICATION

HIGHEREDUCATIONPERFORMANCEREVIEW:PROGRAMMEREVIEW

COURSESPECIFICATION

This Course Specification provides a concise summary of the main features of thecourseandthelearningoutcomesthatatypicalstudentmightreasonablybeexpected to achieve anddemonstrate if he/she takes full advantage of the learningopportunities that are provided. It should be cross-referenced with the programmespecification.

1.TeachingInstitution	Collage of women
2.University Department/Centre	Biology department
3.Course title /code	Basics of Botany /EWb3104
4.Programme(s)to which it contributes	Bachelor of Life Sciences
5.Modes of Attendance offered	Weekly
6.Semester/Year	Season
7.Numberofhourstuition(total)	30h
8.Dateofproduction/revisionofthis Specification	15/9/2021
9.AimsoftheCourse	
Understand the histological statue of an organism's body and appropriate function for each tissue.	

10·LearningOutcomes,Teaching,LearningandAssessmentMethode
Introduce students to plant physiology and its relationship to other sciences, how organs function completely, and the dysfunction that occurs as a result of some pathological conditions
TeachingandLearningMethods
• Explanation and clarification (lecture). • Presentation of selected models of explanatory questions and their solutions. • Self-learning method (assigning students to complete learning some skills after giving them the basics). • Labs. • Discussions • Brainstorming • Examples and problems used to achieve the objectives • google meet, classroom
Assessmentmethods
*Daily exams. • Sudden Exams • Documented exams, semester exams • Cooperative education (groups) Oral exams • Oral questions and discussions • Homework
C. Thinking SkillsC1.Thinking skill according to the student's ability: The goal of this skill is for the student to believe in what is tangible and understand when, what and

how she should think and work to improve the ability to think reasonably. C2.Observation and Perceptionanalysis and interpretation C3.Setting and calendar C4.Critical thinking strategy in learning
TeachingandLearningMethods
• Employing the faculty's ability and experience in communicating the scientific material to the student and informing the student of the importance of time. • Assigning students to prepare reports on a particular subject, thus motivating students to learn the basic principles of scientific research • Assigning students to conduct laboratory experiments on their own after the teacher has given a simple explanation of how to conduct the experiment, thus giving the student the opportunity to elicit and analyze the results • Continuous discussions in all multimedia applications
Assessmentmethods
1. Daily exams 2. • Sudden Exams 3. • Documented exams, semester exams 4. • Cooperative education (Groups) 5. Oral exams 6. • Oral questions and discussions 7. • Homework
D.GeneralandTransferableSkills(otherskillsrelevanttoemployabilityandpersonal development) • Increasing communication between individuals, which contributes to building a learning community • Develop multiple emotional aspects such as curiosity, positive attitude towards learning, social values, independence in learning and self-confidence • Develop the skill aspects of students • Learn to set the right priorities for any problem • Develop respect for time for the completion and implementation of work • Develop a spirit of honest competition between work groups in pursuit of quality work, excellence and diversity in performance • Develop the spirit of creation and creativity

11.CourseStructure

Program structure

Week	Hours	ILOs	Unit/ModuleorTopicTitle	Teaching Method	AssessmentMethod
1	2 hours of theory 2 hours of work	As mentioned in paragraph 10	Introduction of botany	Scientific Lecture	Daily exam
2	2 hours of theory 2 hours of work	As mentioned in paragraph 10	Plant cell	Scientific Lecture	Daily exam
3	2 hours of theory 2 hours of work	As mentioned in paragraph 10	Cell wall	Scientific Lecture	Daily exam
4	2 hours of theory 2 hours of work	As mentioned in paragraph 10	Plant morphology	Scientific Lecture	Daily exam
5	2 hours of theory 2 hours of work	As mentioned in paragraph 10	Plant tissue	Scientific Lecture	Daily exam
6	2 hours of theory 2 hours of work	As mentioned in paragraph 10	Vascular tissue	Scientific Lecture	Daily exam
7	2 hours of theory 2 hours of work	As mentioned in paragraph 10	first month exam	Scientific Lecture	monthly exam
8	2 hours of theory 2 hours of work	As mentioned in paragraph 10	Internal structure of root	Scientific Lecture	Daily exam
9	2 hours of theory 2 hours of work	As mentioned in paragraph 10	Internal structure of stem	Scientific Lecture	Daily exam
10	2 hours of theory 2 hours of work	As mentioned in paragraph 10	Internal structure of Leaf	Scientific Lecture	Daily exam
11	2 hours of theory 2 hours of work	As mentioned in paragraph 10	Secondary growth	Scientific Lecture	Daily exam
12	2 hours of theory 2 hours of work	As mentioned in paragraph 10	second month exam	Scientific Lecture	monthly exam

13	2 hours of theory 2 hours of work	As mentioned in paragraph 10	Plant Modifine	Scientific Lecture	Daily exam
14	2 hours of theory 2 hours of work	As mentioned in paragraph 10	Phytoplant	Scientific Lecture	Daily exam
15	2 hours of theory 2 hours of work	As mentioned in paragraph 10	Zeroplant	Scientific Lecture	Daily exam

12.Infrastructure **Anatomy of flowering plants. Paula Rudall. 3rd edition. 2007.** General Plant	
Requiredreading: · CORETEXTS · COURSEMATERIALS · OTHER	
Special requirements (include forexample workshops, periodicals,ITsoftware,websites)	
Community-based facilities(include for example, guestLectures,internship,field studies)	Advanced English courses from here to English. 2- Cooperation between Iraqi universities and international universities by sending teachers to international universities. 3- Developing the idea of the visiting professor to provide the young universities with expertise and the latest scientific findings in the fields of scientific research. 4- Cooperation between Iraqi universities and private universities through discussing postgraduate students

13.Admissions	
Pre-requisites	
Minimum number of students	100

Maximum number of students	200

TEMPLATEFORCOURSESPECIFICATION

HIGHEREDUCATIONPERFORMANCEREVIEW:PROGRAMMEREVIEW

COURSESPECIFICATION

This Course Specification provides a concise summary of the main features of thecourseandthelearningoutcomesthatatypicalstudentmightreasonablybeexpected to achieve anddemonstrate if he/she takes full advantage of the learningopportunities that are provided. It should be cross-referenced with the programmespecification.

1.TeachingInstitution	Collage of women
2.University Department/Centre	Biology department
3.Course title /code	Plant Physiology/ EWB3405
4.Programme(s)to which it contributes	Bachelor of Life Sciences
5.Modes of Attendance offered	Weekly
6.Semester/Year	Season
7.Number of hours tuition (total)	30h
8.Dateofproduction/revisionofthis Specification	16/9/2021
9.AimsoftheCourse	
Understand the histological statue of an organism's body and appropriate function for each tissue.	

10·LearningOutcomes,Teaching,LearningandAssessmentMethode
A- Introduce students to plant physiology and its relationship to other sciences, how organs function completely, and the dysfunction that occurs as a result of some pathological conditions.
TeachingandLearningMethods
• Explanation and clarification (lecture). • Presentation of selected models of explanatory questions and their solutions. • Self-learning method (assigning students to complete learning some skills after giving them the basics). • Labs. • Discussions • Brainstorming • Examples and problems used to achieve the objectives • google meet, classroom
Assessmentmethods
*Daily exams. • Sudden Exams • Documented exams, semester exams • Cooperative education (groups) Oral exams • Oral questions and discussions • Homework
C. Thinking SkillsC1.Thinking skill according to the student's ability: The goal of this skill is for the student to believe in what is tangible and understand when, what and

how she should think and work to improve the ability to think reasonably. C2.Observation and Perceptionanalysis and interpretation C3.Setting and calendar C4.Critical thinking strategy in learning
TeachingandLearningMethods
• Employing the faculty's ability and experience in communicating the scientific material to the student and informing the student of the importance of time. • Assigning students to prepare reports on a particular subject, thus motivating students to learn the basic principles of scientific research • Assigning students to conduct laboratory experiments on their own after the teacher has given a simple explanation of how to conduct the experiment, thus giving the student the opportunity to elicit and analyze the results • Continuous discussions in all multimedia applications
Assessmentmethods
1. Daily exams 2. • Sudden Exams 3. • Documented exams, semester exams 4. • Cooperative education (Groups) 5. Oral exams 6. • Oral questions and discussions 7. • Homework
D.GeneralandTransferableSkills(otherskillsrelevanttoemployabilityandpersonal development) • Increasing communication between individuals, which contributes to building a learning community • Develop multiple emotional aspects such as curiosity, positive attitude towards learning, social values, independence in learning and self-confidence • Develop the skill aspects of students • Learn to set the right priorities for any problem • Develop respect for time for the completion and implementation of work • Develop a spirit of honest competition between work groups in pursuit of quality work, excellence and diversity in performance • Develop the spirit of creation and creativity

11.CourseStructure					
Week	Hours	ILOs	Unit/ModuleorTopicTitle	Teaching Method	Assessment Method

1	2 hours of theory 2 hours of work	As mentioned in paragraph 10	Water properties	Scientific Lecture	Exams (quarterly, daily), class activity and positive participation, preparing reports and clarifications (not binding on the student, but optional
2	2 hours of theory 2 hours of work	As mentioned in paragraph 10	Water Relation	Scientific Lecture	
3	2 hours of theory 2 hours of work	As mentioned in paragraph 10	Absorption of water	Scientific Lecture	
4	2 hours of theory 2 hours of work	As mentioned in paragraph 10	Transpiration	Scientific Lecture	
5	2 hours of theory 2 hours of work	As mentioned in paragraph 10	Elimenation	Scientific Lecture	
6	2 hours of theory 2 hours of work	As mentioned in paragraph 10	Guttation	Scientific Lecture	
7	2 hours of theory 2 hours of work	As mentioned in paragraph 10	first month exam	Scientific Lecture	
8	2 hours of theory 2 hours of work	As mentioned in paragraph 10	Mineral Nutrition	Scientific Lecture	
9	2 hours of theory 2 hours of work	As mentioned in paragraph 10	Photosynthesis	Scientific Lecture	
10	2 hours of theory 2 hours of work	As mentioned in paragraph 10	Light interactions	Scientific Lecture	
11	2 hours of theory 2 hours of work	As mentioned in paragraph 10	Dark interactions	Scientific Lecture	
12	2 hours of theory 2 hours of work	As mentioned in paragraph 10	second month exam	Scientific Lecture	
13	2 hours of theory 2 hours of work	As mentioned in paragraph 10	Germination	Scientific Lecture	

14	2 hours of theory 2 hours of work	As mentioned in paragraph 10	Growth & Development	Scientific Lecture	
15	2 hours of theory 2 hours of work	As mentioned in paragraph 10	Plant Hormones	Scientific Lecture	

12.Infrastructure	
Requiredreading: · CORETEXTS · COURSEMATERIALS · OTHER	Physiological book, Plant Physiology internet
Special requirements (include forexample workshops, periodicals,ITsoftware,websites)	
Community-based facilities(include for example, guestLectures,internship,field studies)	

13.Admissions	
Pre-requisites	
Minimum number of students	100
Maximum number of students	200

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	College of Education for women, Department of biology
3. Course title/code	Cytology / EWb3101- EWb3102
4. Programme (s) to which it contributes	Weekly
5. Modes of Attendance offered	Presence
6. Semester/Year	First and Second Semester / 2023
7. Number of hours tuition (total)	30 hours
8. Date of production/revision of this specification	1 / 12 / 2023
9. Aims of the Course :	
Adding new sciences to students for future benefit.	
Keeping pace with scientific development.	
Introduce the student to the basic principle of cell science.	

10· Learning Outcomes, Teaching ,Learning and Assessment Methode
A1. Knowledge and understanding. A2. Adding a new scientific aspect. A3. Familiarity with modern methods of diagnosis.
B.Subject-specific skills : B1. Teaching students to use websites in biological diagnosis. B2. Teaching the student to use modern laboratory techniques. B3. Use of new ways to present lectures.
Teaching and Learning Methods
• lecture • Demo • Practical laboratory • Discreet scientific books
Assessment methods
Daily exams. • Sudden Exams • Documented exams, semester exams • Cooperative education (groups) Oral exams • Oral questions and discussions • Homework
C. Thinking Skills C1. Creating a spirit of competition among students. C2. Enhance the student's self-confidence. C3. Connecting knowledge to daily life events. C4. Extra-curricular activities
Teaching and Learning Methods

• Employing the faculty's ability and experience in communicating the scientific material to the student and informing the student of the importance of time. • Assigning students to prepare reports on a particular subject, thus motivating students to learn the basic principles of scientific research • Assigning students to conduct laboratory experiments on their own after the teacher has given a simple explanation of how to conduct the experiment, thus giving the student the opportunity to elicit and analyze the results • Continuous discussions in all multimedia applications.
Assessment methods
1. Daily exams 2. • Sudden Exams 3. • Documented exams, semester exams 4. • Cooperative education (Groups) 5. Oral exams 6. • Oral questions and discussions 7. • Homework

D. General and Transferable Skills (other skills relevant to employability and personal development) • Increasing communication between individuals, which contributes to building a learning community • Develop multiple emotional aspects such as curiosity, positive attitude towards learning, social values, independence in learning and self-confidence • Develop the skill aspects of students • Learn to set the right priorities for any problem • Develop respect for time for the completion and implementation of work • Develop a spirit of honest competition between work groups in pursuit of quality work, excellence and diversity in performance • Develop the spirit of creation and creativity • Develop work appreciation, responsibility and commitment.

11. Course Structure					
Week	Hours	ILOs	Unit/Module or Topic Title	Teaching Method	Assessment Method

Program structure

the first	4	History of the Science Development Basic Cytology	Cytology	theoretical lecture	Daily quiz
The second	4	Cytoplasm	=	=	=
the third	4	Intracellular connections	=	=	=
the fourth	4	Ribosomes	=	=	=
Fifth	4	Lysosomes	=	=	=
VI	4	Cytoplasmic Inclusions	=	=	=
seventh	2	first month exam	=	theoretical exam	Monthly exam
VIII	4		=	theoretical lecture	Daily quiz
ninth	4		=	=	=
The tenth	4		=	=	=
eleven	4		=	=	=
twelveth	4	Nucleus	=	=	=
Thirteenth	4	Cell divisions (mitosis, meiosis I and meiosis II)	=	=	=
fourteenth	4	What is the genetic material and the structural and morphological characteristics of the chromosomes of eukaryotic cells	=	=	=
Fifteenth	2	second month exam	=	theoretical exam	Monthly exam

12. Infrastructure	
Required reading: · CORE TEXTS · COURSE MATERIALS · OTHER	Fundamentals of Cell Biology / Gabriel Barsoum Aziz, 1991 The cell: microstructure and functions / Abdul-Hussein Al-Faisal, 2000 Cell Biology / Abbas Hussein Mugheer Al-Rubaie, 2013.
Special requirements (include for example workshops, periodicals, IT software, websites)	laboratory experiments
Community-based facilities (include for example, guest Lectures , internship , field studies)	seminars

13. Admissions	
Pre-requisites	40
Minimum number of students	100
Maximum number of students	290

course description form

Reviewing the performance of higher education institutions ((review of the academic program))

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

Educational Institution	Anbar University
University Department / Center	[1]Biology department, Education College for Women
Course name/code	Principles of Statistic
Programs included in it	1- Microsoft Word 2- Microsoft Power point 3- Microsoft Excel 4- Classroom 5- You tube 6- Google meet
1 - Forms of attendance available	1 -Theoretical subject: It is given through the Classroom program ٢- Practical subject: 50% is given in attendance and 50% is given through the Classroom program
Chapter / year	Chapter Autumnal / 2022
Number of hours of study (total)	٧٥hours
The date this description was prepared	٢٠٢٢-١٢-٢٠
Course objectives:	
١-Statistics studies how to deal with and classify data for the purpose of producing useful results from it.	
2- Studying the types of data.	
3- Studying data collection and classification methods.	

4- Studying data analysis methods.
5- Study the graphic representation of the data.
6- Studying the relationship of statistics with other applied sciences.

1. Learning outcomes and methods of teaching, learning and assessment
A- Knowledge and understanding: ١-That the student recognize the importance of data in the scientific study and the research aspect. ٢-That the student be familiar with the methods of tabulating data. ٣-The student will identify the representation and collection of data in special tables and represent them graphically. 4 - That the student recognize the importance of statistics in agricultural experiments.
b- Subject-specific skills: ١-Familiarize the student with the science of statistics and its importance in terms of application. ٢-Increasing the student's ability to collect and analyze data. 3- Teaching the student to solve problems and statistical examples and come up with correct scientific results.
Teaching and learning methods
١-Follow the lecture style with the use of modern means of presentation such as data show. ٢- Giving practical lessons to teach students to solve mathematical problems related to statistics. ٣-Direct dialogue with students by asking questions and spreading the interactive method. 4- Homework (writing scientific reports).
C- thinking skills
١-Urging the student to recognize the importance of genetics. ٢-Spreading the spirit of the practical application of heredity. ٣-Cultivating noble values, including the role of the agricultural engineer in exploiting genetics to supplement the economy. ٤-Making the student feel that food production is a collective responsibility, and as an agricultural engineer, he must prepare himself for collective work in agricultural projects and stay away from narrow personal interest. 5- Urging the student to love the knowledge he receives and how to translate it into work on the ground

Learning and teaching methods
١-Through lectures. ٢-Direct meeting with students (conversations.(٣-Scientific trips to different agricultural work sites. ٤-Hosting specialized professors to increase the scientific level of students.
Learning and teaching methods
١-Through lectures. ٢-Direct meeting with students (conversations.(٣-Scientific trips to different agricultural work sites. ٤-Hosting specialized professors to increase the scientific level of students.
Evaluation methods
١-Monthly written exams. ٢-Direct oral exams. ٣-Through classroom and home activities.
D - General and transferable skills (other skills related to employability and personal development).
١Providing the graduate student with the ability to exploit genetics to improve production. ٢-To provide the graduate student with the skills of delivering scientific lectures to farmers after graduating. ٣-Providing the graduate student with leadership and administrative skills in order to work in scientific research centers for the agricultural sector. ٤-Providing the graduate student with skills to transfer modern technology to the country. ٥-Providing the student with scientific research skills to continue communicating with the latest information in the field of horticultural sciences abroad and trying what is new and useful to the country.

Program structure

Course structure					
Evaluation method	education method	Unit name / course or topic	Required learning outcomes	hours	the week
Questions, discussions and examples	Electronic lectures and practical application in laboratories and fields	A brief history of statistics, the relationship of statistics with other sciences	١computer ٢-A modern mobile device ٣-Observations and field applications	٥	the first
Questions, discussions and examples	Electronic lectures and practical application in laboratories and fields	Understand the types of data and ways to collect and display it	١computer ٢-A modern mobile device ٣-Observations and field applications	٥	The second
Questions, discussions and examples	Electronic lectures and practical application in laboratories and fields	Statistical variables and symbols	١computer ٢-A modern mobile device ٣-Observations and field applications	٢	the third
Questions, discussions and examples	Electronic lectures and practical application in laboratories and fields	Data collection and presentation	١computer ٢-A modern mobile device ٣-Observations and field applications	٥	the fourth
first month exam				٥	Fifth
Questions,	Electronic lectures	Measures of central	١computer ٢-A modern	٥	Sixth

discussions and examples	and practical application in laboratories and fields	tendency (arithmetic mean, median, and mode) for both grouped and ungrouped data	mobile device Observations ٣- and field applications		
Questions, discussions and examples	Electronic lectures and practical application in laboratories and fields	Scales of central tendency exercises	١computer ٢-A modern mobile device Observations ٣- and field applications	٥	seventh
Questions, discussions and examples	Electronic lectures and practical application in laboratories and fields	Scatterometers	١computer ٢-A modern mobile device Observations ٣- and field applications	٥	eight
Questions, discussions and examples	Electronic lectures and practical application in laboratories and fields	Applications of measures of central tendency	١computer ٢-A modern mobile device Observations ٣- and field applications	٥	ninth
second month exam				٥	The tenth
Questions, discussions and examples	Electronic lectures and practical application in laboratories and	Principles of probability theory	١computer ٢-A modern mobile device Observations ٣- and field applications	٥	eleventh

	fields				
Questions, discussions and examples	Electronic lectures and practical application in laboratories and fields	Potential exercises	١computer ٢-A modern mobile device ٣- Observations and field applications	٥	twelveth
Questions, discussions and examples	Electronic lectures and practical application in laboratories and fields	Normal distribution of the data	١computer ٢-A modern mobile device ٣- Observations and field applications	٥	Thirteenth
Questions, discussions and examples	Electronic lectures and practical application in laboratories and fields	Applications to the normal distribution of data	١computer ٢-A modern mobile device ٣- Observations and field applications	٥	fourteenth
third month exam				٥	Fifteenth

Program structure

1. Infrastructure	
١- Basics of Statistics 2016 d. Nazim Younes Abed. ٢-Principles of Statistics, Ahmed Abdel Samie, Medical 2008. ٣Principles of Statistics. Adnan Ghanem authorized 2006. ٤- Recent articles from the Internet and from specialized scientific journals .	Required readings: Course Books ▪ other
-a computer -٢An advanced mobile device. 3- Modern devices for measuring climate and soil factors	Special requirements
–	Social services (including, for example, guest lectures, professional training, and field studies).

admissions	
students ٢٠	students ٢٠
students ٤٠	students ٤٠

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	College of Education for women, Department of biology
3. Course title/code	Physiology/ EWB3312
4. Programme(s) to which it contributes	PowerPoint + Google Meet
5. Modes of Attendance offered	weekly
6. Semester/Year	Second Semester - Academic Year 2020/2021
7. Number of hours tuition (total)	45
8. Date of production/revision of this specification	28-1-2021
9. Aims of the Course	
It aims to introduce the student to the science of physiology, its importance, the relationship of the body's organs with each other functionally, and how to maintain these functions in a homeostatic state without the influence of external and internal conditions.	
Knowing some medical conditions that accompany organs as a result of dysfunction	

10· Learning Outcomes, Teaching ,Learning and Assessment Methode
G- Introduce students to animal physiology and its relationship to other sciences, how organs function completely, and the dysfunction that occurs as a result of some pathological conditions. And how to maintain the internal environment of the body in a state of complete homeostasis.
Teaching and Learning Methods
• Explanation and clarification (lecture). • Presentation of selected models of explanatory questions and their solutions. • Self-learning method (assigning students to complete learning some skills after giving them the basics). • Labs. • Discussions • Brainstorming • Examples and problems used to achieve the objectives • google meet, classroom
Assessment methods
Daily exams. • Sudden Exams • Documented exams, semester exams • Cooperative education (groups) Oral exams • Oral questions and discussions • Homework
C. Thinking Skills C 1-Observation and perception. C 2 - analysis and interpretation. C 3- Conclusion and evaluation. C 4 - numbers and calendar. C 5 - Testing students' attention

through surprise questions during the explanation.
C6 - Breaking the stereotypical aspect of the lecture using different methods to transform the student from the role of the passive recipient to the role of active participation.

Teaching and Learning Methods
• Employing the faculty's ability and experience in communicating the scientific material to the student and informing the student of the importance of time. • Assigning students to prepare reports on a particular subject, thus motivating students to learn the basic principles of scientific research • Assigning students to conduct laboratory experiments on their own after the teacher has given a simple explanation of how to conduct the experiment, thus giving the student the opportunity to elicit and analyze the results • Continuous discussions in all multimedia applications.
Assessment methods
22.Daily exams 23.• Sudden Exams 24.• Documented exams, semester exams 25.• Cooperative education (Groups) 26.Oral exams 27.• Oral questions and discussions 28.• Homework

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

• Increasing communication between individuals, which contributes to building a learning community
• Develop multiple emotional aspects such as curiosity, positive attitude towards learning, social values, independence in learning and self-confidence
• Develop the skill aspects of students
• Learn to set the right priorities for any problem
• Develop respect for time for the completion and implementation of work
• Develop a spirit of honest competition between work groups in pursuit of quality work, excellence and diversity in performance
• Develop the spirit of creation and creativity
• Develop work appreciation, responsibility and commitment.

11. Course Structure

Week	Hours	ILOs	Unit/Module or Topic Title	Teaching Method	Assessment Method
46-	2 hours of theory 2 hours of work	As mentioned in paragraph 10	Introduction to animal physiology	animal physiology	Exams (quarterly, daily), class activity and positive participation, preparing reports and clarifications (not binding on the student, but optional)
47-	2 hours of theory 2 hours of work	As mentioned in paragraph 10	The physiological effect of heat	animal physiology	
48-	2 hours of theory 2 hours of work	As mentioned in paragraph 10	physiology of the circulatory system	animal physiology	
49-	2 hours of theory 2 hours of work	As mentioned in paragraph 10	physiology of the nervous system	animal physiology	
50-	2 hours of theory 2 hours of work	As mentioned in paragraph 10	muscular system physiology	animal physiology	
51-	2 hours of theory 2 hours of work	As mentioned in paragraph 10	Digestive system physiology	animal physiology	
52-	2 hours of theory 2 hours of work	As mentioned in paragraph 10	first month exam	animal physiology	
53-	2 hours of theory 2 hours of	As mentioned in paragraph 10	Urinary system physiology	animal physiology	

	work				
54-	2 hours of theory 2 hours of work	As mentioned in paragraph 10	Endocrine system physiology	animal physiology	
55-	2 hours of theory 2 hours of work	As mentioned in paragraph 10	Respiratory physiology	animal physiology	
56-	2 hours of theory 2 hours of work	As mentioned in paragraph 10	Physiology of the female reproductive system	animal physiology	
57-	2 hours of theory 2 hours of work	As mentioned in paragraph 10	second month exam	animal physiology	
58-	2 hours of theory 2 hours of work	As mentioned in paragraph 10	Reproduction and fertilization	animal physiology	
59-	2 hours of theory 2 hours of work	As mentioned in paragraph 10	Physiology of the male reproductive system	animal physiology	
60-	2 hours of theory 2 hours of work	As mentioned in paragraph 10	Flight physiology	animal physiology	

12. Infrastructure	
Required reading: · CORE TEXTS · COURSE MATERIALS · OTHER	Animal Physiology Books / Youssef Muhammad Arab internet Practical animal physiology binding
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	Programming language

Minimum number of students	100
Maximum number of students	200

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	College of Education for women, Department of biology
3. Course title/code	applied bacteria
4. Programme(s) to which it contributes	PowerPoint + Google Meet
5. Modes of Attendance offered	weekly
6. Semester/Year	first Semester - Academic Year 2022/2023
7. Number of hours tuition (total)	45
8. Date of production/revision of this specification	17-9-2023
9. Aims of the Course	
Identify the most important bacteria that live within their environment in nature, such as air bacteria, water bacteria, food bacteria, soil bacteria, as well as medical bacteria and industrial bacteria, and study their characteristics and the most important activities in that environment	
Identify the important bacterial species that have an important role in the cycles of	

Program structure

elements in nature

10· Learning Outcomes, Teaching ,Learning and Assessment Methode

A- Cognitive goals:

A1- That the student recognize the importance of bacteria in the environment surrounding humans, whether they are harmful or beneficial.

A 2- The relationship of the study of applied bacteria in the concept of the relationship of this study to other sciences and environments, such as

Bacteria found in air, water, soil, food, industry, agriculture, medical bacteria, etc

A 3- Methods of isolating bacteria from environments that can.

A 4- Identify the factors affecting bacteria in different environments

Teaching and Learning Methods

- Explanation and clarification (lecture).
- Presentation of selected models of explanatory questions and their solutions.
- Self-learning method (assigning students to complete learning some skills after giving them the basics).

- Labs.
- Discussions
- Brainstorming
- Examples and problems used to achieve the objectives
- google meet, classroom

Assessment methods

Daily exams.
• Sudden Exams
• Documented exams, semester exams
• Cooperative education (groups)
Oral exams
• Oral questions and discussions
• Homework

C. Thinking Skills

C 1-Observation and perception.

C 2 - analysis and interpretation.

C 3- Conclusion and evaluation.

C 4 - numbers and calendar.

C 5 - Testing students' attention through surprise questions during the explanation.

C6 - Breaking the stereotypical aspect of the lecture using different methods to transform the student from the role of the passive recipient to the role of active participation.

Teaching and Learning Methods
• Employing the faculty's ability and experience in communicating the scientific material to the student and informing the student of the importance of time. • Assigning students to prepare reports on a particular subject, thus motivating students to learn the basic principles of scientific research • Assigning students to conduct laboratory experiments on their own after the teacher has given a simple explanation of how to conduct the experiment, thus giving the student the opportunity to elicit and analyze the results • Continuous discussions in all multimedia applications.
Assessment methods
29.Daily exams 30.• Sudden Exams 31.• Documented exams, semester exams 32.• Cooperative education (Groups) 33.Oral exams 34.• Oral questions and discussions 35.• Homework

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

• Increasing communication between individuals, which contributes to building a learning community
• Develop multiple emotional aspects such as curiosity, positive attitude towards learning, social values, independence in learning and self-confidence
• Develop the skill aspects of students
• Learn to set the right priorities for any problem
• Develop respect for time for the completion and implementation of work
• Develop a spirit of honest competition between work groups in pursuit of quality work, excellence and diversity in performance
• Develop the spirit of creation and creativity
• Develop work appreciation, responsibility and commitment.

11. Course Structure

Week	Hours	ILOs	Unit/Module or Topic Title	Teaching Method	Assessment Method
61-	2 hours of theory 2 hours of work	As mentioned in paragraph 10	Introduction and definition of applied bacteriology	Applied bacteria	Exams (quarterly, daily), class activity and positive participation, preparing reports and clarifications (not binding on the student, but optional)
62-	2 hours of theory 2 hours of work	As mentioned in paragraph 10	air bacteria	Applied bacteria	
63-	2 hours of theory 2 hours of work	As mentioned in paragraph 10	water bacteria	Applied bacteria	
64-	2 hours of theory 2 hours of work	As mentioned in paragraph 10	Use of bacteria as an indicator of fecal Use of bacteria as an indicator of fecal contamination of water	Applied bacteria	
65-	2 hours of theory 2 hours of work	As mentioned in paragraph 10	sewage bacteria	Applied bacteria	
66-	2 hours of theory 2 hours of work	As mentioned in paragraph 10	Food bacteria (meat	Applied bacteria	
67-	2 hours of theory 2 hours of work	As mentioned in paragraph 10	Food bacteria (milk	Applied bacteria	
68-	2 hours of	As	First mounth exam	Applied bacteria	

	theory 2 hours of work	mentioned in paragraph 10			
69-	2 hours of theory 2 hours of work	As mentioned in paragraph 10	soil bacteria	Applied bacteria	
70-	2 hours of theory 2 hours of work	As mentioned in paragraph 10	Bacteria that contribute to nitrogen solvation in nature	Applied bacteria	
71-	2 hours of theory 2 hours of work	As mentioned in paragraph 10	Industrial bacteria	Applied bacteria	
72-	2 hours of theory 2 hours of work	As mentioned in paragraph 10	Some industries in which industrial bacteria contribute	Applied bacteria	
73-	2 hours of theory 2 hours of work	As mentioned in paragraph 10	Medical bacteria	Applied bacteria	
74-	2 hours of theory 2 hours of work	As mentioned in paragraph 10	The most important types of medicinal bacteria	Applied bacteria	
75-	2 hours of theory 2 hours of work	As mentioned in paragraph 10	Second mounth exam	Applied bacteria	

12. Infrastructure	
Required reading: · CORE TEXTS · COURSE MATERIALS · OTHER	Dr.. Al-Zaidi, Hamid Majeed. (2000). Microbiology (theoretical), Ministry of Higher Education and Scientific Research, University of Baghdad
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	Programming language
Minimum number of students	100
Maximum number of students	200

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 - Education College for Women
2. University Department/Centre	Department of Biology
3. Course title/code	Plant Anatomy
4. Programme (s) to which it contributes	stage II
5. Modes of Attendance offered	weekly
6. Semester/Year	First Semester \ 2021
7. Number of hours tuition (total)	30 hours Semester / theoretical
8. Date of production/revision of this Specification	5/29/2021
9. Aims of the Course	
Introduce the student in detail about the meaning of plant anatomy. Introduce the student to the different parts of the plant anatomically.	
Introduce the student to the types of plant tissues and the basis for classification Introduce the student to how to distinguish between primary and secondary growth in plants	

10· Learning Outcomes, Teaching ,Learning and Assessment Methods
A1- Introduce students and understand the importance of plant anatomy in the process of classifying plants A2. Enable students to identify the types of plant tissues and how to diagnose them A3.. Enabling students to distinguish between primary growth and secondary growth in the different parts of the plant A4. Introduce students to the most important theories that explain how growth occurs in plant cell walls A5. Enable students to know the meaning and importance of meristematic tissues for plants and how to classify those tissues A6. Enabling students to know the meaning of permanent tissues, how they are classified, and their most important functions
B. Subject-specific skills B1.. Microscopically distinguishing between types of plant tissues. B 2-. Microscopic identification of the components of some plant parts. B-3 Preparation of a number of slides for some parts of the plant and their diagnosis.
Teaching and Learning Methods
1- Explanation and clarification 2- The method of the lecture 3- Student groups 4- Practical lessons in the laboratory and scientific trips

Assessment methods
Daily, semester and yearly exams Feedback from students for assessment through classroom and extra-curricular activities (discussions, attendance, interaction, interventions, answers, additions, comments, and special points of view. Reports and Research.
C. Thinking Skills C1. Enhancing the student's self-confidence, abilities and specialization. C2. Desire to work after graduation in the field of specialization. C3 Strengthening work and cooperation in a team spirit. C4. Accept and receive knowledge and science with desire without boredom.
Teaching and Learning Methods
1- Explanation and clarification 2- The method of the lecture 3- Student groups 4- Practical lessons in the laboratory 5- Scientific trips 6- The method of self-learning
Assessment methods
-Self-evaluation of the student by the professor, which is determined through observation and continuity of work. -Adherence to scientific and other directives from the professor and management regarding the scientific subject. -The student's interaction with the lecture and classroom and extra-curricular activities.

-Written exam.
-Discussions and interaction.

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 team work 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 clearly in writing).

11. Course Structure

Week	Hours	ILOs	Unit/Module or Topic Title	Teaching Method	Assessmen tMethod
١	٤	Define plant anatomy	Plant Anatomy	Explanation - model presentation slides - and lecture	Theoretical Tests Practical tests Reports
٢	٤	A comprehensi ve introduction to plant anatomy and its branches	Plant Anatomy	Explanation - model presentation slides - and lecture	Theoretical Tests Practical tests Reports
٣	٤	Study of the living components of a plant cell	Plant Anatomy	Explanation - model presentation slides - and lecture	Theoretical Tests Practical tests Reports
٤	٤	Study of the non-living components of plant parts	Plant Anatomy	Explanation - model presentation slides - and lecture	Theoretical Tests Practical tests Reports
٥	٤	plant cell wall	Plant Anatomy	Explanation - model presentation slides - and lecture	Theoretical Tests Practical tests Reports
٦	٤	Study of types of pits	Plant Anatomy	Explanation - model presentation slides - and	Theoretical Tests Practical tests Reports

				lecture	
٧	٤	A study of the most important theories that explain the formation of the cell wall	Plant Anatomy	Explanation - model presentation slides - and lecture	Theoretical Tests Practical tests Reports
٨	٤	Study of the bases adopted in the classification of plant tissues	Plant Anatomy	Explanation - model presentation slides - and lecture	Theoretical Tests Practical tests Reports
٩	4	Study of the collenchyma tissue	Plant Anatomy	Explanation - model presentation slides - and lecture	Theoretical Tests Practical tests Reports
١٠	٤	Study of the parenchymal tissue	Plant Anatomy	Explanation - model presentation slides - and lecture	Theoretical Tests Practical tests Reports
١١	٤	Study of the sclerenchyma tissue	Plant Anatomy	Explanation - model presentation slides - and lecture	Theoretical Tests Practical tests Reports
١٢	٤	The study of xylem texture	Plant Anatomy	Explanation - model presentation slides - and lecture	Theoretical Tests Practical tests Reports
١٣	٤	study of phloem tissue	Plant Anatomy	Explanation - model presentation slides - and lecture	Theoretical Tests Practical tests Reports
١٤	٤	Study of the vascular cambium	Plant Anatomy	Explanation - model presentation slides - and lecture	Theoretical Tests Practical tests Reports
١٥	٤	Study of the corck cambium	Plant Anatomy	Explanation - model presentation	Theoretical Tests Practical tests Reports

				slides - and lecture	

12. Infrastructure	
Required reading: · CORE TEXTS · COURSE MATERIALS · OTHER	Fundamentals of plant anatomy Dr. Badri Owaid Al-Ani - University of Baghdad ز Fundamentals of plant physiology Doctor Ahmed Mostafa Elhayani
Special requirements (include for example workshops, periodicals, IT software, websites)	Practical part in plant anatomy ز Practical plant anatomy Use of electronic references, websites
Community-based facilities (include for example, guest Lectures , internship , field studies)	guest Lectures from other country or University, internship , field studies

13. Admissions	
Pre-requisites	
Minimum number of students	20
Maximum number of students	30

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 program specification.

1. Teaching Institution	University of Anbar
2. University Department/Centre	College of Education for women, Department of biology
3. Course title/code	Molecular Biology/ WEB3505
4. Programme(s) to which it contributes	Microsoft (Word+PowerPoint)+Phantom PDF +Designer+ Google Meet
5. Modes of Attendance offered	weekly
6. Semester/Year	Semester
7. Number of hours tuition (total)	48
8. Date of production/revision of this specification	20-02-2020
9. Aims of the Course	
It aims to introduce the student to Biotechnology and its relations to life, learning Proteins and enzyme production artificially, Fermentation and its pathways, Animal and plant tissue cultures, Nanotechnology, Genetic engineering	

10· Learning Outcomes, Teaching, Learning and Assessment Methods

A- Introduce students to Biotechnology in both Eukaryotes and prokaryotes
B- Enzymes and proeins production by fermintation.
C- Fermentation
D- Animal and plant tissue culturing.
E- Nanotechnology applications
F- Genetic engineering
G- Differences between eukaryotes and prokaryotes in biotechnology

Teaching and Learning Methods

- Lectures.
- Educational videos.
- Self-learning method (assigning students to complete learning some skills after giving them the basics).
- Scientific Labs.
- Virtual labs
- Discussions
- Brainstorming
- Google Meet, classroom

Assessment methods

- Daily exams.
• Quizzes.
• Semester exams
• Oral questions and discussions

C. Thinking Skills

1-Thinking skills and imagination
2- Observation and perception.
3 - Analysis and interpretation.
4- Conclusion and evaluation.
5- Using different methods to transform the student from the role of the passive recipient to the role of active participation.

Program structure

Teaching and Learning Methods
- Lectures - Educational videos - Scientifically specialized laboratory - Virtual labs. - Cooperative homework
Assessment methods
1. Daily exams 2. Monthly exams 3. Laboratory exams 4. Cooperative education 5. Laboratory reports
D. General and Transferable Skills (other skills relevant to employability and personal development) • Increasing communication between individuals, which contributes to building a learning community • Develop multiple emotional aspects such as curiosity and, a positive attitude towards learning, social values, independence in learning, and self-confidence • Develop the skill aspects of students • Learn to set the right priorities for any problem • Develop respect for time for the completion and implementation of work • Develop a spirit of honest competition between work groups in pursuit of quality work, excellence, and diversity in performance • Develop the spirit of creation and creativity • Develop work appreciation, responsibility, and commitment.

11. Course Structure

Program structure

Week	Hours	ILOs	Unit/Module or Topic Title	Teaching Method	Assessment Method
1-	4	Biotechnology	Introduction	Lectures, Educational videos, Cooperative work, Virtual labs.	Exams (quarterly, daily), class activity, and positive participation in preparing reports and clarifications (not binding on the student, but optional)
2-	4	Biotechnology	Fermentations	Lectures, Educational videos, Cooperative work, Virtual labs.	
3-	4	Biotechnology	Fermentation products	Lectures, Educational videos, Cooperative work, Virtual labs.	
4-	4	Biotechnology	Batch and Continuous culture	Lectures, Educational videos, Cooperative work, Virtual labs.	
5-	4	Biotechnology	Genetic Engineering	Lectures, Educational videos, Cooperative work, Virtual labs.	
6-	4	Biotechnology	Plant Biotechnology	Lectures, Educational videos, Cooperative work, Virtual labs.	
7-	4	Biotechnology	Plant Biotechnology	Lectures, Educational videos, Cooperative work, Virtual labs.	
8-	4	Biotechnology	Plant Biotechnology applications	Lectures, Educational videos, Cooperative work, Virtual labs.	
9-	4	Biotechnology	Animal biotechnology	Lectures, Educational videos, Cooperative work, Virtual labs.	
10-	4	Biotechnology	Animal biotechnology applications	Lectures, Educational videos, Cooperative work, Virtual labs.	
11-	4	Biotechnology	Animal biotechnology applications	Lectures, Educational videos, Cooperative work, Virtual labs.	
12-	4	Biotechnology	General aspects and exam[les	Lectures, Educational videos, Cooperative work, Virtual labs.	
13-	2	Biotechnology	General aspects and exam[les	Lectures, Educational videos, Cooperative	

Program structure

				work, Virtual labs.	
14-	2	Biotechnology	General aspects and exam[les	Lectures, Educational videos, Cooperative work, Virtual labs.	
15-	2	Biotechnology	General aspects and exam[les	Lectures, Educational videos, Cooperative work, Virtual labs.	

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

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

course description form

Reviewing the performance of higher education institutions ((review of the academic program))

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

Educational Institution	Anbar University
University Department / Center	[1]Biology department, Education College for Women
Course name/code	genetics
Programs included in it	1- Microsoft Word 2- Microsoft Power point 3- Microsoft Excel 4- Classroom 5- You tube 6- Google meet
1 - Forms of attendance available	1 -Theoretical subject: It is given through the Classroom program ٢- Practical subject: 50% is given in attendance and 50% is given through the Classroom program
Chapter / year	Chapter Autumnal / 2020
Number of hours of study (total)	٧٥hours
The date this description was prepared	٢٠٢٣-١٢-٢٠
Course objectives:	
١- Plant genetics seeks to study the genetic factors that determine the shape and behavior of an organism	
٢- Study of Mendel's laws of heredity.	
3- Studying the practical applications of genetics in the field of plants.	
٤-Studying the application of plant genetics in breeding and improving horticultural crops.	

5- Study of molecular genetics and genetic engineering as modern applications of genetics.
6- Studying the relationship of genetics with other applied sciences.

1. Learning outcomes and methods of teaching, learning and assessment
A- Knowledge and understanding: **١-The student will know the genetic structure of plants and their phenotypic behavior** **٢-That the student recognize the basic laws of Mendel.** **٣-That the student recognize the anomalies of Mendel's laws.** **٤-That the student recognize the importance of genetics in improving the growth and yield of horticultural crops.**
b- Subject-specific skills: **١-The student learns about plant genetics and its importance from the point of view and application.** **٢-Increasing the student's ability to evaluate the superior genetic structures with the growth achieved.** **3- Teaching the student to conduct pollination and cross-breeding operations to obtain distinct hybrids.**
Teaching and learning methods
١-Follow the lecture style with the use of modern means of presentation, such as the data show. ٢-Giving practical lessons to teach students to solve mathematical problems related to genetics. ٣-Direct dialogue with students by asking questions and spreading the interactive method. ٤-Homework (writing scientific reports.(٥-Conducting field and applied visits to the relevant fields.
Evaluation methods
١-Semester exams. ٢-Quick exams (cues). ٣-Evaluation through class activity and direct discussion. ٤-By preparing scientific reports and making use of information networks. 5- Final exams.
C- thinking skills
١-Urging the student to recognize the importance of genetics. ٢-Spreading the spirit of the practical application of heredity. ٣-Cultivating noble values, including the role of the agricultural engineer in

exploiting genetics to supplement the economy. ٤-Making the student feel that food production is a collective responsibility, and as an agricultural engineer, he must prepare himself for collective work in agricultural projects and stay away from narrow personal interest. 5- Urging the student to love the knowledge he receives and how to translate it into work on the ground
Learning and teaching methods
١-Through lectures. ٢-Direct meeting with students (conversations.(٣-Scientific trips to different agricultural work sites. ٤-Hosting specialized professors to increase the scientific level of students.
Evaluation methods
١-Monthly written exams. ٢-Direct oral exams. ٣-Through classroom and home activities.
D - General and transferable skills (other skills related to employability and personal development).
١-Providing the graduate student with the ability to exploit genetics to improve production. ٢-To provide the graduate student with the skills of delivering scientific lectures to farmers after graduating. ٣-Providing the graduate student with leadership and administrative skills in order to work in scientific research centers for the agricultural sector. ٤-Providing the graduate student with skills to transfer modern technology to the country. ٥-Providing the student with scientific research skills to continue communicating with the latest information in the field of horticultural sciences abroad and trying what is new and useful to the country.

Program structure

Course structure					
Evaluation method	education method	Unit name / course or topic	Required learning outcomes	hours	the week
Questions, discussions and examples	Electronic lectures and practical application in laboratories and fields	A brief history of genetics, the relationship of genetics to other sciences	١computer ٢-A modern mobile device ٣-Observations and field applications	٥	the first
Questions, discussions and examples	Electronic lectures and practical application in laboratories and fields	The plant cell and its components, cell division	١computer ٢-A modern mobile device ٣-Observations and field applications	٥	The second
Questions, discussions and examples	Electronic lectures and practical application in laboratories and fields	Introduction to Mendelian Inheritance, Mendel's First Law	١computer ٢-A modern mobile device ٣-Observations and field applications	٢	the third
Questions, discussions and examples	Electronic lectures and practical application in laboratories and fields	Mendel's second law, practical applications of the two laws	١computer ٢-A modern mobile device ٣-Observations and field applications	٥	the fourth
first month exam				٥	Fifth
Questions,	Electronic lectures	Anomalies of Mendelian law,	١computer ٢-A modern	٥	Sixth

discussions and examples	and practical application in laboratories and fields	genetic interaction	mobile device Observations ٣- and field applications		
Questions, discussions and examples	Electronic lectures and practical application in laboratories and fields	Genetic linkage and crossing over, genetic mapping	١computer ٢-A modern mobile device Observations ٣- and field applications	٥	seventh
Questions, discussions and examples	Electronic lectures and applications	Cytoplasmic genetics	١computer ٢-A modern mobile device Observations ٣- and field applications	٥	eight
Questions, discussions and examples	Electronic lectures and practical application in laboratories and fields	Hybrid strength and hybrid abundance	١computer ٢-A modern mobile device Observations ٣- and field applications	٥	ninth
second month exam				٥	The tenth
Questions, discussions and examples	Electronic lectures and practical application in laboratories and fields	Hybrid power applications in the agricultural field	١computer ٢-A modern mobile device ٣-Observations and field applications	٥	eleventh
Question	Electronic	Genetic		٥	twelveth

s, discussions and examples	lectures and practical application in laboratories and fields	engineering, methods of testing it	١computer ٢-A modern mobile device ٣-Observations and field applications		
Questions, discussions and examples	Electronic lectures and practical application in laboratories and fields	Applications of genetic engineering in the agricultural field	١computer ٢-A modern mobile device ٣-Observations and field applications	٥	Thirteenth
Questions, discussions and examples	Electronic lectures and practical application in laboratories and fields	Quantitative genetics	١computer ٢-A modern mobile device ٣-Observations and field applications	٥	fourteenth
third month exam				٥	Fifteenth

Program structure

1. Infrastructure	
١Genetics 1990 d. Abdul Latif Al-Baldawi. -٢Inheritance and breeding of the plant t. Ahmed Abdel Moneim 2009 -٣Plant genetics, Dr. Abdul Basit Al Muslim 2007 -٣Recent articles from the Internet and from specialized scientific journals.	Required readings: Course Books ▪ other
-١a computer -٢An advanced mobile device. 3- Modern devices for measuring climate and soil factors.	Special requirements
–	Social services (including, for example, guest lectures, professional training, and field studies).

admissions	
- Prerequisites	
Less number of students	students ٢٠
The largest number of students	students ٤٠

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	College of Education for women, Department of biology
3. Course title/code	Analytical chemistry
4. Programme(s) to which it contributes	Practical laboratory
5. Modes of Attendance offered	weekly
6. Semester/Year	First semester / first year
7. Number of hours tuition (total)	٣٠theoretical / 30 practical
8. Date of production/revision of this specification	٢٠-٩-2021
9. Course objectives: Study analytical chemistry and its types	

Program structure

10· Learning Outcomes, Teaching ,Learning and Assessment Methode
An introductory study on analytical chemistry and its types
solutions and their classification
Study of acids, bases and salts
Chemical equilibrium study
Assessment methods
Daily exams. • Sudden Exams • Documented exams, semester exams • Cooperative education (groups) Oral exams • Oral questions and discussions • Homework
C. Thinking Skills C 1-Observation and perception. C 2 - analysis and interpretation. C 3- Conclusion and evaluation. C 4 - numbers

and calendar.

C 5 - Testing students' attention through surprise questions during the explanation.

C6 - Breaking the stereotypical aspect of the lecture using different methods to transform the student from the role of the passive recipient to the role of active participation.

Teaching and Learning Methods

• Employing the faculty's ability and experience in communicating the scientific material to the student and informing the student of the importance of time.

• Assigning students to prepare reports on a particular subject, thus motivating students to learn the basic principles of scientific research

• Assigning students to conduct laboratory experiments on their own after the teacher has given a simple explanation of how to conduct the experiment, thus giving the student the opportunity to elicit and analyze the results

• Continuous discussions in all multimedia applications.

Assessment methods

36. Daily exams
37. • Sudden Exams
38. • Documented exams, semester exams
39. • Cooperative education (Groups)
40. Oral exams
41. • Oral questions and discussions
42. • Homework

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

- Increasing communication between individuals, which contributes to building a learning community
- Develop multiple emotional aspects such as curiosity, positive attitude towards learning, social values, independence in learning and self-confidence
- Develop the skill aspects of students
- Learn to set the right priorities for any problem
- Develop respect for time for the completion and implementation of work
- Develop a spirit of honest competition between work groups in pursuit of quality work, excellence and diversity in performance
- Develop the spirit of creation and creativity
- Develop work appreciation, responsibility and commitment.

11. Course Structure

Week	Hours	ILOs	Unit/Module or Topic Title	Teaching Method	Assessment Method
76-	2 hours of theory 2 hours of work	Definition of analytical chemistry and its types	Analytical chemistry	theoretسical lecture	Exams (quarterly, daily), class activity and positive participation, preparing reports and clarifications (not binding on the student, but optional)
77-	2 hours of theory 2 hours of work	gravimetric analysis methods	=	=	

78-	2 hours of theory 2 hours of work	types of sediment	=	=	
79-	2 hours of theory 2 hours of work	Types of precipitators	=	=	
80-	2 hours of theory 2 hours of work	Classification of solutions and methods of expressing their concentration	=	=	
81-	2 hours of theory 2 hours of work	Acids, bases and salts	=	=	
82-	2 hours of theory 2 hours of work	Monthly exam	=	=	
83-	2 hours of theory 2 hours of work	chemical equilibrium	=	=	
84-	2 hours of theory 2 hours of work	Factors affecting balance	=	=	
85-	2 hours of theory 2 hours of work	Equilibrium in acids and bases	=	=	
86-	2 hours of theory 2 hours of	Ionization of strong acids and	=	=	

	work	strong bases			
87-	2 hours of theory 2 hours of work	Ionization of salts	=	=	
88-	2 hours of theory 2 hours of work	buffer solutions	=	=	
89-	2 hours of theory 2 hours of work	General review of the most important points	=	=	
90-	2 hours of theory 2 hours of work	second month exam	=	=	

12. Infrastructure	
Required reading: · CORE TEXTS · COURSE MATERIALS · OTHER	Educational lectures from the net
Special requirements (include for example workshops, periodicals, IT software, websites)	Laboratory experiments

Community-based facilities (include for example, guest Lectures , internship , field studies)	Seminars

13. Admissions	
Pre-requisites	Programming language
Minimum number of students	100
Maximum number of students	200

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	College of Education for women, Department of biology
3. Course title/code	organic chemistry
4. Programme(s) to which it contributes	Practical laboratory
5. Modes of Attendance offered	weekly
6. Semester/Year	Second semester / first year
7. Number of hours tuition (total)	٣٠theoretical / 30 practical
8. Date of production/revision of this specification	٢٠-٣-2022
9. Course objectives: Study of alkyl groups and their nomenclature	

10· Learning Outcomes, Teaching ,Learning and Assessment Methode

Study the types of chemical reactions for each type of alkyl groups

Alkanes and Alkenes Alkenes.

Study of alkanes, their interactions, naming, and physical and chemical properties

- Study of alkenes, their interactions, naming, and physical and chemical properties

Assessment methods

Daily exams.

• Sudden Exams

• Documented exams, semester exams

• Cooperative education (groups)

Oral exams

• Oral questions and discussions

• Homework

C. Thinking Skills

C 1-Observation and perception.

C 2 - analysis and interpretation.

C 3- Conclusion and evaluation.

C 4 - numbers

and calendar.

C 5 - Testing students' attention through surprise questions during the explanation.

C6 - Breaking the stereotypical aspect of the lecture using different methods to transform the student from the role of the passive recipient to the role of active participation.

Teaching and Learning Methods

• Employing the faculty's ability and experience in communicating the scientific material to the student and informing the student of the importance of time.

• Assigning students to prepare reports on a particular subject, thus motivating students to learn the basic principles of scientific research

• Assigning students to conduct laboratory experiments on their own after the teacher has given a simple explanation of how to conduct the experiment, thus giving the student the opportunity to elicit and analyze the results

• Continuous discussions in all multimedia applications.

Assessment methods

43. Daily exams
44. • Sudden Exams
45. • Documented exams, semester exams
46. • Cooperative education (Groups)
47. Oral exams
48. • Oral questions and discussions
49. • Homework

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

- Increasing communication between individuals, which contributes to building a learning community
- Develop multiple emotional aspects such as curiosity, positive attitude towards learning, social values, independence in learning and self-confidence
- Develop the skill aspects of students
- Learn to set the right priorities for any problem
- Develop respect for time for the completion and implementation of work
- Develop a spirit of honest competition between work groups in pursuit of quality work, excellence and diversity in performance
- Develop the spirit of creation and creativity
- Develop work appreciation, responsibility and commitment.

11. Course Structure

Week	Hours	ILOs	Unit/Module or Topic Title	Teaching Method	Assessment Method
91-	2 hours of theory 2 hours of work	Definition of organic chemistry and its content in general	organic chemistry	theoretical lecture	Exams (quarterly, daily), class activity and positive participation, preparing reports and clarifications (not binding on the student, but optional)
92-	2 hours of theory 2 hours of work	alkyl groups	=	=	

93-	2 hours of theory 2 hours of work	Alkanes	=	=	
94-	2 hours of theory 2 hours of work	Nomenclature of alkanes and their interactions	=	=	
95-	2 hours of theory 2 hours of work	Alkenes and their chain shapes	=	=	
96-	2 hours of theory 2 hours of work	Nomenclature of alkenes and their interactions	=	=	
97-	2 hours of theory 2 hours of work	Monthly exam	=	=	
98-	2 hours of theory 2 hours of work	Alkynes and their offshoots	=	=	
99-	2 hours of theory 2 hours of work	Alkenes and their interactions	=	=	
100-	2 hours of theory 2 hours of work	Laboratory preparation of alkynes	=	=	
101-	2 hours of theory 2 hours of	oxidation of alkynes	=	=	

	work				
102-	2 hours of theory 2 hours of work	Halogenation of alkynes	=	=	
103-	2 hours of theory 2 hours of work	Differences between alkanes, alkenes, and alkynes	=	=	
104-	2 hours of theory 2 hours of work	General review of the most important points	=	=	
105-	2 hours of theory 2 hours of work	second month exam	=	=	

12. Infrastructure	
Required reading: · CORE TEXTS · COURSE MATERIALS · OTHER	Educational lectures from the net
Special requirements (include for example workshops, periodicals, IT software, websites)	Laboratory experiments

Community-based facilities (include for example, guest Lectures , internship , field studies)	Seminars

13. Admissions	
Pre-requisites	Programming language
Minimum number of students	100
Maximum number of students	200

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	
2. University Department/Centre	
3. Course title/code	
4. Programme(s) to which it contributes	
5. Modes of Attendance offered	
6. Semester/Year	
7. Number of hours tuition (total)	
8. Date of production/revision of this specification	
9. Aims of the Course	

10· Learning Outcomes, Teaching ,Learning and Assessment Methode
A- Knowledge and Understanding A1. A2. A3. A4. A5. A6 .
B. Subject-specific skills B1. B2. B3.
Teaching and Learning Methods
Assessment methods
C. Thinking Skills C1. Thinking skill according to the student's ability: The goal of this skill is for the student to believe in what is tangible and understand when, what and how she should think and work to improve the ability to think reasonably. C2. Observation and Perception analysis and interpretation C3. Setting and calendar C4. Critical thinking strategy in learning
Teaching and Learning Methods

Assessment methods

D. General and Transferable Skills (other skills relevant to employability and personal development)
D1.
D2.
D3.
D4.

11. Course Structure

Week	Hours	ILOs	Unit/Module orTopic Title	Teaching Method	Assessment Method
1	2	Introduction	Archegoniate	Scientific Lecture	Daily exam and monthly exam
2	2	Classification of Bryophyta	=	=	=
3	2	Order : Marchantiales	=	=	=
4	2	Class : Hepaticae (Hepaticopsida)	=	=	=
5	2	Class: Anthocerotopsida (Horn Worts)	=	=	=
6	2	Bryopsida or (Mosses)	=	=	=
7	2	Order : Bryales	=	=	=
8	2	Monthly Eam ,1	=	=	=
9	2	Division : Pteridophyta	=	=	=
10	2	Class : Lycopodineae (Club mosses)	=	=	=
11	2	Sub Class : Ligulopesida	=	=	=
12	2	Equisetineae (Horse taile)	=	=	=
13	2	Monthly Exam.2	=	=	=
14	2	Class : Filicineae	=	=	=
15	2	Order : Marsiliales	=	=	=
16	2	Division : Gymnosperms	=	=	=

=

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	360
Maximum number of students	400

Program structure

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 - Education College for Women
2. University Department/Centre	Department of Biology
3. Course title/code	Comparative anatomy of chordata
4. Programme (s) to which it contributes	stage III
5. Modes of Attendance offered	weekly
6. Semester/Year	First and Second Semester \ 2021
7. Number of hours tuition (total)	30 hoursSemester / theoretical
8. Date of production/revision of this Specification	5/29/2021
9. Aims of the Course	
Introduce students to the emergence and development of chordata and their importance	
To identify the distinctive features of each division with its classification and to address some of them Important models in detail for each division. Introduce students to the importance, disadvantages and classes of chordata	

Program structure

10· Learning Outcomes, Teaching ,Learning and Assessment Methods
A- Knowledge and Understanding A1. Introduce students to the emergence and development of chordata and their importance in addition to studying all peoples A2. Chordata animals and identifying the distinctive characteristics of each phylum with their classification and addressing some of them A3. Important models in detail for each division. A4. Introduce students to the economic importance of Chordata, their disadvantages, and their related classes
B. Subject-specific skills B1.Practical identification of the main groups of chordata .
Teaching and Learning Methods
1- Explanation and clarification 2- The method of the lecture 3- Student groups 4- Practical lessons in the laboratory and scientific trips
Assessment methods
Daily, semester and yearly exams Feedback from students for assessment through classroom and extra-curricular activities (discussions, attendance, interaction, interventions, answers, additions, comments, and special points of view. Reports and Research.
C. Thinking Skills C1.Enhancing the student's self-confidence. abilities and specialization. C2. Desire to work after graduation in the

field of
specialization. C3 Strengthening work and cooperation in a team spirit. C4. Accept and receive knowledge and science with desire without boredom.
Teaching and Learning Methods
1- Explanation and clarification 2- The method of the lecture 3- Student groups 4- Practical lessons in the laboratory 5- Scientific trips 6- The method of self-learning
Assessment methods
-Self-evaluation of the student by the professor, which is determined through observation and continuity of work. -Adherence to scientific and other directives from the professor and management regarding the scientific subject. -The student's interaction with the lecture and classroom and extra-curricular activities. -Written exam. -Discussions and interaction.
D. General and Transferable Skills (other skills relevant to employability and Personal development). D1. Verbal communication (the ability to express ideas clearly and confidently i speech). D2.Teamwork (working with confidence within a team work group). D3.Investigation analysis (collecting information in a systematic and scientific wa to establish facts and principles as a solution to a specific problem). D4.Written communication (the ability to express clearly in writing).

11. Course Structure

Program structure

Week	Hours	ILOs	Unit/Module or Topic Title	Teaching Method	Assessment Method
1	4	General features of chordata	Chordata	Explanation - model presentation slides - and lecture	Theoretical Tests Practical tests Reports
2	4	group of vertebrates	Chordata	Explanation - model presentation slides - and lecture	Theoretical Tests Practical tests Reports
3	4	Chordata classification	Chordata	Explanation - model presentation slides - and lecture	Theoretical Tests Practical tests Reports
4	4	Circulation of system	Chordata	Explanation - model presentation slides - and lecture	Theoretical Tests Practical tests Reports
5	4	Digestive system	Chordata	Explanation - model presentation slides - and lecture	Theoretical Tests Practical tests Reports
6	4	Skin system	Chordata	Explanation - model presentation slides - and lecture	Theoretical Tests Practical tests Reports
7	4	Skeletal system	Chordata	Explanation - model presentation slides - and lecture	Theoretical Tests Practical tests Reports
8	4	Nerural system	Chordata	Explanation - model presentation slides - and lecture	Theoretical Tests Practical tests Reports
9	4	Muscular system	Chordata	Explanation - model presentation slides - and lecture	Theoretical Tests Practical tests Reports
11	4	Pulmantory systrm	Chordata	Explanation - model presentation slides - and lecture	Theoretical Tests Practical tests Reports
11	4	Genetial system	Chordata	Explanation - model presentation slides - and lecture	Theoretical Tests Practical tests Reports

12	4	Comparative of systemes	Chordata	Explanation - model presentation slides - and lecture	Theoretical Tests Practical tests Reports
13	4	Vertebrata and classification	Chordata	Explanation - model presentation slides - and lecture	Theoretical Tests Practical tests Reports
14	4	Tetrapoda and classification	Chordata	Explanation - model presentation slides - and lecture	Theoretical Tests Practical tests Reports
15	4	prochordata	Chordata	Explanation - model presentation slides - and lecture	Theoretical Tests Practical tests Reports

12. Infrastructure	
Required reading: · CORE TEXTS · COURSE MATERIALS · OTHER	Fundamentals of Comparative Anatomy of Chordates / Written by Shukri Habib Khalil, Abdel-Zahra Kazem Muhammed -Book: Comparative Anatomy of Vertebrates Written by: Dr. Mona Farid Abdel Rahman
Special requirements (include for example workshops, periodicals, IT software, websites)	Invertebrate Binding, General Entomology Book Invertebrate Biology \ Prof. Mohammed Hassan Al-Hamoud. Use of electronic references, websites
Community-based facilities (include for example, guest Lectures , internship , field studies)	guest Lectures from other country or University, internship , field studies

13. Admissions	
Pre-requisites	
Minimum number of students	20
Maximum number of students	30

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 - Education College for Women
2. University Department/Centre	Department of Biology
3. Course title/code	Invertebrates 1 and Invertebrates 2
4. Programme (s) to which it contributes	stage II
5. Modes of Attendance offered	weekly
6. Semester/Year	First and Second Semester \ 2021
7. Number of hours tuition (total)	30 hours Semester / theoretical
8. Date of production/revision of this specification	5/29/2021
9. Aims of the Course	
Introduce students to the emergence and development of invertebrate animals and their importance In addition to studying all the people invertebrate animal	
To identify the distinctive features of each division with its classification and to address some of them Important models in detail for each division. Introduce students to the importance, disadvantages and classes of invertebrates	

10· Learning Outcomes, Teaching ,Learning and Assessment Methods
A- Knowledge and Understanding A1. Introduce students to the emergence and development of invertebrate animals and their importance in addition to studying all peoples A2. Invertebrate animals and identifying the distinctive characteristics of each phylum with their classification and addressing some of them A3. Important models in detail for each division. A4. Introduce students to the economic importance of invertebrates, their disadvantages, and their related classes A5. Know the most important diseases transmitted by invertebrates A6. Encouraging students to collect models of different invertebrate phyla
B. Subject-specific skills B1. Practical identification of the main groups of invertebrates. B 2- Identifying in a practical way the role of the most important disease-causing invertebrate species.
Teaching and Learning Methods
1- Explanation and clarification 2- The method of the lecture 3- Student groups 4- Practical lessons in the laboratory and scientific trips
Assessment methods

Daily, semester and yearly exams Feedback from students for assessment through classroom and extra-curricular activities (discussions, attendance, interaction, interventions, answers, additions, comments, and special points of view. Reports and Research.
C. Thinking Skills C1. Enhancing the student's self-confidence, abilities and specialization. C2. Desire to work after graduation in the field of specialization. C3 Strengthening work and cooperation in a team spirit. C4. Accept and receive knowledge and science with desire without boredom.
Teaching and Learning Methods
1- Explanation and clarification 2- The method of the lecture 3- Student groups 4- Practical lessons in the laboratory 5- Scientific trips 6- The method of self-learning
Assessment methods
-Self-evaluation of the student by the professor, which is determined through observation and continuity of work. -Adherence to scientific and other directives from the professor and management regarding the scientific subject. -The student's interaction with the lecture and classroom and extra-curricular activities. -Written exam. -Discussions and interaction.

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 team work 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 clearly in writing).

11. Course Structure

Week	Hours	ILOs	Unit/Module or Topic Title	Teaching Method	Assessment Method
١	٤	General introduction to invertebrates and their importance	Invertebrates	Explanation - model presentation slides - and lecture	Theoretical Tests Practical tests Reports
٢	٤	Evolution of invertebrate animals	Invertebrates	Explanation - model presentation slides - and lecture	Theoretical Tests Practical tests Reports
٣	٤	Great groups of multicellular animals	Invertebrates	Explanation - model presentation slides - and lecture	Theoretical Tests Practical tests Reports
٤	٤	Elementary Division - its characteristics and classification	Invertebrates	Explanation - model presentation slides - and lecture	Theoretical Tests Practical tests Reports
٥	٤	Organelles movement, types of reproduction and colony formation in primary	Invertebrates	Explanation - model presentation slides - and lecture	Theoretical Tests Practical tests Reports
٦	٤	Amoeba and Paramecium	Invertebrates	Explanation - model presentation slides - and lecture	Theoretical Tests Practical tests Reports
٧	٤	Phylum of sponges - their characteristic	Invertebrates	Explanation - model presentation slides - and lecture	Theoretical Tests Practical tests Reports

		s and classification			
٨	٤	G. *Hydra- Aurelia- Metridium*	Invertebrates	Explanation - model presentation slides - and lecture	Theoretical Tests Practical tests Reports
٩	4	Phylum of Flatworms - Characteristics and Classification	Invertebrates	Explanation - model presentation slides - and lecture	Theoretical Tests Practical tests Reports
١٠	٤	Planaria - sheep liver worm - Tainia	Invertebrates	Explanation - model presentation slides - and lecture	Theoretical Tests Practical tests Reports
١١	٤	Phylum of Nematodes - General characteristics and classification	Invertebrates	Explanation - model presentation slides - and lecture	Theoretical Tests Practical tests Reports
١٢	٤	Ascaris worm - Ancylostoma	Invertebrates	Explanation - model presentation slides - and lecture	Theoretical Tests Practical tests Reports
١٣	٤	Arthropod phylum - its characteristics and classification	Invertebrates	Explanation - model presentation slides - and lecture	Theoretical Tests Practical tests Reports
١٤	٤	The phylum of ringworms - their characteristics and classification , earthworm - sandworm - medical leeches	Invertebrates	Explanation - model presentation slides - and lecture	Theoretical Tests Practical tests Reports
١٥	٤	The phylum of mollusks-- its characteristics and classification , Helix-	Invertebrates	Explanation - model presentation slides - and lecture	Theoretical Tests Practical tests Reports

12. Infrastructure	
Required reading: · CORE TEXTS · COURSE MATERIALS · OTHER	The Science of Invertebrates - Dr. Murad Baba Murad Invertebrates - Charoak Practical Invertebrate Book Invertebrate Zoology- E,L,GORDAN P,S,VERMA
Special requirements (include for example workshops, periodicals, IT software, websites)	Invertebrate Biology \ Prof. Mohammed Hassan Al-Hamoud. Practical Parasitology Binding, Practical Invertebrate Binding, General Entomology Book Invertebrate Biology \ Prof. Mohammed Hassan Al-Hamoud. Use of electronic references, websites
Community-based facilities (include for example, guest Lectures , internship , field studies)	guest Lectures from other country or University, internship , field studies

13. Admissions	
Pre-requisites	
Minimum number of students	20
Maximum number of students	30

Program structure

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 - Education College for Women
2. University Department/Centre	Department of Biology
3. Course title/code	Parasitology1 and Parasitology 2
4. Programme (s) to which it contributes	stage four
5. Modes of Attendance offered	weekly
6. Semester/Year	First and Second Semester \ 2021
7. Number of hours tuition (total)	30 hoursSemester / theoretical
8. Date of production/revision of this specification	5/29/2021
9. Aims of the Course	
Introduce students to the emergence and development of parasite And study the importance of parasites for women and animal	
Study of the mutual parasitic diseases between human and animal and study the most important medical parasites that affect human	

Program structure

10· Learning Outcomes, Teaching ,Learning and Assessment Methods
A- Knowledge and Understanding A1. Introduce students to the emergence and development of parasites and their importance in addition to studying some parasite A2. parasites and identifying the distinctive characteristics of each phylum with their classification and addressing some of them A3. Important models in detail for each division. A4. Introduce students to the economic importance of parasites, their disadvantages, and their related classes A5. Know the most important diseases transmitted by parasit A6. Encouraging students to collect models of different parasites phyla
B. Subject-specific skills B1.Practical identification of the main groups of parasites B 2- Identifying in a practical way the role of the most important disease-causing parasites species.
Teaching and Learning Methods
1- Explanation and clarification 2- The method of the lecture 3- Student groups 4- Practical lessons in the laboratory and scientific trips
Assessment methods
Daily, semester and yearly exams Feedback from students for assessment through classroom and extra-curricular activities (discussions, attendance, interaction, interventions, answers, additions, comments, and special points of view. Reports and Research.
C. Thinking Skills

C1.Enhancing the student's self-confidence. abilities and specialization.

C2. Desire to work after graduation in the field of specialization.

C3 Strengthening work and cooperation in a team spirit.

C4. Accept and receive knowledge and science with desire without boredom.

Teaching and Learning Methods

1- Explanation and clarification
2- The method of the lecture
3- Student groups
4- Practical lessons in the laboratory
5- Scientific trips
6- The method of self-learning

Assessment methods

-Self-evaluation of the student by the professor, which is determined through observation and continuity of work.
-Adherence to scientific and other directives from the professor and management regarding the scientific subject.
-The student's interaction with the lecture and classroom and extra-curricular activities.
-Written exam.
-Discussions and interaction.

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 team work 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 clearly in writing).

11. Course Structure

Week	Hours	ILOs	Unit/Module or Topic Title	Teaching Method	Assessment Method
1	4	General introduction to parasitess and their importance	Parasitology	Explanation - model presentation slides - and lecture	Theoretical Tests Practical tests Reports
2	4	His parasitic people	Parasitology	Explanation - model presentation slides - and lecture	Theoretical Tests Practical tests Reports
3	4	Protozoa	Parasitology	Explanation - model presentation slides - and lecture	Theoretical Tests Practical tests Reports
4	4	Some of the species of sarcodina	Parasitology	Explanation - model presentation slides - and lecture	Theoretical Tests Practical tests Reports
5	4	Some of the species of ciliophora , Balantidium	Parasitology	Explanation - model presentation slides - and lecture	Theoretical Tests Practical tests Reports
6	4	Some of the species ofmastigoph ora	Parasitology	Explanation - model presentation slides - and lecture	Theoretical Tests Practical tests Reports
7	4	Some of the races of blood and tissue like leishmania	Parasitology	Explanation - model presentation slides - and lecture	Theoretical Tests Practical tests Reports
8	4	Intestinal flagella -	Parasitology	Explanation - model presentation slides - and lecture	Theoretical Tests Practical tests Reports
9	4	sporozoa	Parasitology	Explanation - model presentation slides - and lecture	Theoretical Tests Practical tests Reports

11	4	Intestinal sporozoa	Parasitology	Explanation - model presentation slides - and lecture	Theoretical Tests Practical tests Reports
11	4	platyhelmenthes	Parasitology	Explanation - model presentation slides - and lecture	Theoretical Tests Practical tests Reports
12	4	cestoda	Parasitology	Explanation - model presentation slides - and lecture	Theoretical Tests Practical tests Reports
13	4	trematoda	Parasitology	Explanation - model presentation slides - and lecture	Theoretical Tests Practical tests Reports
14	4	- Fasciola hepatica ,baski	Parasitology	Explanation - model presentation slides - and lecture	Theoretical Tests Practical tests Reports
15	4	Schistosoma	Parasitology	Explanation - model presentation slides - and lecture	Theoretical Tests Practical tests Reports

12. Infrastructure	
Required reading: · CORE TEXTS · COURSE MATERIALS · OTHER	The parasitology\Ismail Abdel Wahab Hadithi
Special requirements (include for example workshops, periodicals, IT software, websites)	Duncan, Samuel Martin (2015) Development of an inducible system for Leishmania gene deletion: application to the cell cycle protein kinase CRK3. PhD thesis, Essentials of MEDICAL PARASITOLOGY\ Apurba Sankar Sastry MD (JIPMER),DNB, MNAMS, PDCR Assistant Professor Department of Microbiology Jawaharlal Institute of Postgraduate Medical Education & Research (JIPMER) Pondicherry, India Sandhya Bhat K MD, DNB, MNAMS, PDCR Assistant Professor Department of Microbiology Pondicherry Institute of Medical Sciences (PIMS) (A Unit of Madras Medical Mission) Pondicherry, India
Community-based facilities (include for example, guest Lectures , internship , field studies)	guest Lectures from other country or University, internship , field studies

13. Admissions

Program structure

Pre-requisites	
Minimum number of students	20
Maximum number of students	30

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 - Education College for Women
2. University Department/Centre	Department of Biology
3. Course title/code	Scientific Research Methodology EWB2201
4. Programme (s) to which it contributes	stage II
5. Modes of Attendance offered	weekly
6. Semester/Year	Semester
7. Number of hours tuition (total)	30 hoursSemester / theoretical
8. Date of production/revision of this specification	1/1/2021
9. Aims of the Course	
Introducing students to the mechanism of scientific research and the method of writing scientific research properly and correctly, and then qualifying students to write the research required of them in the future, especially the graduation research	

10· Learning Outcomes, Teaching ,Learning and Assessment Methods
- A distinguished student with the ability to write a good scientific research. - Differentiate between the report and scientific research.
Teaching and Learning Methods
1- Explanation and clarification 2- The method of the lecture
Assessment methods
monthly exams Daily exams Writing a scientific research final exam
C. Thinking Skills - The student's ability to deduce information and how to write a solid research. Encouraging the spirit of cooperation between students and writing joint research.
Teaching and Learning Methods
1- Explanation and clarification 2- The method of the lecture 3- Student groups 4- The method of self-learning
Assessment methods
-Self-evaluation of the student by the professor, which is determined through observation and continuity of work.

Program structure

-The student's interaction with the lecture and classroom and extra-curricular activities.
-Written exam.
-Discussions and interaction.

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 team work 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.

11. Course Structure

Week	Hours	ILOs	Unit/Module or Topic Title	Teaching Method	Assessment Method
1	2	An introduction to the methodology of scientific research and its definition, the stages of human thinking, the classification of Charles Peirce, the principles on which the methodology of scientific research is based.	Scientific Research Methodology EWB2201	Explanation - model and lecture	Theoretical Tests Practical tests Reports
2	2	Definition of science, method of scientific thinking, samples, research sample	Scientific Research Methodology EWB2201	Explanation - model and lecture	Theoretical Tests Practical tests Reports
3	2	Methods and methods of sampling testing, random sampling of all kinds	Scientific Research Methodology EWB2201	Explanation - model and lecture	Theoretical Tests Practical tests Reports
4	2	The probability sample is the intentional or the non-random sample	Scientific Research Methodology EWB2201	Explanation - model and lecture	Theoretical Tests Practical tests Reports
5	2	first month exam			

Program structure

6	2	Descriptive scientific research method and its steps, scientific research tools, types of descriptive research,	Scientific Research Methodology EWB2201	Explanation - model and lecture	Theoretical Tests Practical tests Reports
		evaluation of the descriptive method			
7	2	System analysis approach and its steps, elements of the system, concept of feedback, types of system, open and closed system.	Scientific Research Methodology EWB2201	Explanation - model and lecture	Theoretical Tests Practical tests Reports
8	2	Experimental method, experimentation, experimental research steps	Scientific Research Methodology EWB2201	Explanation - model and lecture	Theoretical Tests Practical tests Reports
9	2	Principles of conducting the experiment, examples of experiments, experimental control	Scientific Research Methodology EWB2201	Explanation - model and lecture	Theoretical Tests Practical tests Reports
11	2	Variables, objectives of controlling variables	Scientific Research Methodology EWB2201	Explanation - model and lecture	Theoretical Tests Practical tests Reports
11	2	Methods of controlling variables, experiment, experimental design, types of experimental designs	Scientific Research Methodology EWB2201	Explanation - model and lecture	Theoretical Tests Practical tests Reports
12	2	Methods of conducting equivalence, evaluating the experimental approach and its steps	Scientific Research Methodology EWB2201	Explanation - model and lecture	Theoretical Tests Practical tests Reports
13	2	second month exam	Scientific Research Methodology EWB2201		

Program structure

14	2	Discuss student research	Scientific Research Methodology EWB2201		
15	2	Discuss student research	Scientific Research Methodology EWB2201		

12. Infrastructure

Required reading: · CORE TEXTS · COURSE MATERIALS · OTHER	Research models
Special requirements (include for example workshops, periodicals, IT software, websites)	Use of electronic references, 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	College of Education for women, Department of biology
3. Course title/code	Ecology/ qe27ywb
4. Programme(s) to which it contributes	PowerPoint + Google Meet
5. Modes of Attendance offered	weekly
6. Semester/Year	First Semester - Academic Year 2020/2021
7. Number of hours tuition (total)	48
8. Date of production/revision of this Specification	03-1-2021
9. Aims of the Course	
Introduce the student to the principles of ecology and the relationship of living organisms with non –living components and the effect of each factor on the other	
Learn about the different types of ecosystem.	
Learn about living environmental factors.	

10· Learning Outcomes, Teaching ,Learning and Assessment Methode

Program structure

A- A. Knowledge and Understanding A1.To familiarize the student with the basics of environmental
B- A2.know the types of ecosystems
C- A3. Learn about living things and their relationship with ecosystems
D- A4.Identify the non-living components and their effect on ecosystem

B. Subject-specific skills B1.Developing the scientific concept of the study subject by the student.

B2.Devlop the students educational concept of how to preserve the environmental

B3.Introduction the student to how to maintain ecological

Teaching and Learning Methods

- Explanation and clarification (lecture).
- Presentation of selected models of explanatory questions and their solutions.
- Self-learning method (assigning students to complete learning some skills after giving them the basics).

- Labs.
- Discussions
- Brainstorming
- Examples and problems used to achieve the objectives
- google meet, classroom

Assessment methods

1- Daily and monthly electronic exams
2- Electronic reports on the subject of the study .

C. Thinking Skills
C1.Thinking of objective questions within the electronic class C2.Participate in the discussion of question and interact with them electronically
C3.How to respond to interrogative question by looking at different sources
C4.

Teaching and Learning Methods

•Asking and discussing oral questions with students 2- Delivering lectures , recording them in a link and sending them to student
Assessment methods
1- Daily and monthly electronic exams 2- Electronic reports on the subject of the study .

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

- D1.Attending electronic lectures

D2.Participation in electronic discussion

D3. Attending scientific seminars

D4. Participation in scientific workshops

11. Course Structure

Week	Hours	ILOs	Unit/Module or Topic Title	Teaching Method	Assessment Method
1-	2 hours of theory 2 hours of work	Abrief history of ecology	A brief history of ecology	Scientific Lecture	Exams (quarterly, daily), class activity and positive participation, preparing reports and clarifications (not binding on the student, but optional)
2-	2 hours of theory 2 hours of work	The foundation of the divisionof eco	The foundation of the division of ecology	Scientific Lecture	
3-	2 hours of theory 2 hours of work	Ecosystem	Ecosystem	Scientific Lecture	
4-	2 hours of theory 2 hours of work	Biogeochemical cyce	Biogeochemical cycles	Scientific Lecture	
5-	2 hours of theory 2 hours of work	Tolerance laws and limiting factors	tolerance laws and limiting factors	Scientific Lecture	
6-	2 hours of theory 2 hours of work	Productivity	Productivity	Scientific Lecture	
7-	2 hours of theory 2 hours of work	Exam	first month exam	Scientific Lecture	
8-	2 hours of theory 2 hours of work	Food chin	Food chin	Scientific Lecture	

Program structure

9-	2 hours of theory 2 hours of work	Nets chin	Nets chin	Scientific Lecture	
10-	2 hours of theory 2 hours of worke	population	population	Scientific Lecture	
11-	2 hours of theory 2 hours of work	Energy of pyramids	Energy of pyramids	Scientific Lecture	
12-	2 hours of theory 2 hours of work	Environmental succession	Environmental succession	Scientific Lecture	
13-	2 hours of theory 2 hours of work	Species divergence	Species divergence	Scientific Lecture	
14-	2 hours of theory 2 hours of work	Environmental factor	Environmental factor	Scientific Lecture	
15-	2 hours of theory 2 hours of work		second month exam	Scientific Lecture	

12. Infrastructure	
Required reading: · CORE TEXTS · COURSE MATERIALS · OTHER	Al-rawi , mohammed amar and Abl-alraheem moammed asheer(1989) Envionmental pollution University of Baghdad
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	Programming language

Program structure

Minimum number of students	100
Maximum number of students	230

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	College of Education for women, Department of biology
3. Course title/code	Environmental pollution/ b43aagq
4. Programme(s) to which it contributes	PowerPoint + Google Meet
5. Modes of Attendance offered	weekly
6. Semester/Year	secund Semester - Academic Year 2020/2021
7. Number of hours tuition (total)	48
8. Date of production/revision of this Specification	30-1-2021
9. Aims of the Course	
Introduction the student to the sources of pollution and thi3r danger to humans and how to treat tham	
Identifying environmental pollution of all kinds knowing source and to how to treat it	
Knowing the pollution substance or energy and the extent of its impact.	
Studying the dangers of pollution of all kinds and their impact on humans .	

10· Learning Outcomes, Teaching ,Learning and Assessment Methode

Program structure

A- A. Knowledge and Understanding A1.To familiarize the student with the basics of environmental pollution .
B- A2.know the types of pollution.
C- A3. Learn about living things and their relationship with pollution
D- A4.Identify the non-living components and their effect on pollution

B. B. Subject-specific skillsB1.Developing the scientific concept of the study subject by the student.
B2.Devlop the students educational concept of how to preserve the pollutionl
B3.Introduction the student to how to maintain ecological

Teaching and Learning Methods

- Asking and discussing oral questions with students
- Delivering lectures , recording them in a link and sending them to student.
- Labs.
- Discussions
- Brainstorming
- Examples and problems used to achieve the objectives
- google meet, classroom

Assessment methods

1- Daily and monthly electronic exams
2- Electronic reports on the subject of the study .

C. Thinking Skills
C1.Thinking of objective questions within the electronic class C2.Participate in the discussion of question and interact with them electronically
C3.How to respond to interrogative question by looking at different sources
C4.

Teaching and Learning Methods

Program structure

1•Asking and discussing oral questions with students 2- Delivering lectures , recording them in a link and sending them to student
Assessment methods
1- Daily and monthly electronic exams 2- Electronic reports on the subject of the study .

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

- D1.Attending electronic lectures

D2.Participation in electronic discussion

D3. Attending scientific seminars

D4. Participation in scientific workshops

11. Course Structure

Week	Hours	ILOs	Unit/Module or Topic Title	Teaching Method	Assessment Method
1-	2 hours of theory 2 hours of work	Abrief history of pollution	Environmental pollution	Scientific Lecture	Exams (quarterly, daily), class activity and positive participation, preparing reports and clarifications (not binding on the student, but optional)
2-	2 hours of theory 2 hours of work	*Effects of Environmental pollution*	Environmental pollution	Scientific Lecture	
3-	2 hours of theory 2 hours of work	Air pollution	Environmental pollution	Scientific Lecture	
4-	2 hours of theory 2 hours of work	Noise pollution	Environmental pollution	Scientific Lecture	
5-	2 hours of theory 2 hours of work	Radiation pollution	Environmental pollution	Scientific Lecture	
6-	2 hours of theory 2 hours of work	Water pollution	Environmental pollution	Scientific Lecture	
7-	2 hours of theory 2 hours of work	First month Exam	Environmental pollution	Scientific Lecture	
8-	2 hours of theory 2 hours of work	Food contamination	Environmental pollution	Scientific Lecture	
9-	2 hours of theory 2 hours of work	Microbiology contamination	Environmental pollution	Scientific Lecture	

Program structure

10-	2 hours of theory 2 hours of worke	Soil pollution	Environmental pollution	Scientific Lecture	
11-	2 hours of theory 2 hours of work	Global pollution	Environmental pollution	Scientific Lecture	
12-	2 hours of theory 2 hours of work	The ozone	Environmental pollution	Scientific Lecture	
13-	2 hours of theory 2 hours of work	Global warming	Environmental pollution	Scientific Lecture	
14-	2 hours of theory 2 hours of work	Drug contaminati on	Environmental pollution	Scientific Lecture	
15-	2 hours of theory 2 hours of work	Second month Exam	Environmental pollution	Scientific Lecture	

12. Infrastructure	
Required reading: · CORE TEXTS · COURSE MATERIALS · OTHER	Al-rawi , mohammed amar and Abl-alraheem moammed asheer(1989) Envionmental pollution University of Baghdad
Special requirements (include for example workshops, periodicals, IT software, websites)	Electronic reports
Community-based facilities (include for example, guest Lectures , internship , field studies)	Developing the idea of the visiting professor to provide the young universities with expertise and the latest scientific findings in the fields of scientific research.

13. Admissions	
Pre-requisites	Programming language
Minimum number of students	100
Maximum number of students	230

TEMPLATE FOR COURSE SPECIFICATION

celluar metabolism Dr.Ghadeer Mahmood

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 programmer specification.

1. Teaching Institution	University of Anbar
2. University Department/Centre	College of Education for women, Department of biology
3. Course title/code	cellular metabolism
4. Programme(s) to which it contributes	PowerPoint
5. Modes of Attendance offered	weekly
6. Semester/Year	Second Semester - Academic Year
7. Number of hours tuition (total)	45
8. Date of production/revision of this specification	5252 / 1 /52
9. Aims of the Course	
Course Objectives: The course description provides the most important objectives and expected learning outcomes from achieving the maximum benefit from learning opportunities and how to link them with the course description of cellular metabolism to perform biological functions and what indicates the power of nutritional transformation, renewal and construction.	
Factors affecting metabolism Biological mechanisms of the basic elements	
Understanding energy metabolism and its impact on health (amount and type of food intake)	

Program structure

The role of enzymes
The role of vitamin and mineral metabolism

10· Learning Outcomes, Teaching ,Learning and Assessment Methode
A- Introducing students to the science of cellular metabolism and its relationship to other sciences and how biology affects the functioning of the cell, which is a network of biochemical reactions that transform receptors to perform biological functions and have paths to generate energy for biogenesis and perpetuation.
The products of digestion of the basic elements and their importance as well as health
Teaching and Learning Methods
1- Explanation, clarification, discussion, dialogue, and life examples 2- Lecture and presentations 3- Practical lessons Asking questions and metabolic diseases (for students) 4- Student groups 5- Coupling the theoretical lectures with the practical part
Assessment methods
1- Monthly exams 2- Short daily exams (oral/written) 3- Practical tests 4- Student activities / teaching aids 5- Scientific research 6- Reports related to the lecture as homework
C- thinking skills 1- The student's thinking skill. and this depends on the student's ability to comprehend and how to think about what is going on during the lecture and to give the scientific material. 2- Observation 3- Analysis

4- Interpretation
5- Preparation and calendar

Emotional goals:

The ability to understand metabolic processes and the consequent healthy patterns as a result of nutritional behavior

Teaching and Learning Methods

1- Explanation of the lecture
2- Student groups
3- Practical lessons in laboratories
4- Making models
5- View the photos

Assessment methods

1- Theoretical tests
2- Practical tests
3- Scientific research and reports

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

· The ability to understand the metabolic life processes within the organism's body and explain its metabolic disorders
· The ability to apply healthy dietary patterns for their direct impact on the health of the individual and society.

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

- Increasing communication between individuals, which contributes to building a learning community
- Develop multiple emotional aspects such as curiosity, positive attitude towards learning, social values, independence in learning and self-confidence
- Develop the skill aspects of students
- Learn to set the right priorities for any problem
- Develop respect for time for the completion and implementation of work
- Develop a spirit of honest competition between work groups in pursuit of quality work, excellence and diversity in performance
- Develop the spirit of creation and creativity
- Develop work appreciation, responsibility and commitment.

11. Course Structure

Program structure

Week	Hours	ILOs	Unit/Module or Topic Title	Teaching Method	Assessment Method
1-	4 hours of theory 2 hours of work	As mentioned in paragraph 10	Introduction to cellular metabolism	cellular metabolism	Exams (quarterly, daily), class activity and positive participation, preparing reports and clarifications (not binding on the student, but optional)
2-	4 hours of theory 2 hours of work	As mentioned in paragraph 10	Enzyme. Chemical structure	cellular metabolism	
3-	4 hours of theory 2 hours of work	As mentioned in paragraph 10	enzyme specificity	cellular metabolism	
4-	4 hours of theory 2 hours of work	As mentioned in paragraph 10	enzyme functions	cellular metabolism	
5-	4 hours of theory 2 hours of work	As mentioned in paragraph 10	energy metabolism	cellular metabolism	
6-	4 hours of theory 2 hours of work	As mentioned in paragraph 10	after calculilysis	cellular metabolism	
7-	4 hours of theory 2 hours of work	As mentioned in paragraph 10	Clayoxalate cycle	cellular metabolism	
8-	4 hours of theory 2 hours of work	As mentioned in paragraph 10	Glucose biosynthesis	cellular metabolism	
9-	4 hours of theory 2 hours of work	As mentioned in paragraph 10	the exam	cellular metabolism	
10-	4 hours of theory 2 hours of work	As mentioned in paragraph 10	protein metabolism	cellular metabolism	

Program structure

11-	4 hours of theory 2 hours of work	As mentioned in paragraph 10	The importance of amino acid metabolism	cellular metabolism	
12-	4 hours of theory 2 hours of work	As mentioned in paragraph 10	fat metabolism	cellular metabolism	
13-	4 hours of theory 2 hours of work	As mentioned in paragraph 10	The importance of fat metabolism	cellular metabolism	
14-	4 hours of theory 2 hours of work	As mentioned in paragraph 10	Oxidation of fatty acids	cellular metabolism	
15-	4 hours of theory 2 hours of work	As mentioned in paragraph 10	The exam	cellular metabolism	

12. Infrastructure	
Required reading: · CORE TEXTS · COURSE MATERIALS · OTHER	Celluar metabolismBooks / Youssef Muhammad Arab internet Practical celluar metabolismbinding
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	Programming language
Minimum number of students	100
Maximum number of students	260

TEMPLATE FOR COUR 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	College of Education for Women / Biology
3. Course title/code	Histology / EWB3205
4. Programme(s) to which it contributes	Weekly
5. Modes of Attendance offered	Presence
6. Semester/Year	First course
7. Number of hours tuition (total)	30 hours
8. Date of production/revision of this Specification	1 / 9 / 2021
9. Aims of the Course	
Adding new sciences to students for future benefit.	
Keeping pace with scientific development.	
Knowledge and learn structure & functional different of body systems	

10· Learning Outcomes, Teaching ,Learning and Assessment Methode
A- Knowledge and Understanding A1. A2. Adding a new scientific aspect. A3.. A4. A5. A6 .
B.Subject-specific skills : B1. Teaching students to use websites in biological diagnosis. B2. Teaching the student to use modern laboratory techniques. B3. Use of new ways to present lectures.
Teaching and Learning Methods
Lecture Demo Practical laboratory Discreet scientific books
Assessment methods
Exams daily quiz practical semester exam
C. Thinking Skills C1. Creating a spirit of competition among students. C2. Enhance the student's self-confidence. C3. Connecting knowledge to daily life events. C4. Extra-curricular activities
Teaching and Learning Methods :
practical lecture. Use of microscope and lab instruments. Conduct experiments.

Assessment methods :
Quiz practical exam Application for in-lab experiments semester exam

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

D1. Ability to read relevant research and scientific literature.

D2. Familiarize the student with the principle and basis of cell science.

D3. Expansion of the student's thinking and awareness of linking science with modern devices.

D4. The student does not depend on the instructor only.

D5. Use accuracy in the scientific answer.

D6. Investing in modern programs to reach special biological results.

11. Course Structure

Week	Hours	ILOs	Unit/Module or Topic Title	Teaching Method	Assessment Method
the first	4	Introduction of Histology / Epithelial tissues	Histology	theoretical lecture+ practical	Daily quiz
The second	4	. Glands	=	=	=
the third	4	Connective tissues & its Compositions	=	=	=
the fourth	4	General or proper connective tissue , Loose & Dense	=	=	=
Fifth	4	Specialized connective tissues , cartilage & Bone	=	=	=
VI	4	Blood & Hemopoietic Tissues	=	=	=
seventh	2	first month exam	=	theoretical exam	Monthly exam
VIII	4	Muscular system	=	theoretical lecture + practical	Daily quiz
ninth	4	Nervous system	=	=	=
The tenth	4	Skin & its appendages	=	=	=

eleven	4	Digestive System	=	=	=
twelfth	4	Respiratory System	=	=	=
Thirteenth	4	Urinary system	=	=	=
fourteenth	4	Circulatory system			
fifteenth	2	second month exam	=	theoretical exam	Monthly exam

12. Infrastructure	
Required reading: · CORE TEXTS · COURSE MATERIALS · OTHER	* Mescher,A.L.(2018).Junqueiras basic histology : text and atlas : McGraw-Hill- Education. *Gartner,L.P.and Hiatt,J.L.(2012).Color atlas and text of histology:Lippincott Williams & Wilkins.
Special requirements (include for example workshops, periodicals, IT software, websites)	laboratory experiments
Community-based facilities (include for example, guest Lectures , internship , field studies)	Seminars

13. Admissions	
Pre-requisites	40
Minimum number of students	150
Maximum number of students	250

Lecturer / Nbaa M. Abid Al alh

Program structure

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 program specification.

1. Teaching Institution	University of Anbar
2. University Department/Centre	College of Education for women, Department of biology
3. Course title/code	Molecular Biology/ WEB3501
4. Programme(s) to which it contributes	Microsoft (Word+PowerPoint)+Phantom PDF +Designer+ Google Meet
5. Modes of Attendance offered	weekly
6. Semester/Year	Semester
7. Number of hours tuition (total)	48
8. Date of production/revision of this specification	20-02-2020
9. Aims of the Course	
It aims to introduce the student to the Molecular biology of life, learning how genetic materials replicate, Protein production by molecular pathways, Gene expression beyond decrypting its code, the effects of point mutations with the most important proteins and enzymes included	

10· Learning Outcomes, Teaching, Learning and Assessment Methods

A- Introduce students to Genetic materials in both Eukaryotes and prokaryotes B- Genetic basics to produce proteins inside the cell.
C- Gene expression of cryptic sequences
D- Effect of Point Mutations on genetic material
E- Most important proteins interacted with biological pathways
F- The main differences between Eukaryotes and prokaryotes

Teaching and Learning Methods

- Lectures.
- Educational videos.
- Self-learning method (assigning students to complete learning some skills after giving them the basics).
- Scientific Labs.
- Virtual labs
- Discussions
- Brainstorming
- Google Meet, classroom

Assessment methods

- Daily exams.
- Quizzes.
- Semester exams
- Oral questions and discussions

C. Thinking Skills

1-Thinking skills and imagination
2- Observation and perception.
3 - Analysis and interpretation.
4- Conclusion and evaluation.
5- Using different methods to transform the student from the role of the passive recipient to the role of active participation.

Teaching and Learning Methods
- Lectures - Educational videos - Scientifically specialized laboratory - Virtual labs. - Cooperative homework
Assessment methods
1. Daily exams 2. Monthly exams 3. Laboratory exams 4. • Cooperative education 5. Laboratory reports
D. General and Transferable Skills (other skills relevant to employability and personal development) • Increasing communication between individuals, which contributes to building a learning community • Develop multiple emotional aspects such as curiosity and, a positive attitude towards learning, social values, independence in learning, and self-confidence • Develop the skill aspects of students • Learn to set the right priorities for any problem • Develop respect for time for the completion and implementation of work • Develop a spirit of honest competition between work groups in pursuit of quality work, excellence, and diversity in performance • Develop the spirit of creation and creativity • Develop work appreciation, responsibility, and commitment.

11. Course Structure

Program structure

Week	Hours	ILOs	Unit/Module or Topic Title	Teaching Method	Assessment Method
1-	4	Molecular Biology	Genetic materials Structure	Lectures, Educational videos, Cooperative work, Virtual labs.	Exams (quarterly, daily), class activity, and positive participation in preparing reports and clarifications (not binding on the student, but optional)
2-	4	Molecular Biology	DNA Replication	Lectures, Educational videos, Cooperative work, Virtual labs.	
3-	4	Molecular Biology	DNA Replication II:	Lectures, Educational videos, Cooperative work, Virtual labs.	
4-	4	Molecular Biology	The Mechanism of Transcription in Bacteria	Lectures, Educational videos, Cooperative work, Virtual labs.	
5-	4	Molecular Biology	Operons	Lectures, Educational videos, Cooperative work, Virtual labs.	
6-	4	Molecular Biology	DNA–Protein Interactions in Bacteria	Lectures, Educational videos, Cooperative work, Virtual labs.	
7-	4	Molecular Biology	Eukaryotic RNA Polymerases and Their Promoters	Lectures, Educational videos, Cooperative work, Virtual labs.	
8-	4	Molecular Biology	General Transcription Factors in Eukaryotes	Lectures, Educational videos, Cooperative work, Virtual labs.	
9-	4	Molecular Biology	Transcription Activators in Eukaryotes	Lectures, Educational videos, Cooperative work, Virtual labs.	
10-	4	Molecular Biology	Chromatin Structure and Its Effects on Transcription	Lectures, Educational videos, Cooperative work, Virtual labs.	
11-	4	Molecular Biology	RNA Processing I: Splicing	Lectures, Educational videos, Cooperative work, Virtual labs.	
12-	4	Molecular	RNA	Lectures, Educational	

		Biology	Processing II: Capping and Polyadenylation	videos, Cooperative work, Virtual labs.	
13-	2	Molecular Biology	Other RNA Processing Events and Post-Transcriptional Control of Gene Expression	Lectures, Educational videos, Cooperative work, Virtual labs.	
14-	2	Molecular Biology	The Mechanism of Translation I: Initiation	Lectures, Educational videos, Cooperative work, Virtual labs.	
15-	2	Molecular Biology	The Mechanism of Translation II: Elongation and Termination	Lectures, Educational videos, Cooperative work, Virtual labs.	
16-	2	Molecular Biology	Ribosomes and Transfer RNA	Lectures, Educational videos, Cooperative work, Virtual labs.	

12. Infrastructure	
Required reading: CORE TEXTS, COURSE MATERIALS OTHER	- Molecular biology, Robert F. Weaver 2017 - Molecular biology, Nashaat G. Mostafa, 2018 - Molecular biology, Abbas A. AlJanabi 2013
Special requirements (include for example workshops, periodicals, IT software, and websites)	-
Community-based facilities (include, for example, guest Lectures, internship, and field studies)	-

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

Program structure