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

Academic Program Specification Form For The Academic

University: Anbar
College : Education College For Pure Sciences Department :Biology
Date Of Form Completion :10-6-2023

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Dean's Name Date : / /	Dean's Assistant For Scientific Affairs Date : / / Signature	Head of Department Date : / / Signature

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Quality Assurance And University Performance ManagerDate : / /
Signature

Course description Sample

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

This course description provides a succinct summary of the most important course characteristics and the learning outcomes the student is expected to achieve Demonstrating whether they have made the most of the learning opportunities available. It must be linked to a description the program.

- Educational institution	**Anbar University - College of Education for Pure Sciences**
University department/center	**College of Education for Pure Sciences/Department of Biology**
Course name/code	**Advance Plant Physiology**
Programs in which it is included	**Master education of Biology**
Available attendance forms	**Daily**
Semester/year	**Quarterly**
Number of study hours (total)	**30**
Date this description was prepared	**2023-2024**

Course objectives:

1- **Definition of the fine structure of the plant cell and its relationship to the vital processes that take place inside the plant body,**
2- **Identification the germination process .**
3- **Explain the respiratory oxidation processes, energy release.**
4- **Identification of plant hormones and their role in plant growth.**
5- **floral reproduction mechanisms .**
6- **identification of the stresses to which the plant is exposed, and mechanisms for avoiding and resisting these stresses .**
7- **Studying water stress and temperature as examples of the subject of stress.**

Learning outcomes, teaching, learning and assessment methods

A- Knowledge and understanding

A1- The student should be familiar with the precise structure of the plant cell.

A2- The student should be familiar with the respiratory oxidation processes and energy release mechanisms.

A3- The student should be familiar with growth regulators and plant hormones and their role in plant growth and aging.

A4- The student should be familiar with germination, its types and the factors affecting it.

A5- The student should be familiar with the mechanisms of floral growth and divisions according to light periods.

A6- The student should be familiar with the types of environmental stresses that plants are exposed to and the mechanisms of resistance to them

Teaching and learning methods

Electronic lecture
In-person lecture
Video presentation
Posters and shapes

B- Subject-specific skills

B1 - The student should be able to link between the components of the cell and the vital processes that occur in it

B2 - The student should be able to explain the composition of seeds and their germination mechanisms

B3 - The student should understand the mechanisms by which plants benefit from the process of respiration and energy release and the paths of biosynthesis

B4 - The student should distinguish between long- and short-day plants and the principles of dividing plants according to the seasons and the role of the phytin pigment in plants.

B5 - The student should focus on the impact of environmental stresses and their work as determinants of plant growth.

C- Thinking skills

C1 - The student will learn about the wide range of plant adaptations to live in different environments.

C2 - The student will learn about the ability of God Almighty that created this biodiversity in the plant world.

Teaching and learning methods

Blackboard + pen + data show +Electronically on some e-learning programs such as Google Form and other forms+ Extrapolation, Analysis+ Conclusion+ The lecture Empowerment+ Discussion.

Evaluation methods

Daily Quick Exams
Live Oral Exams
Weekly Exams
Monthly Exams

11. Course Structure					
Week	Hours	ILOs	Unit/Module or Topic Title	Teaching Method	Assessment Method
1st.	2	P + D	Introduction to Plant Physiology	lecture	Daily Quiz
2nd.	2	P + D	Plant Cell: Definition + Living Components	lecture	Daily Quiz
3rd.	2	P + D	Plant Cell: Cell Wall and Non-Living Components	lecture	Daily Quiz
4th.	2	P + D	Seed and Germination	lecture	Daily Quiz
5th.	2		First Month Exam		
6th.	2	P + D	Plant Hormones	lecture	Daily Quiz
7th.	2	P + D	Respiratory Oxidation	lecture	Daily Quiz
8th.	2	P + D	Floral Growth	lecture	Daily Quiz
9th.	2	P + D	Floral Growth .. Synchrony	lecture	Daily Quiz
10th.	2		Second Month Exam		
11th.	2	P + D	Stress + Definition and Types of Stress + Resistance Mechanisms	lecture	Daily Quiz
12th.	2	P + D	Drought Stress	lecture	Daily Quiz
13th.	2	P + D	Heat Stress	lecture	Daily Quiz
14th.	2	P + D	General Review	Discussion	
15th.	2		Optional Exam		

Admissions	
1. Approval of admission conditions for students in accordance with the regulations of the Ministry of Higher Education and Scientific Research (admission to graduate studies is by university order from the university presidency) **2. To pass the department's personal examination.** **3. Bachelor's average to obtain a master's degree, and bachelor's and master's averages to obtain a doctoral degree.** **4. The department's capacity includes postgraduate students in general, private, and privileges channels.**	**Prerequisites**
4	**The smallest number of gradute students**
15 - 5	**The largest number of graduate students**

Graduation research projects	**Social services (including, for example, guest lectures, vocational training, and field studies(**
University	Required readings: 1-Course books 2-Other
Solid research published in solid scientific journals on the Internet and electronic media	Special requirements
1- https://www.ncbi.nlm.nih.gov/	Social services (including, for example, guest lectures, vocational training, and field studies(

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	Anbar University, College of Education for Pure Sciences
2. University Department/Centre	Dep. Biology
3. Course title/code	
4. Programme(s) to which it contributes	MSC.
5. Modes of Attendance offered	Presence
6. Semester/Year	2023- 2024
7. Number of hours tuition (total)	30
8. Date of production/revision of this Specification	6-6-2024
9. Aims of the Course	
Teaching the student, the advance of biotechnology and the developments of this science Types of fermentation The applied importance of biotechnology Applied of fermentation	

10· Learning Outcomes, Teaching, Learning and Assessment Method

A- Knowledge and Understanding

A1.A2. Learn about the biotechnology

A2. The concept of biotechnology

A3. Bioproduction

A4. Application of biotechnology

A5. Enabling the student to conduct bioproduction experiments

A6 .

B. Subject-specific skills

B1. Developing student skills in isolation industrial microorganism

B2. Introducing the student to the factors affecting the growth of organism

B3. Preparing the culture media

B4. Introducing the student to the types of biological fermentations

Teaching and Learning Methods

Using modern technology in education through display devices in the thermotical aspect using data show. while the practical aspect is in Laboratories through practical experiments.

Assessment methods

Evaluation methods
Daily and monthly examinations + write reports

C. Thinking Skills

External tests 2- Various and interconnected questions to test the student's skills

The student must actively participate in thermotical and practical lectures

Teaching and learning methods

Theory, practice and discussions

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

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	2		Introduction in biotechnology	In presence - Theoretical	
2	2		**Applied of biotechnology**	=	
3	2		Types of biotechnology	=	
4	2		Types of biotechnology	=	
5	2		Inoculum	=	
6	2		Environmental factors affecting on production		
7	2		First monthly exam		
8	2		Preparing the culture media	=	
9	2		Fermentation	=	
10	2		=	=	
11	2		Down stream		
12	2		=	=	
13	2		Second monthly exam		
14	2		Production of SCP	=	
15	2		Production of microbial enzymes	=	

12. Infrastructure

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

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

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 Pure Sciences
3. Course title/code	Advanced Biochemistry
4. Programme(s) to which it contributes	Master's degree in life sciences
5. Modes of Attendance offered	
6. Semester/Year	Semester
7. Number of hours tuition (total)	30 hr
8. Date of production/revision of this specification	13-6-2024
9. Aims of the Course	
Giving an advanced idea about biochemistry, types of life molecules, their sources and composition.	
An explanation of the important organic molecules of the living cell and their vital functions.	

10· Learning Outcomes, Teaching ,Learning and Assessment Methode

A- Knowledge and Understanding1. The master's student will learn about the chemical structure of large life molecules.

2. The master's student is familiar with the chemical reactions of these life molecules.

3. The master's student learned to name those molecules' structural and functional differences.
A2.
A3.
A4.
A5.
A6 .

B. Subject-specific skills

1. The master's student sequences the stages of digestion of life molecules.

2. The student classifies the primary materials involved in the synthesis of life molecules.

3. The student arranges the relationship between the living molecules within the living organism.

Teaching and Learning Methods

1. Specialized lectures.
2. Collect lecture information from different sources.
3. Reports and discussion.
4. Self-education and dialogues.

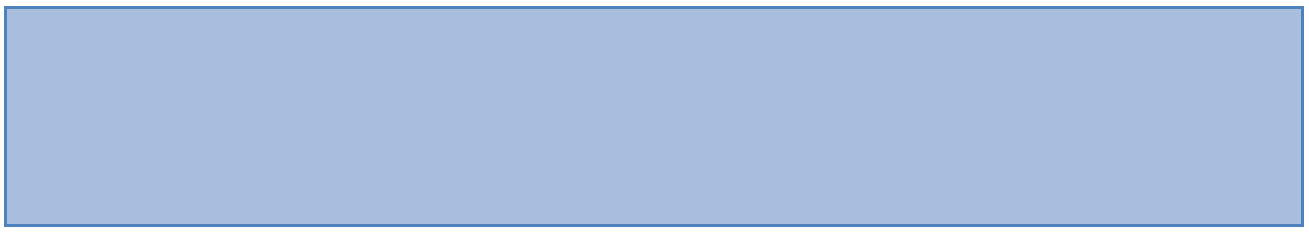
Assessment methods

1. Quick tests (Quiz).
2. Monthly exams.
3. Semester exams.

C. Thinking Skills
1- Understanding life and biological complexities: It helps students understand how living organisms are structured and how they work, which enhances emotional awareness of biodiversity and the complexities of biological systems.
2- It promotes respect and appreciation for the environment and living creatures and encourages moral values such as integrity, honesty and cooperation in the context of scientific research and laboratory work.

Teaching and Learning Methods

Assessment methods



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

1. Adopting the discussion method for the vocabulary of the academic subject.
2. Preparing scientific reports.
3. Adopting scientific methods in analysis.

11. Course Structure

Week	Hours	ILOs	Unit/Module orTopic Title	Teaching Method	ssessment Method
١	٢ hours lecture	Carbohydrates	Carbohydrates, their importance, classification and properties - symmetry and optical activity of monosaccharides, cyclic structure, Howarth's formula. Sugar reactions - the effect of concentrated and dilute bases and the effect of oxidizing and reducing agents on monosaccharides, fermentation, formation of esters, and deoxysaccharides.	lecture	Weekly tests and monthly exams
٢	٢ hours lecture	Carbohydrates	Derivatives of monosaccharides (amino sugars, glycosides and uronic acids). Disaccharides - maltose, sucrose and lactose, trisaccharides.	lecture	Weekly tests and monthly exams
٣	٢ hours lecture	Carbohydrates	Polysaccharides: homopolysaccharides - starch, glycogen, cellulose, and heteropolysaccharides - mucosaccharides, their types and functions.	lecture	Weekly tests and monthly exams
٤	٢ hours lecture	Fats	Fats, their importance and functions, fatty acids, classification of fats - neutral fats and their interactions. Reactions of glycerol, waxes, and complex-phosphorous fats containing and devoid of nitrogen.	lecture	Weekly tests and monthly exams
٥	٢ hours lecture	Fats	Sphingolipids - ceramides, glycolipids - cancleosides. Derived fats - terpenes, steroids, cholesterol, steroid hormones of all kinds.	lecture	Weekly tests and monthly exams
٦	٢ hours lecture	Amino acids	Amino acids, their types, properties and chemical reactions. Amino group transfer, ninhydrin reaction, Sanker and Edman.	lecture	Weekly tests and monthly exams
٧	٢ hours lecture	Amino acids	Rare amino acids in proteins, non-essential amino acids, peptides - some vitally important peptides - glutathione. Hydrolysis of peptides - their digestion and degradation of the carboxyl terminus, the study of enzymes such as trypsin and pepsin.	lecture	Weekly tests and monthly exams
٨	٢ hours lecture	Proteins	Chapter Five: Proteins - their functional and structural classification - fibrous and globular	lecture	Weekly tests and

			proteins, some complex proteins - phosphorylated, fatty.		monthly exams
٩	٢ hours lecture	Proteins	Supplementation of synthesized proteins, derived proteins, protein denaturation and denaturation, electrophoresis, protein purification.	lecture	Weekly tests and monthly exams
١٠	٢ hours lecture	Nucleotides and nucleic acids	Nuclear proteins - their types and degradation, types of nucleic acids, nucleic acid bases - purines and their derivatives (uric acid and caffeine), pyrimidines and their derivatives, ribonucleic acid - its structure and types.	lecture	Weekly tests and monthly exams
١١	٢ hours lecture	Nucleotides and nucleic acids	Doxyribose DNA - structure, Watson-Crick model, chromosome, gene, genetic code, viruses.	lecture	Weekly tests and monthly exams
١٢	٢ hours lecture	Enzymes	Chapter Seven: Enzymes - their nature and difference from inorganic cofactors, mechanics and theories of enzyme action, chemical structure of the enzyme. General properties of enzymes (specialization of their action, specificity of their action),	lecture	Weekly tests and monthly exams
١٣	٢ hours lecture	Enzymes	Optimal conditions for enzymatic reactions, competitive and non-competitive inhibition, conjugates of organic and inorganic enzymes, homologous enzymes, regulatory enzymes, classification and naming of enzymes, uses of enzymes.	lecture	Weekly tests and monthly exams
١٤	٢ hours lecture	Vitamins	Vitamins - their definition, classification and importance, Vitamin A - its generators and vital activity, symptoms of deficiency and sources, Vitamin D - its generators and effectiveness, symptoms of deficiency and sources.	lecture	Weekly tests and monthly exams
١٥	٢ hours lecture	Hormones	Chapter Nine: Hormones - their definition, characteristics, classification, types of glands in the human body, and the thyroid gland. The thyroid gland - its hormones T1, T2, T3, T4, steps in the biosynthesis of thyroid hormones, activities of thyroid hormones..	lecture	Weekly tests and monthly exams

12. Infrastructure	
Required reading: · CORE TEXTS · COURSE MATERIALS · OTHER	Introduction to biochemistry Dr. Khawla Al Falih Biochemistry Dr. Basil Dalali

Special requirements (include for example workshops, periodicals, IT software, websites)	Biochemistry by Harper
Community-based facilities (include for example, guest Lectures , internship , field studies)	Iraqi academic journals website, accredited scientific journals, Pubmed

13. Admissions	
Pre-requisites	
Minimum number of students	10
Maximum number of students	18

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	Anbar universe. Education coll. For pure sciences
2. University Department/Centre	biology
3. Course title/code	
4. Programme(s) to which it contributes	
5. Modes of Attendance offered	E. and direct lectures
6. Semester/Year	First semester
7. Number of hours tuition (total)	2
8. Date of production/revision of this specification	9-6-2024
9. Aims of the Course	
A1. nucleic acid	
A2. genetic inheritance,	
A3. protein synthesis	
A4. gene excretion	
A1. nucleic acid	
A2. genetic inheritance,	
A3. protein synthesis	

10· Learning Outcomes, Teaching ,Learning and Assessment Methode
A- Knowledge and Understanding A1. nucleic acid A2. genetic inheritance, A3. protein synthesis A4. gene excretion
B. Subject-specific skillsB1.mechanisim of protein synthesis B2.gen SOS
Teaching and Learning Methods
Assessment methods
Electronic and direct lectures
C. Thinking Skills C1. C2. C3. C4.
Teaching and Learning Methods
DNA and RNA extraction methods Sequencing mechanism’s
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	Assessment Method
1st.	2	P + D	Molecular genetics	lecture	Daily Quiz
2nd.	2	P + D	Central dogma	lecture	Daily Quiz
3rd.	2	P + D	Monthly exam	lecture	Monthly exam
4th.	2	P + D	Genetic code	lecture	Report
5th.	2	P + D	Protein synthesis	lecture	Daily Quiz
6th.	2	P + D	Monthly exam	lecture	Monthly exam
7th.	2	P + D	Transcription control	lecture	Seminar
8th.	2	P + D	Translation control	lecture	Daily Quiz
9th.	2	P + D	Monthly exam	lecture	Monthly exam
10th.	2	P + D	Gene excretion	lecture	Daily Quiz
11th.	2	P + D	regulation of GE	lecture	report
12th.	2	P + D	Monthly exam	lecture	Monthly exam
13th.	2	P + D	SOS mechanisms	lecture	Seminar
14th.	2	P + D	Control mechanisms	lecture	Daily Quiz
15th.	2	P + D	Monthly exam	lecture	Monthly exam

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

13. Admissions	
Pre-requisites	NCBI
Minimum number of students	10
Maximum number of students	20

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	Anbar universe. Education coll. For pure sciences
2. University Department/Centre	biology
3. Course title/code	
4. Programme(s) to which it contributes	
5. Modes of Attendance offered	E. and direct lectures
6. Semester/Year	second semester
7. Number of hours tuition (total)	2
8. Date of production/revision of this specification	12-6-2024
9. Aims of the Course	
A1. Scientific research method	
A2. The student learns how to write scientific research	
A3. To learn to correspond with respectable magazines	
A4. That the student learns how to choose a research problem or master's thesis.	

10· Learning Outcomes, Teaching ,Learning and Assessment Methode
A- Knowledge and Understanding B- A1- The student must be familiar with the types of scientific research A2- The student gets to know the types of local and international magazines A3- That the student becomes familiar with reliable magazines A4- The student should know how to write scientific research, reviews, short research papers, etc A5- The student should become familiar with the mechanism of writing a master's thesis A6- The student should know how to choose a research problem and how to address it and present it in an impressive scientific manner
B. Subject-specific skills B1 - The student learns how to write scientific research B2 - To learn to correspond with respectable magazines B3- That the student learns how to choose a research problem or master's thesis.
Teaching and Learning Methods
Assessment methods
Electronic and direct lectures
C. Thinking Skills 1- In-person and electronic lecture 2- Brainstorming 3- Smart board.
Teaching and Learning Methods
Writing scientific research and a master's thesis
Assessment methods
Daily oral exams and Monthly exams

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

D1- That the student recognizes God's power in the individual's thinking process and his writing skill.

D2- That the student recognizes his personal ability to coordinate the course of scientific research

D3- That the student knows how to identify important information

11. Course Structure

Week	Hours	ILOs	Unit/Module or Topic Title	Teaching Method	Assessment Method
1st.	2	P + D	Introduction to the scientific research method:	lecture	Daily Quiz
2nd.	2	P + D	• Definition: method, research, scientific research method	lecture	Daily Quiz
3rd.	2	P + D	• The importance of scientific research methods	lecture	Monthly exam
4th.	2	P + D	• Advantages of scientific research methods	lecture	Report
5th.	2	P + D	• Types of scientific research methods	lecture	Daily Quiz
6th.	2	P + D	• Science and the characteristics of scientific knowledge	lecture	Monthly exam
7th.	2	P + D	Preparing and publishing scientific research:	lecture	Seminar
8th.	2	P + D	Methods of preparing scientific research:	lecture	Daily Quiz
9th.	2	P + D	the address. the introduction.	lecture	Monthly exam
10th.	2	P + D	Research problem.	lecture	Daily Quiz
11th.	2	P + D	Monthly exam 1	lecture	report
12th.	2	P + D	The limits of the study. The method used. Questions and hypotheses.	lecture	Monthly exam
13th.	2	P + D	Theoretical framework. The practical side. Results, recommendations and proposals.	lecture	Seminar
14th.	2	P + D	Thesis or dissertation, periodicals, bulletins, reports, books	lecture	Daily Quiz
15th.	2	P + D	Mistakes made by researchers during scientific research	lecture	Monthly exam

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

13. Admissions	
Pre-requisites	google
Minimum number of students	10
Maximum number of students	20

HIGHER EDUCATION PERFORMANCE REVIEW: PROGRAMME REVIEW

COURSE SPECIFICATION

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

1. Teaching Institution	**University Of Anbar/ College Of Education For Humanities**
2. University Department/Centre	**Geography**
3. Course title/code	
4. Programme(s) to which it contributes	**Advanced Trends in Teaching**
5. Modes of Attendance offered	**Postgraduate**
6. Semester/Year	**First 2023-2024**
7. Number of hours tuition (total)	**30 Hour**
8. Date of production/revision of this specification	**5/9/2023**
9. Aims of the Course	
1- Developing graduate students' knowledge of the most important foundations and standards of teacher preparation and teacher training programs and systems in various education systems in various developed countries of the world. 2- Developing graduate students' awareness of the most important research issues raised in the field of teaching methods and training them to discuss these issues and reach appropriate solutions to them based on the educational field reality. 3- Develop academic and professional skills to be able to synchronize continuous learning. 4- Giving students insight into educational goals and skills and their importance in the success of the educational learning process	

10· Learning Outcomes, Teaching ,Learning and Assessment Methods

A. Knowledge and Understanding

A1- To determine the objectives of teaching general and special geography, including educational ones.

A2- To demonstrate the skills of teaching geography and know the concept of strategy.

A3- To explain how to use teaching strategies in the educational process.

A4- To know the concepts of methods and strategy.

A5- To clarify the relationship between university teaching methods and school teaching.

A6- To plan a lesson in the style of a lecture and how to prepare and present it.

A7- To show the impact of the effective teaching strategy on the success of the educational process.

A8- To provide a model lesson on concept maps in teaching geography.

A9- Applying a model lesson using the brainstorming strategy.

A10- To evaluate the constructivist theory based on the basis of many strategies on it.

A11- To distinguish between visual thinking and e-learning and the extent of their usefulness in education.

A12- Explain the importance of divergent thinking in developing thinking.

A13- To highlight the role of active learning strategies in the educational process.

A14- To explain the important role of reciprocal teaching in developing students' skills.

A15- To use educational means in teaching geography.

B. Subject-specific skills

B1- - Master the basic professional and modern skills in the field of teaching methods.

B2- Develops existing teaching methods and tools in the field of teaching methods.

B3- Uses modern technological means to serve the practice of the teaching profession.

B4- He plans to develop professional practice and develop student performance.

B5- Makes professional decisions in different professional contexts.

B6- Practicing creativity/innovation.

B7- Participates in discussion and dialogue based on evidence and evidence.

B8- Provides working papers and reports in the field of teaching methods

Teaching and Learning Methods

Discussion and dialogue, assigning students to perform group work, PowerPoint presentations, student self-activities, brainstorming, problem solving, reports, research, and work papers.

Assessment methods

1. Achievement test (objective and essay), oral test, Micro-teaching

C. Thinking Skills

C1- Forming tendencies towards using thinking methods in solving daily problems.

C2- Volunteering to participate in group work inside and outside the classroom.

C3- Savor the beauty of the designs applied and planned by researchers for educational strategies.

C4- Improving students' roles and making them creative.

C5- Developing values and trends and the possibility of actually achieving them.

C6- Describing the student's performance that he is expected to perform after completing the teaching work, not what he feels or what he thinks.
Teaching and Learning Methods
Discussion and dialogue, assigning students to perform group work, PowerPoint presentations, student self-activities, brainstorming, problem solving, reports, research, and work papers.
Assessment methods
1. Achievement test (objective and essay), oral test, Micro-teaching

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

D1- Connects different knowledge to solve professional problems.
D2- Conduct a research study or write a systematic scientific study on a research problem.
D3- Evaluates risks in professional practices in the field of specialization.
D4- Plans to develop performance in the field of the specialized subject.
D5- Master the skills of effective communication of various types.
D6- Uses information technology to serve professional practice.
D7- Uses various sources to obtain information and knowledge.
D8- Works in a team and in different professional contexts.
D9- Continue continuous self-learning.
D10- Master the basic and modern professional skills in the field of specialization.
D11- Writes and evaluates professional reports.

11. Course Structure

Week	Hours	ILOs	Unit/Module or Topic Title	Teaching Method	Assessment Method
1	2	Identifying geography, its general and specific objectives, the objectives of teaching it, and its	Geography (objectives of teaching, general and specific objectives, and its importance).	**Discussion, dialogue, presentations, collaborative sessions, and working papers**	**Written oral examinations, note card**

		importance as it is the basis for the subsequent steps.			
2	**2**	Identify and develop skills in teaching geography.	Geography teaching skills	**Discussion, dialogue, presentations, collaborative sessions, and working papers**	**Written oral examinations, note card**
3	**2**	Learn how to use each educational strategy individually	Teaching strategies	**Discussion, dialogue, presentations, collaborative sessions, and working papers**	**Written oral examinations, note card**
4	**2**	Learn about teaching methods in terms of concept and types, and their importance in the educational process and their applications.	Techniques of Teaching (concept, types)	**Discussion, dialogue, presentations, collaborative sessions, and working papers**	**Written oral examinations, note card**
5	**2**	Explaining the role and types of university teaching in the educational learning process.	University teaching style	**Discussion, dialogue, presentations, collaborative sessions, and working papers**	**Written oral examinations, note card**
6	**2**	Explaining how to prepare the lecture and the time and place conditions	Lecture (prepared and presented).	**Discussion, dialogue, presentations, collaborative sessions, and working papers**	**Written oral examinations, note card**

		for its presentation.			
7	**2**	Explaining the role of effective teaching strategy in developing skills.	Effective teaching strategy	**Discussion, dialogue, presentations, collaborative sessions, and working papers**	**Written oral examinations, note card**
8	**2**	Practical application of concept maps in geography lessons, as they are closely related to them.	Concept maps in teaching geography	**Discussion, dialogue, presentations, collaborative sessions, and working papers**	**Written oral examinations, note card**
9	**2**	Identify the brainstormin g strategy and its importance in generating and developing ideas.	Brainstorming	**Discussion, dialogue, presentations, collaborative sessions, and working papers**	**Written oral examinations, note card**
10	**2**	Clarifying the role of constructivist theory in the educational process	Constructivist theory	**Discussion, dialogue, presentations, collaborative sessions, and working papers**	**Written oral examinations, note card**
11	**2**	Explaining the role of e-learning and using visual thinking in developing students' skills.	Visual thinking and e-learning	**Discussion, dialogue, presentations, collaborative sessions, and working papers**	**Written oral examinations, note card**
12	**2**	Emphasizing the use of divergent thinking in the educational	Divergent thinking	**Discussion, dialogue, presentations, collaborative sessions,**	**Written oral examinations, note card**

		process to benefit from it in developing thinking.		**and working papers**	
13	**2**	Applying active learning strategies in education to benefit from them in developing fluency and flexibility for students.	Active learning strategies	**Discussion, dialogue, presentations , collaborative sessions, and working papers**	**Written oral examinations, note card**
14	**2**	Uses of reciprocal teaching strategy in developing educational skills.	Reciprocal teaching	**Discussion, dialogue, presentations , collaborative sessions, and working papers**	**Written oral examinations, note card**
15	**2**	The use of Instructional Aids in teaching and their importance in the success of the Instructional process.	Employing Instructional Aids in teaching	**Discussion, dialogue, presentations , collaborative sessions, and working papers**	**Written oral examinations, note card**

12. Infrastructure	
Required reading: · **CORE TEXTS** · **COURSE MATERIALS** · **OTHER**	**Al-Hashemi, Abdul Rahman and Taha Ali Hussein (2008), Modern Strategies in the Art of Teaching** **Obaidat, Dhouqan, Abu Saeed Suhaila (2007), Teaching Strategies in the Twenty-First Century, Teacher and Educational Supervisor's Guide** **Qatami, Youssef (2013), Cognitive learning and teaching strategies** **Darwaza, Afnan Nazira (2004), Educational Psychology Strategies**

	Al-Ayasrah, Walid Tawfiq (2011), Strategies for Teaching Thinking and its Skills
Special requirements (include for example workshops, periodicals, IT software, websites)	Suwaidan Suaadah Hamdi and Haider Abdel Karim (2018), Modern trends in teaching in scientific and technological development. Suwaidan Suaadah Hamdi and Haider Abdel Karim (2018), Classroom Teaching Skills. **Abu Riyash, Muhammad (2009), The origins of learning and teaching strategies** **Bin Khamis, Abdullah (2009), Methods of Teaching Science, Concepts and Practical Applications** **Abdel Karim, Wathiq, and Zainab Hamza (2012), the constructivist approach, models and strategies in teaching scientific concepts** **Farman, Shatha Adel and Azhar Alwan (2015), Learning and teaching strategies and their practical applications** **Al-Ajrash, Haider Jassim (2013), Contemporary strategies and methods in teaching history.**
Community-based facilities (include for example, guest Lectures , internship , field studies)	**Wahib, Muhammad Yassin, Zaidan, Nada Fattah (2012), thinking development programs, their types, strategies and methods.** **Abu Shreikh, Shaher Theeb (2008), Teaching Strategies**

13. Admissions	
Pre-requisites	**1- Employing the latest results of specialized scientific research in teaching.** **2- Evaluating students' results in teaching methods and their ability to apply them in classroom educational situations.** **3- Holding practical workshops and lectures on educational strategies and implementing solutions.** **4. Employing teaching models with theoretical foundations in teaching plans to address difficulties in understanding, low academic achievement, and develop diverse thinking styles.**
Minimum number of students	**12**
Maximum number of students	**15**

Course description Sample

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

This course description provides a succinct summary of the most important course characteristics and the learning outcomes the student is expected to achieve Demonstrating whether they have made the most of the learning opportunities available. It must be linked to a description the program.

- Educational institution1	**Anbar University - College of Education for Pure Sciences**
University department/center	**College of Education for Pure Sciences/Department of Biology**
Course name/code	**Advance Human Physiology **
Programs in which it is included	**Master of Biology**
Available attendance forms	**Daily**
Semester/year	**2-Semester**
Number of study hours (total)	**30**
Date this description was prepared	**2023-2024**
Course objectives:	
Teaching advanced animal physiology should lead to:	
- Teaching the student advanced human physiology and the developments of this science. - Fill the gap in Physiology lecturers in the market of labor in Iraq. - Fill the gaps of technical staff in the undergraduate laboratories by participating in delivering practical sessions as part of their training . - Following up students for their postgraduate studies. That is, graduates will be able to easily undertake postgraduate (doctoral) studies abroad and locally.	

Learning outcomes, teaching, learning and assessment methods
A- Knowledge and understanding
A1Extrapolation

A2- Comprehension and analysis

A3- Conclusion

A4- The lecture

A5- Empowerment of scientific specialization

B- Subject-specific skills

B1 - Developing the skill in knowing the functions of the organs and using them in the practical aspect
B2 - Developing the skill of how to determine the vital function of an organ and its disorders.
B3 - Developing the skill of employing theoretical information for use in the practical aspect.

C- Thinking skills

C1- Thinking that explores the truth through (question and answer)
C2- Managing societal problems by finding appropriate solutions to them through academic concepts
C3- Spreading the spirit of interaction and attraction among students through academic competition
C4- Urging students to employ what they have learned in public life

Teaching and learning methods

Blackboard + pen + data show +Electronically on some e-learning programs such as Google Form and other forms+ Extrapolation, Analysis+ Conclusion+ The lecture Empowerment+ Discussion.

Evaluation methods

- Daily, weekly, monthly and final exams
- Reports and assignments
- Daily discussions

General and transferable skills (other skills related to employability and personal development.

C1- Accuracy in determining the nature of the proper performance of the function of a vital organ, and the conditions affecting it.
C2- Credibility and transparency in scientific research
C3- Instilling the foundations of the value of physiology, its importance in all fields, and its relationship with other sciences.

Course structure

Course structure					
Evaluation method	**Teaching method**	**Name of the unit/course or subject**	**Required learning outcomes**	**hours**	**The week**
Attendance and motivational questions.	**A video lecture with a text lecture with a live broadcast**	**A general introduction to the philosophy of blood, its components and functions**	Develop theoretical skills	**2**	**1**
Exams and daily activities	**A video lecture with a text lecture with a live broadcast**	- Blood production, and production sites by age. - Red blood cell production and its disorders	Develop theoretical skills	**2**	**2**
Exams and daily activities	**A video lecture with a text lecture with a live broadcast**	**White blood cell production, production sites and composition, and some disorders**	Develop theoretical skills	**2**	**3**
Exams and daily activities	**A video lecture with a text lecture with a live broadcast**	**Inflammation, phagocytosis and blood coagulation**	Develop theoretical skills	**2**	**4**
Attendance and motivational questions	**A video lecture with a text lecture with a live broadcast**	**The endocrine system and its hormones**	Develop theoretical skills	**2**	**5**
Attendance and motivational questions	**A video lecture with a text lecture with a live broadcast**	**The most important disorders of the endocrine glands and hormonal systems**	Develop theoretical skills	**2**	**6**
Attendance and motivational questions	**A video lecture with a text lecture with a live broadcast**	**First exam**	Develop theoretical skills	**2**	**7**
Attendance and motivational questions	**A video lecture with a text lecture with a live broadcast**	**The Nervous system and some of its disorders**	Develop theoretical skills	**2**	**8**
Attendance and motivational questions with grade	**A video lecture with a text lecture with a live broadcast**	**Oxidative stress, antioxidants and their functional importance**	Develop theoretical skills	**2**	**9**
Attendance and motivational questions	**A video lecture with a text lecture with a live broadcast**	**Liver and pancreas disorders**	Develop theoretical skills	**2**	**10**
Attendance and motivational questions	**A video lecture with a text lecture with a live broadcast**	**Growth disorders, cellular differentiation and cancer**	Develop theoretical skills	**2**	**11**
Attendance and motivational questions	**A video lecture with a text lecture with a live broadcast**	**Discussing scientific questions and homework**	Develop theoretical skills	**2**	**12**

Attendance and motivational questions	**A video lecture with a text lecture with a live broadcast**	**The urinary system and its disorders**	Develop theoretical skills	**2**	**13**
Attendance and motivational questions with grade	**A video lecture with a text lecture with a live broadcast**	**Discussing the quarterly report**	Develop theoretical skills	**2**	**14**
		Second exam		**2**	**15**

12. Infrastructure

1. Guyton and Hall, translated by Dr. Sadiq Al-Hilali (1997), a reference in medical physics. International Academy for Printing and Publishing - Beirut. 2. Al-Alawji, Sabah Nasser (2008). Endocrine and gonadal hormones. Dar Al-Fikr Printing and Publishing Foundation, Amman - Jordan.	**Required prescribed books**
Guyton,A.C.and Hall,J.E.(2016) Text book of medical physiology.13th.Elsevier Saunders.China.	**- Main references (sources).**
Guyton,A.C.and Hall,J.E.(2016) Text book of medical physiology.13th.Elsevier Saunders.China.	**Recommended books and references (scientific journals, reports,...)**
https://libcat.uobaghdad.edu.iq/fullrecr.php?nid=3449&hl=ara https://libcat.uobaghdad.edu.iq/fullrecr.php?nid=29685&hl=ara	**Electronic references, websites...**

13. Course development plan

Ensuring the exchange of experiences and visits made by the teaching staff to universities and colleges outside Iraq play a helpful role in formulating curricula to serve the development of the educational process.

Developing the curriculum by continuously keeping pace with the development taking place in the study programs of the corresponding departments in international universities in the nature of the study materials that meet the need and the extent to which they cover the requirements of the productive and academic activities of the beneficiaries.

Course description Sample

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

This course description provides a succinct summary of the most important course characteristics and the learning outcomes the student is expected to achieve Demonstrating whether they have made the most of the learning opportunities available. It must be linked to a description the program.

Educational institution١	**University of Anbar - College of Education for Pure Sciences**
University department/center	**College of Education for Pure Sciences/Department of Biology**
Course name/code	**Diagnostic bacteriology**
Programs in which it is included	**M.Sc. in Biology**
Available attendance forms	**Daily**
Semester/year	**Quarterly**
Number of study hours (total)	**٣٠**
Date this description was prepared	**2023-2024**

Course objectives:

This course aims to:

1- **Preparing specialists in the field of bacterial pathogenesis and practically to fill a market need the job.**
2- **I finally conducted a scientific study and tried to keep up with scientific development in the field of bacterial diagnosis.**
3- **Cooperating with the state and the private sector by providing advice, scientific advice and procedures laboratory analyzes in the field of bacteriology, special bacterial diagnosis.**
4- **Encouraging scientific research and providing students with basic skills in bacterial diagnosis. and their applications in the fields Medical, environmental and food industries.**
5- **Volumes on solving scientific problems to serve national development plans.**

Learning outcomes, teaching, learning and assessment methods

A- Knowledge and understanding

A1-Enabling students to obtain knowledge and understanding of the intellectual framework and foundations of bacterial diagnosis applications in various fields.

A2- Enabling students to obtain knowledge and understanding of microbiology and bacterial diagnosis in the medical, industrial, environmental and food fields.

A3- Enabling students to obtain knowledge and understanding of bacterial diagnosis and diseases.

A4- Bringing the student to a level where he has the ability to interpret the results (research) and turn them into a work reality, from which he will benefit in the future during study and after graduation.

Teaching and learning methods

Blackboard + pen + data show

B- Subject-specific skills

B1 - Scientific and practical skills.
B2 -Memorization and analysis skills. Skills for use and development.
B3 - Developing the student's decision-making skill as it is the essence of the educational and statistical process.

C- Thinking skills

1- External tests
2- Various and interconnected questions to test the student's skills
3- Enabling students to solve problems related to the intellectual framework of the foundations and applications of bacterial diagnosis.
4- Enabling students to solve problems related to bacteriology and medical, industrial, environmental, and food microbiology.
5- Enabling students to solve problems related to bacterial pathology.
6- Enabling students to solve problems related to bacterial diagnosis.

Teaching and learning methods

Blackboard + pen + data show +Electronically on some e-learning programs such as Google Form and other forms+ Extrapolation, Analysis+ Conclusion+ The lecture Empowerment+ Discussion.
Solving a group of practical examples by the academic staff.
Participation of students during the lecture to solve some scientific problems

Evaluation methods
Daily and monthly examinations
General and transferable skills (other skills related to employability and personal development.

Course structure					
Evaluation method	**Teaching method**	**Name of the unit/course or subject**	**Required learning outcomes**	**hours**	**The week**
Attendance and motivational questions.	**A video lecture with a text lecture with a live broadcast**	Introduction in diagnostic bacteriology	**The student to learn the basic principles of diagnostic bacteriology**	**2**	**-**
Exams and daily activities	**A video lecture with a text lecture with a live broadcast**	Isolation Techniques and Cultural Media	**The student learns the principles isolation techniques and cultural media**	**2**	**-**
Exams and daily activities	**A video lecture with a text lecture with a live broadcast**	Staining reaction, Gram stain, Other types of Stain	**The student will learn the principles of staining reaction (Gram stain)**	**2**	**-**
Exams and daily activities	**A video lecture with a text lecture with a live broadcast**	Morphology of the bacterial colony (Cultural characteristics)	**The student learns the principles of bacterial cultural characteristics**	**2**	**-**
Attendance and motivational questions	**A video lecture with a text lecture with a live broadcast**	API 20 E Identification System for Enterobacteriaceae and Other Gram-negative Rods	**The student learns the principles of API 20 E Identification System**	**2**	**-**
Attendance and motivational questions	**A video lecture with a text lecture with a live broadcast**	Gram Positive Cocci Genus: Staphylococcus	**The student learns the principles of Genus: Staphylococcus**	**2**	**-**
Attendance and motivational questions	**A video lecture with a text lecture with a live broadcast**	Gram Positive Cocci Genus: Streptococci	**The student should know the Streptococci**	**2**	**-**
Attendance and motivational questions	**A video lecture with a text lecture with a live broadcast**	Gram Positive Bacilli Genus: Bacillus	**The student learns the principles of Genus Bacillus**	**2**	**-**
Attendance and motivational questions with grade	**A video lecture with a text lecture with a live broadcast**	Gram Positive Bacilli Genus: Clostridium	**The student will learn the principles of Genus: Clostridium**	**2**	**-**
Attendance and motivational questions	**A video lecture with a text lecture with a live broadcast**	Enterobacteriaceae	**The student will learn the principles of Enterobacteriaceae**	**2**	**-**

Attendance and motivational questions	**A video lecture with a text lecture with a live broadcast**	E. coli	**The student learns about E. coli**	**2**	**-**
Attendance and motivational questions	**A video lecture with a text lecture with a live broadcast**		**Exam**	**2**	**-**
Attendance and motivational questions	**A video lecture with a text lecture with a live broadcast**	Klebsiella	**The student learns about Klebsiella**	**2**	**-**
Attendance and motivational questions with grade	**A video lecture with a text lecture with a live broadcast**	Salmonella, Shigella and Proteus	**The student learns the about Genus Salmonella, Shigella and Proteus**	**2**	**-**
		Monthly exam	**Exam**		

Admissions	
1. Approval of admission conditions for students in accordance with the regulations of the Ministry of Higher Education and Scientific Research (admission to graduate studies is by university order from the university presidency) **2. To pass the department's personal examination.** **3. Bachelor's average to obtain a master's degree, and bachelor's and master's averages to obtain a doctoral degree.** **4. The department's capacity includes postgraduate students in general, private, and privileges channels.**	**Prerequisites**
4	**The smallest number of gradute students**
15 - 5	**The largest number of graduate students**

Graduation research projects	**Social services (including, for example, guest lectures, vocational training, and field studies(**

Infrastructure	
Jawetz, M. & Adelberg's. 2013. Medical Microbiology , Twenty-Sixth Edition. The McGraw-Hill Companies, Inc. USA Website: https://www.ncbi.nlm.nih.gov/books/NBK8526/	Required readings: 1-Course books 2-Other
	Special requirements
	Social services (including, for example, guest lectures, vocational training, and field studies(

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 for pure sciencs – University of Anbar
2. University Department/Centre	Biology
3. Course title/code	
4. Programme(s) to which it contributes	Master's or PhD
5. Modes of Attendance offered	Attendance
6. Semester/Year	Summary Statistical
7. Number of hours tuition (total)	30 hours
8. Date of production/revision of this Specification	2024
9. Aims of the Course	
The course aims to introduce the student to the scientific foundations of designing and analyzing theoretical and practical experiments, and to familiarize himself with modern techniques relevant to the plant breeding.	

10· Learning Outcomes, Teaching ,Learning and Assessment Methode

A- Knowledge and Understanding

A1- Expanding the student's theoretical and practical horizons.
A2- Reviewing recent and critical experiments related to statistical sciences.
A3- Identifying the types of statistical tests and designs for experiments.
A4- Identifying the processes and conditions surrounding the research or experiment.
A5- Increasing the student's practical experience.
A6- Developing students' skills for field work to implement research .

B. Subject-specific skills

B1 - Providing students with the skills required in designing experiments and their impact on making the right decision.
B2 - Increasing students' awareness in identifying modern trends in designing experiments, which include modern technologies via computers.
B3 - Teaching students modern methods in interpreting the results obtained from their studies.

Teaching and Learning Methods

- The method of delivering lectures regarding the theoretical framework of the subject.
2- The method of explanation, interpretation and linking
3- Method of explanation using electronic means of explanation (Data show).
4- Use the regular blackboard and pen to clarify and explain some of the things that need to be explained to the student.

Assessment methods

1-Weekly tests (quiz) and semester and final exams (theoretical and practical).
2- Interaction within the lecture
3- Attendance...
4- Commitment and discipline within the classroom and laboratory
5- Preparing scientific reports, providing scientific explanations and presenting them

C. Thinking Skills

C1- Developing and enhancing thinking skills according to the student’s ability and moving him to a higher level of thinking.
C2- Attention: arouse students’ attention by managing the dialogue and participating in the discussion of the opinions, ideas, and opinions presented.
C3- Response: Monitoring the extent of the student’s response and interaction with the material being explained theoretically and practically.
C4- Developing and enhancing the critical thinking strategy in learning

Teaching and Learning Methods

1- Active participation in the classroom is evidence of the student’s commitment and responsibility.
2- The semester and final exams are considered a reflection of the student’s commitment and cognitive and skill achievement.
3- The student develops and discusses scientific explanations for the results of his practical experiments and submits a report on them
4- It is known for the role of experimental design in the scientific method and the extent of its spread in Iraq, the Arab world, and the world

Assessment methods

1- Conducting various types of tests and examinations
2- Reverse feeding from students
3- The method of expression through facial features
4- Preparing scientific reports, providing scientific explanations and presenting them

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

D1-- Providing students with the skills required in plant breeding and their effect on plant growth and production.
D2-- Increasing students' awareness of modern trends in plant breeding, which include modern computer-based technologies.
D3- Teaching students about modern methods in Statistical.
D4- General and qualifying transferable skills (other skills related to employability and personal development).

11. Course Structure

Week	Hours	ILOs	Unit/Module orTopic Title	Teaching Method	Assessment Method
1	٢	Theoretical explanation and interpretation with the use of electronic	Introduction to statistics Statistical variables Data collection and presentation	theoretical and practical	Theoretical tests with homework
2	٢	Theoretical explanation and interpretation with the use of electronic,	practicalMeasures of centering, Measures of dispersion	theoretical and practical	Theoretical tests with homework
3	5	theoretical a practicalTheoretical explanation and interpretation with the use of electronic	Measures of centering, Measures of dispersion	theoretical and practical	Theoretical tests with homework
4	5	Theoretical explanation and interpretation with the use of electronic	Measures of dispersion, Probability theory.	theoretical and practical	Theoretical tests with homework
5	5	Theoretical explanation and interpretation with the use	Hypothesis testing. t-test	theoretical and practical	Theoretical tests with homework

		of electronic			
6	5	Theoretical explanation and interpretation with the use of electronic	First month exam		
7	2	Theoretical explanation and interpretation with the use of electronic	Chi-square distribution	theoretical and practical	Theoretical tests with homework
8	2	Theoretical explanation and interpretation with the use of electronic	Chi-square distribution	theoretical and practical	Theoretical tests with homework
9	2	Theoretical explanation and interpretation with the use of electronic	Breeding self-pollinating crops, raising pure lines, and preserving the purity of the varietyf-distribution.	theoretical and practical	Theoretical tests with homework
10	2	Theoretical explanation and interpretation with the use of electronic	Correlation Regression	theoretical and practical	Theoretical tests with homework
11	2	Theoretical explanation and interpretation with the use of electronic	Correlation Regression	theoretical and practical	Theoretical tests with homework
12	2	Theoretical explanation and interpretation with the use of electronic	Correlation Regression	theoretical and practical	Theoretical tests with homework
13	2	Theoretical explanation and interpretation with the use of electronic	Second month exam	theoretical and practical	Theoretical tests with homework
14	2	Theoretical explanation and interpretation with the use of electronic	Correlation Regression	theoretical and practical	Theoretical tests with homework

15	2	Theoretical explanation and interpretation with the use of electronic	, Computer applications for correlation and regression analysis,	theoretical and practical	Theoretical tests with homework

12. Infrastructure	
Required reading: · CORE TEXTS · COURSE MATERIALS · OTHER	Introduction to Statistics, Design and Analysis of Theoretical Experiments
Special requirements (include for example workshops, periodicals, IT software, websites)	Basics of Statistics Book
Community-based facilities (include for example, guest Lectures , internship , field studies)	Introduction to Statistics, Design and Analysis of Theoretical Experiments

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

Course Description Form

1. Course Name:
Advance Ecology
2. Course Code:
3. Semester / Year:
Second semester/2023-2024
4. Description Preparation Date:
10/6/2024
5. Available Attendance Forms:
Daily, at the time specified in the schedule, and at full time
6. Number of Credit Hours (Total) / Number of Units (Total)
60 hr./ 3Unit
7. Course administrator's name (mention all, if more than one name)
Name: Dr. Mohammed Fadhil Abood Email: eps.mohammed.fadhel@uoanbar.edu.iq
8. Course Objectives

Course Objectives	This course aims to convey a general idea about: 1-The student must be able to teach and learn the environmental subject 2- That the student becomes familiar with the concept and divisions of environmental science 3- The student understands the types of ecosystems 4- The student should understand the living and non-living factors affecting ecosystems 5- The student should understand the balance of ecosystems and how humans affect this balance 6-Introducing the student to biogeochemical cycles. 7- Introducing the student to how energy flows through the food chain and food web. 8-Introducing the student to environmental pyramids and their types. 9- Introducing the student to the determining factors and levels of tolerance in ecosystems. 10- Introducing the student to productivity in the ecosystem and methods for measuring it. 11-Introducing the student to negative and positive nutritio relationships between living organisms in the environment.

9. Teaching and Learning Strategies

Strategy	. A- Cognitive objectives 1- Extrapolation 2- Analysis 3- Conclusion 4-The lecture 5-Empowerment

	B - The skills objectives of the course. B1 - Developing the skill in knowing the components of ecosystems B2 - Developing the skill of knowing climate factors and their effects B3 - Developing the skill of linking these climatic factors with practical material using laboratory equipment C- Emotional and value goals C1- Thinking that explores the truth through (question and answer) C2- Managing societal problems by finding appropriate solutions to them through academic concepts C3- Spreading the spirit of interaction and attraction among students through academic competition C4- Urging students to employ what they have learned in public life D - General and qualifying transferable skills (other skills related to employability and personal development). D1-The skill of studying environmental systems D2- The skill of measuring and analyzing non-living factors affecting ecosystems D3- The skill of knowing how to maintain the balance of ecosystems D4- The skill of self-development by giving him information that will bene him in the academic future D5- It enables the student to use what he has learned to develop himself a preserve his environment

10. Course structure

Evaluation method	Teaching method	Name of unit/course or subject	Required learning outcomes	Hours	Week
an in-person lecture, and motivational questions.	Blackboard and data show	Ecology, definition of ecology, relationship of ecology to other sciences	Definitions of ecology and scientists contributing to ecology	2 Theoretical + 2 practical	١
motivational questions	Blackboard and data show	Divisions of ecology and types of ecosystems	Introducing the student to the types of ecosystems	2 Theoretical + 2 practical	٢

motivational questions	Blackboard and data show	Components of an ecosystem: living and non-living components	Introducing the student to the components of the ecosystem	2 Theoretical + 2 practical	٣
motivational questions	Blackboard and data show	Ecosystem balance	Introducing the student to the balance of the ecosystem	2 Theoretical + 2 practical	٤
motivational questions	Blackboard and data show	Semester exam -1	Determine the student’s understanding of the material	2 Theoretical + 2 practical	٥
motivational questions	Blackboard and data show	Biogeochemical cycles	The student's understanding of the cycles of elements in nature	2 Theoretical + 2 practical	٦
motivational questions	Blackboard and data show	Biological productivity, types of productivity, methods of measuring productivity	The student’s understanding of the types of biological productivity	2 Theoretical + 2 practical	٧
motivational questions	Blackboard and data show	Tolerance laws (Leebig's law and Shelford's law	The student’s understanding of the laws of endurance and	2 Theoretical + 2 practical	٨

			climatic factors		
motivational questions	Blackboard and data show	Food chains and their types, food web	The student understands food chains and food webs	2 Theoretical + 2 practical	٩
motivational questions	Blackboard and data show	Environmental pyramids and their types	Introducing the student to environmental pyramids	2 Theoretical + 2 practical	١٠
motivational questions	Blackboard and data show	Semester exam-2	Determine the student's understanding of the material	2 Theoretical + 2 practical	١١
motivational questions	Blackboard and data show	Comunity	*The student learns the concept of society and population	2 Theoretical + 2 practical	١٢
motivational questions.	Blackboard and data show	review	The student's understanding of the material studied during the semester *The student's knowledge of the connection between all of the above	2 Theoretical + 2 practical	١٣
motivational questions.	Blackboard and data show	, the second month exam	To increase the student's awareness	2 Theoretical + 2 practical	١٤

			through enrichment questions With a calendar exam		

11.Course Evaluation

The grade distribution is from 25 for the theoretical aspect, with 15 marks for the practical aspect, in addition to the student's evaluation according to the tasks assigned to him, such as daily preparation, daily, oral, monthly, written exams, reports... etc.

12.Learning and Teaching Resources

Required textbooks (curricular books, any)	1- Mawlud, Bahram Khadr, Al-Saadi, Hussein Ali, Al-Azami, Hussein Sharif. (1991) Environmental Science and Pollution. University of Baghdad.
Main references (sources)	2-Odum, E.P. (1971) Fundamentals of Ecology. Third Edition, W.B. Saunders Co., Philadelphia, 1-574. 3-Botkin and Keller (1995). Environmental Science – Earth as a living planet. John Wiley, New York 4-Nebel and Wright (1996): Environmental Science, way the world works, 5th Ed. Prentice Hall, New Jerse ٥ -Ecology and the quality of our environment (1984) written by Charles H. Southwick. (Translated by Qaiser Najib Saleh, Suhaila Al-Dabbagh, and Tariq Muhammad Saleh) - University of Mosul - Iraq ٦. -Introduction to Environmental Sciences (1987) Sameh Gharaibeh and Yahya Al-Farhan Arab Center for Publications Distribution - Beirut - Lebanon
Recommended books and references (scientific journals, reports...)	Journal of environment, sustainable development and hun health
Electronic references, websites	**https://www.uoanbar.edu.iq/staff-page.php?ID=1124**

Course description Sample

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

This course description provides a succinct summary of the most important course characteristics and the learning outcomes the student is expected to achieve Demonstrating whether they have made the most of the learning opportunities available. It must be linked to a description the program.

- Educational institution1	**Anbar University - College of Education for Pure Sciences**
University department/center	**College of Education for Pure Sciences/Department of Biology**
Course name/code	**Advance Endocrinology **
Programs in which it is included	**Ph.D.in Biology**
Available attendance forms	**Daily**
Semester/year	**2-Semester**
Number of study hours (total)	**30**
Date this description was prepared	**2023-2024**
Course objectives:	
Teaching advanced Advance Endocrinology should lead to:	
- Teaching the student Advance Endocrinology and the developments of this science. - Fill the gap in Endocrinology lecturers in the market of labor in Iraq. - Fill the gaps of technical staff in the undergraduate laboratories by participating in delivering practical sessions as part of their training .	

Learning outcomes, teaching, learning and assessment methods
A- Knowledge and understanding
A1Extrapolation A2- Comprehension and analysis

A3- Conclusion

A4- The lecture

A5- Empowerment of scientific specialization

B- Subject-specific skills

B1 - Developing the skill in knowing the functions of the endocrine glands and using them in the practical aspect

B2 - Developing the skill of how to determine the endocrine glands function of an organ and its disorders.

B3 – Knowing the functional coordination between the nervous system and the endocrine system.

B4 - Developing the skill of employing theoretical information for use in the practical aspect.

C- Thinking skills

C1- Thinking that explores the truth through (question and answer)

C2- Managing societal problems by finding appropriate solutions to them through academic concepts

C3- Spreading the spirit of interaction and attraction among students through academic competition

C4- Urging students to employ what they have learned in public life.

Teaching and learning methods

Blackboard + pen + data show +Electronically on some e-learning programs such as Google Form and other forms+ Extrapolation, Analysis+ Conclusion+ The lecture Empowerment+ Discussion.

Evaluation methods

- Daily, weekly, monthly and final exams
- Reports and assignments
- Daily discussions

General and transferable skills (other skills related to employability and personal development.

C1- Accuracy in determining the nature of the proper performance of the function of a endocrine system, and the conditions affecting it.

C2- Credibility and transparency in scientific research

C3- Instilling the foundations of the value of Advance Endocrinology , its importance in all fields, and its relationship with other sciences.

Course structure

Course structure					
Evaluation method	**Teaching method**	**Name of the unit/course or subject**	**Required learning outcomes**	**hours**	**The week**
Attendance and motivational questions.	**A video lecture with a text lecture with a live broadcast**	- Functional Organization of the Endocrine System - Chemical Structure of Hormones	Develop theoretical skills	**2**	**1**
Exams and daily activities	**A video lecture with a text lecture with a live broadcast**	- Control of Secretion Rate - Transport and Distribution in the Body	Develop theoretical skills	**2**	**2**
Exams and daily activities	**A video lecture with a text lecture with a live broadcast**	- Metabolism and Excretion of hormones. - Classes of Hormone Receptors	Develop theoretical skills	**2**	**3**
Exams and daily activities	**A video lecture with a text lecture with a live broadcast**	-Receptors That Alter the Activity of Intracellular Enzymes - Intracellular Hormone Receptors	Develop theoretical skills	**2**	**4**
Attendance and motivational questions	**A video lecture with a text lecture with a live broadcast**	- Hormonal systems Hypothalamus Function and its disorders	Develop theoretical skills	**2**	**5**
Attendance and motivational questions	**A video lecture with a text lecture with a live broadcast**	-Pituitary gland hormones and its disorders. - Growth disorders	Develop theoretical skills	**2**	**6**
Attendance and motivational questions	**A video lecture with a text lecture with a live broadcast**	First exam	Develop theoretical skills	**2**	**7**
Attendance and motivational questions	**A video lecture with a text lecture with a live broadcast**	The Adrenal Glands and Their Hormones. Disorders of Adrenal gland.	Develop theoretical skills	**2**	**8**
Attendance and motivational questions with grade	**A video lecture with a text lecture with a live broadcast**	The Gonads , Their Hormones and Disorders	Develop theoretical skills	**2**	**9**
Attendance and motivational questions	**A video lecture with a text lecture with a live broadcast**	The Thyroid gland , Its Hormones and Disorders. The Parathyroid Glands ,Their Hormones and Disorders	Develop theoretical skills	**2**	**10**
Attendance and motivational questions	**A video lecture with a text lecture with a live broadcast**	-The Pancreas and Its Hormones -Disorders of Pancreatic Hormones	Develop theoretical skills	**2**	**11**
Attendance and motivational questions	**A video lecture with a text lecture with a live broadcast**	Discussing scientific questions and homework	Develop theoretical skills	**2**	**12**
Attendance and motivational questions	**A video lecture with a text lecture with a live broadcast**	Review lectures	Develop theoretical skills	**2**	**13**
Attendance and motivational questions with grade	**A video lecture with a text lecture with a live broadcast**	Discussing the quarterly report	Develop theoretical skills	**2**	**14**
		Second exam		**2**	**15**

12. Infrastructure

1. Guyton and Hall, translated by Dr. Sadiq Al-Hilali (1997), a reference in medical physics. International Academy for Printing and Publishing - Beirut. 2. Al-Alawji, Sabah Nasser (2008). Endocrine and gonadal hormones. Dar Al-Fikr Printing and Publishing Foundation, Amman - Jordan.	**Required prescribed books**
- Guyton,A.C.and Hall,J.E.(2016) Text book of medical physiology.13th.Elsevier Saunders.China. - CONSTANTI, A.; BARTKE, A.; AND KHARDORI, R.Basic Endocrinology for Students of Pharmacy and Allied Clinical Health Sciences. Amsterdam: Harwood Academic Publishers, 1998.	**- Main references (sources).**
التشريح الوظيفي وعلم وظائف الاعضاء ، الدكتور شتيوي العبدالله (٢٠١٢)- دار المسيرة - عمان – الاردن. - Hall, John (2011). Guyton and Hall textbook of medical physiology (12th ed.). Philadelphia, Pa.: Saunders/Elsevier. p. 3. ISBN 978-1-4160-4574-8. - Widmaier, Eric P.; Raff, Hershel; Strang, Kevin T. (2016). Vander's Human Physiology Mechanisms of Body Function. New York, NY: McGraw-Hill Education. pp. 14–15. ISBN 978- 1-259-29409-9.	**Recommended books and references (scientific journals, reports,...)**
https://academic.oup.com/endo https://www.ncbi.nlm.nih.gov/books/NBK22/	**Electronic references, websites...**

13. Course development plan

Ensuring the exchange of experiences and visits made by the teaching staff to universities and colleges outside Iraq play a helpful role in formulating curricula to serve the development of the educational process.

Developing the curriculum by continuously keeping pace with the development taking place in the study programs of the corresponding departments in international universities in the nature of the study

materials that meet the need and the extent to which they cover the requirements of the productive and academic activities of the beneficiaries.

Course description Sample

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

This course description provides a succinct summary of the most important course characteristics and the learning outcomes the student is expected to achieve Demonstrating whether they have made the most of the learning opportunities available. It must be linked to a description the program.

**- Educational institution **	**Anbar University - College of Education for Pure Sciences**
University department/center	**College of Education for Pure Sciences/Department of Biology**
Course name/code	**Genetic Engineering \BIO105**
Programs in which it is included	**Ph.D. education of Biology**
Available attendance forms	**Daily**
Semester/year	**Quarterly**
Number of study hours (total)	**30**
Date this description was prepared	**2023-2024**
Course objectives:	
1-This course aims to develop students' skills with regard to the subject of gene cloning and production of recombinant proteins in different expression hosts, 2- to learn about the primers design and gene product by PCR and analysis of gene sequenses .	
3-Informing students the protein production in biological hosts, and to show the graduate students the most important applications of genetic engineering..	

Learning outcomes, teaching, learning and assessment methods
A- Knowledge and understanding
A1- Knowledge of the topics on which understanding of the course depends (gene cloning, transformation, transduction, PCR, Real time PCR).

A2- Knowing the foundations and basic concepts of gene expression in foreign hosts to obtain target protein.

A3- Knowing the foundations and methods of (Transformation, primer design foe specific gene, restriction digestion and ligation).

A4- Bringing the student to a level where he has the ability to interpret the results (research) and turn them into a work reality, from which he will benefit in the future during study and after graduation.

Teaching and learning methods
Blackboard + pen + data show
B- Subject-specific skills
B1 - Developing the student's biological methods for use the enzymes in gene cloning.. B2 - Developing the skill of estimation, hypothesis for cloning procedure . B3 - Developing the student's decision-making skill as it is the essence of the educational and biological process.
C- Thinking skills External tests 2- Various and interconnected questions to test the student's skills
Teaching and learning methods
Blackboard + pen + data show +Electronically on some e-learning programs such as Google Form and other forms+ Extrapolation, Analysis+ Conclusion+ The lecture Empowerment+ Discussion.
Evaluation methods
Daily and monthly examinations
General and transferable skills (other skills related to employability and personal development.

Course structure					
Evaluation method	**Teaching method**	**Name of the unit/course or subject**	**Required learning outcomes**	**hours**	**The week**
Attendance and motivational questions.	**A video lecture with a text lecture with a live broadcast**	Introduction in Genetic Engineering	**The student to learn the basic principles of Genetic Engineering**	**2**	**-**
Exams and daily activities	**A video lecture with a text lecture with a live broadcast**	Gene cloning concepts	**The student learns concepts of gene cloning**	**2**	**-**
Exams and daily activities	**A video lecture with a text lecture with a live broadcast**	Cloning vectors	**The student will learn types of cloning vectors**	**2**	**-**
Exams and daily activities	**A video lecture with a text lecture with a live broadcast**	Gene expression	**The student learns to gene expression systems**	**2**	**-**
Attendance and motivational questions	**A video lecture with a text lecture with a live broadcast**	Monthly exam		**2**	**-**
Attendance and motivational questions	**A video lecture with a text lecture with a live broadcast**	Expression hosts	**The student learns the concept of expression hosts and types of it**	**2**	**-**
Attendance and motivational questions	**A video lecture with a text lecture with a live broadcast**	Transcription control	**The student should know the transcription system in E.coli**	**2**	**-**
Attendance and motivational questions	**A video lecture with a text lecture with a live broadcast**	Protein synthesis	**The student learns how to do a comprehensive review of the protein synthesis by translation.**	**2**	**-**
Attendance and motivational questions with grade	**A video lecture with a text lecture with a live broadcast**	PCR	**The student will learn the concept of polymerase chain reaction**	**2**	**-**
Attendance and motivational questions	**A video lecture with a text lecture with a live broadcast**	Monthly exam		**2**	**-**
Attendance and	**A video lecture with a**	Gene Expression systems	**The student learns the different expression**	**2**	**-**

motivational questions	**text lecture with a live broadcast**		**systems (Bacteria, yeast….)**		
Attendance and motivational questions	**A video lecture with a text lecture with a live broadcast**	Selective of hybrid clone	**The student learns how to know what has been studied**	**2**	**-**
Attendance and motivational questions	**A video lecture with a text lecture with a live broadcast**	DNA Digestion	**Type of restriction enzymes**	**2**	**-**
Attendance and motivational questions with grade	**A video lecture with a text lecture with a live broadcast**	**A comprehensive review of the article**	**The student learns the extent of his understanding of the material through a comprehensive review**	**2**	**-**
		A report on a special topic in the article			

Admissions	
1. Approval of admission conditions for students in accordance with the regulations of the Ministry of Higher Education and Scientific Research (admission to graduate studies is by university order from the university presidency) **2. To pass the department's personal examination.** **3. Bachelor's average to obtain a master's degree, and bachelor's and master's averages to obtain a doctoral degree.** **4. The department's capacity includes postgraduate students in general, private, and privileges channels.**	**Prerequisites**
4	**The smallest number of gradute students**
15 - 5	**The largest number of graduate students**

Graduation research projects	**Social services (including, for example, guest lectures, vocational training, and field studies(**

Infrastructure	
2- Introduction of Genetic Engineering, by: ghalib Al-bakri,	Required readings: 1-Course books 2-Other
1- INTRODUCTION TO BIOTECHNOLOGY AND GENETIC ENGINEERING, by A.J. NAIR. INFINITY SCIENCE PRESS LLC. INDIA. 2007. 3- Clark, D. (2006). Molecular Biology Understanding the Genetic Revolution. Elsevier Inc. 4- Santos, D.M. (2011). Genetic Engineering, Recent Developments in application. Apple Academic press	Special requirements
2- https://www.ncbi.nlm.nih.gov/	Social services (including, for example, guest lectures, vocational training, and field studies(

Course description Sample

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

This course description provides a succinct summary of the most important course characteristics and the learning outcomes the student is expected to achieve Demonstrating whether they have made the most of the learning opportunities available. It must be linked to a description the program.

- Educational institution1	**Anbar University - College of Education for Pure Sciences**
University department/center	**College of Education for Pure Sciences/Department of Biology**
Course name/code	**Cellular structure and behavior**
Programs in which it is included	**Ph.D.in Biology**
Available attendance forms	**Daily**
Semester/year	**2-Semester**
Number of study hours (total)	**30**
Date this description was prepared	**2023-2024**
Course objectives:	
Teaching cytology should lead to:	
- Teaching the student Cellular structure and behavior and the developments of this science. - Fill the gap in Cellular structure and behavior in the market of labor in Iraq. - Fill the gaps of technical staff in the undergraduate laboratories by participating in delivering practical sessions as part of their training.	

Learning outcomes, teaching, learning and assessment methods

A- Knowledge and understanding

A1Extrapolation

A2- Comprehension and analysis

A3- Conclusion

A4- The lecture

A5- Empowerment of scientific specialization

B- Subject-specific skills

B1 - Developing the skill in knowing the functions of the cell and using them in the practical aspect
B2 - Developing the skill of how to determine the vital function of each cell organelle.
B4 - Developing the skill of employing theoretical information for use in the practical aspect.

C- Thinking skills

C1- Thinking that explores the truth through (question and answer)
C2- Managing societal problems by finding appropriate solutions to them through academic concepts
C3- Spreading the spirit of interaction and attraction among students through academic competition
C4- Urging students to employ what they have learned in public life.

Teaching and learning methods

Blackboard + pen + data show +Electronically on some e-learning programs such as Google Form and other forms+ Extrapolation, Analysis+ Conclusion+ The lecture Empowerment+ Discussion.

Evaluation methods

- Daily, weekly, monthly and final exams
- Reports and assignments
- Daily discussions

General and transferable skills (other skills related to employability and personal development.

C1- Accuracy in determining the nature of the proper performance of the function of a cell, and the conditions affecting it.

C2- Credibility and transparency in scientific research

Course structure

Course structure					
Evaluation method	**Teaching method**	**Name of the unit/course or subject**	**Required learning outcomes**	**hours**	**The week**
Attendance and motivational questions.	**A video lecture with a text lecture with a live broadcast**	Cell	Develop theoretical skills	**2**	**1**
Exams and daily activities	**A video lecture with a text lecture with a live broadcast**	Body fluids	Develop theoretical skills	**2**	**2**
Exams and daily activities	**A video lecture with a text lecture with a live broadcast**	Plasma membrane	Develop theoretical skills	**2**	**3**
Exams and daily activities	**A video lecture with a text lecture with a live broadcast**	Plasma membrane	Develop theoretical skills	**2**	**4**
Attendance and motivational questions	**A video lecture with a text lecture with a live broadcast**	Plasma membrane	Develop theoretical skills	**2**	**5**
Attendance and motivational questions	**A video lecture with a text lecture with a live broadcast**	Cellular communication	Develop theoretical skills	**2**	**6**
Attendance and motivational questions	**A video lecture with a text lecture with a live broadcast**	Cellular receptors	Develop theoretical skills	**2**	**7**
Attendance and motivational questions	**A video lecture with a text lecture with a live broadcast**	Exam 1	Develop theoretical skills	**2**	**8**
Attendance and motivational questions with grade	**A video lecture with a text lecture with a live broadcast**	Intracellular signals	Develop theoretical skills	**2**	**9**
Attendance and motivational questions	**A video lecture with a text lecture with a live broadcast**	Cytoskeleton	Develop theoretical skills	**2**	**10**
Attendance and motivational questions	**A video lecture with a text lecture with a live broadcast**	Cytoskeleton	Develop theoretical skills	**2**	**11**
Attendance and motivational questions	**A video lecture with a text lecture with a live broadcast**	Nucleus	Develop theoretical skills	**2**	**12**
Attendance and motivational questions	**A video lecture with a text lecture with a live broadcast**	Nucleus	Develop theoretical skills	**2**	**13**

Attendance and motivational questions with grade	**A video lecture with a text lecture with a live broadcast**	Cell death	Develop theoretical skills	**2**	**14**
	Exam 2	Exam 2		**2**	**15**

12. Infrastructure

	Required prescribed books
- Guyton,A.C.and Hall,J.E.(2016) Text book of medical physiology.13th.Elsevier Saunders.China.	**- Main references (sources).**
- Hall, John (2011). Guyton and Hall textbook of medical physiology (12th ed.). Philadelphia, Pa.: Saunders/Elsevier. p. 3. ISBN 978-1-4160-4574-8. - Widmaier, Eric P.; Raff, Hershel; Strang, Kevin T. (2016). Vander's Human Physiology Mechanisms of Body Function. New York, NY: McGraw-Hill Education. pp. 14–15. ISBN 978- 1-259-29409-9.	**Recommended books and references (scientific journals, reports,...)**
https://www.sciencedirect.com/journal/cell	**Electronic references, websites...**

13. Course development plan

Ensuring the exchange of experiences and visits made by the teaching staff to universities and colleges outside Iraq play a helpful role in formulating curricula to serve the development of the educational process.

Developing the curriculum by continuously keeping pace with the development taking place in the study programs of the corresponding departments in international universities in the nature of the study materials that meet the need and the extent to which they cover the requirements of the productive and academic activities of the beneficiaries.

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	Anbar University, College of Education for Pure Sciences
2. University Department/Centre	Dep. Biology
3. Course title/code	
4. Programme(s) to which it contributes	Ph.D
5. Modes of Attendance offered	Presence
6. Semester/Year	Second semester
7. Number of hours tuition (total)	2
8. Date of production/revision of this Specification	9-6-2024
9. Aims of the Course	
Introducing the student to the progress of mycology Types of fungi Diagnosis of fungi Diseases resulting from infection with some fungi	

10· Learning Outcomes, Teaching ,Learning and Assessment Methode
A- Knowledge and UnderstandingA1. The student should know the history of the emergence of fungi. A2. Providing the student with the knowledge necessary to know the kingdom of fungi. A3. Giving the student the ability to know the types of fungi and the diseases resulting from them. A4. Providing the student with the skill of diagnosing fungi A5. The student will know how to distinguish between toxic and non-toxic fungi
B. Subject-specific skillsB1. To provide the student with some of the necessary methods in the process of diagnosing fungi. B2. To provide the student with the ability to diagnose diseases resulting from fungal infection B3. Identify the distinctive characteristics of each fungal disease. B4. Giving the student the ability to diagnose fungal diseases.
Teaching and Learning Methods
Using modern technology in education through display devices in the thermotical aspect using data show. while the practical aspect is in Laboratories through practical experiments.
Assessment methods
Electronic and direct lectures
C. Thinking Skills
The student must actively participate in thermotical and practical lectures
Teaching and learning methods
Theory, practice and discussions
General and transferable skills (other skills related to employability and personal development).

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

D1. Verbal teaching behavior skills such as discussion, dialogue, explanation, and interpretation.

D2. Non-verbal teaching behavior skills, such as visual contact between the teacher and the student, and the use of illustration methods such as educational videos and pictures.

D3. Planning skills: such as the skill of determining the lesson topic, using appropriate methods, and preparing questions

11. Course Structure

Week	Hours	ILOs	Unit/Module or Topic Title	Teaching Method	Assessment Method
1st.	2	P+D	Introduction in mycology	Lecture	Daily Quiz
2 st .	2	P+D	**General characteristics of fungi**	Lecture	Daily Quiz
3 st.	2	P+D	**Importance of Fungi:**	Lecture	Seminar
4 st	2	P+D	Types of fungi	Lecture	Report
5 st	2	P+D	Ways of living of fungi	Lecture	Daily Quiz
6 st	2	P+D	Environmental factors affecting fungal growth	Lecture	Seminar
7 st	2		First monthly exam	Lecture	Monthly exam

		P+D			
8 st	2	P+D	Principles adopted in diagnosing fungi	Lecture	Daily Quiz
9 st	2	P+D	Cell wall	Lecture	Seminar
10 st	2	P+D	nutrition	Lecture	Daily Quiz
11 st	2	P+D	Shapes of flagella	Lecture	Report
12 st	2	P+D	Sporophore	Lecture	Seminar
13 st	2	P+D	Second monthly exam	Lecture	Monthly exam
14 st.	2	P+D	Sporangia	Lecture	Daily Quiz
15 st.	2	P+D	Spores	Lecture	Seminar

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

13. Admissions	
Pre-requisites	Google
Minimum number of students	10
Maximum number of students	20

COURSE SPECIFICATION

HIGHER EDUCATION PERFORMANCE REVIEW: PROGRAMME REVIEW

COURSE SPECIFICATION

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

1. Teaching Institution	**University Of Anbar/ College Of Education For Humanities**
2. University Department/Centre	**Department of English Language**
3. Course title/code	
4. Programme(s) to which it contributes	**Advanced Trends in Teaching**
5. Modes of Attendance offered	**Postgraduate/PhD**
6. Semester/Year	**First 2023-2024**
7. Number of hours tuition (total)	**30 Hour**
8. Date of production/revision of this specification	**5/9/2023**
9. Aims of the Course	
A1. Scientific research method	
A2. The student learns how to write scientific research	
A3. To learn to correspond with respectable magazines	
A4. That the student learns how to choose a research problem or master's thesis.	

10· Learning Outcomes, Teaching ,Learning and Assessment Methods

A. Knowledge and Understanding

C- A1- The student must be familiar with the types of scientific research
A2- The student gets to know the types of local and international magazines
A3- That the student becomes familiar with reliable magazines
A4- The student should know how to write scientific research, reviews, short research papers, etc
A5- The student should become familiar with the mechanism of writing a master's thesis

A6- The student should know how to choose a research problem and how to address it and present it in an impressive scientific manner

B. Subject-specific skills

B1 - The student learns how to write scientific research

B2 - To learn to correspond with respectable magazines

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Teaching and Learning Methods

Discussion and dialogue, assigning students to perform group work, PowerPoint presentations, student self-activities, brainstorming, problem solving, reports, research, and work papers.

Assessment methods

Electronic and direct lectures

C. Thinking Skills

1- In-person and electronic lecture

2- Brainstorming

3- Smart board.

Teaching and Learning Methods

Writing scientific research and a master's thesis

Assessment methods

1. Daily oral exams and Monthly exams

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

D1- That the student recognizes God's power in the individual's thinking process and his writing skill.

D2- That the student recognizes his personal ability to coordinate the course of scientific research

D3- That the student knows how to identify important information

11. Course Structure

Week	Hours	ILOs	Unit/Module or Topic Title	Teaching Method	Assessment Method
1	2		Education and Learning	Lectures	Exam + activity
2	2		Innovations in health and medicine	Lectures	Exam + activity
3	2		Writing and reading ESP compositions	Lectures	Exam + activity
4	2		Urban planning	Lectures	Exam + activity
5	2		Water, food, and energy	Lectures	Exam + activity
6	2		First test	Lectures	Exam + activity
7	2		Free trade and fair trade	Lectures	Exam + activity
8	2		Conserving the past	Lectures	Exam + activity
9	2		Wonders of the modern world	Lectures	Exam + activity
10	2		Olympic business	Lectures	Exam + activity
11	2		Second Test	Lectures	Exam + activity
12	2		Trends	Lectures	Exam + activity
13	2		Communications and technology	Lectures	Exam + activity
14	2		Writing and reading ESP compositions	Lectures	Exam + activity
15	2		Oral Test	Lectures	Exam + activity

12. Infrastructure	
Required reading: · **CORE TEXTS** · **COURSE MATERIALS** · **OTHER**	Headway Academic Skills Level 3
Special requirements (include for example workshops, periodicals, IT software, websites)	**. Textbook, Sarah Philpot and Lesley Curnick**

Community-based facilities (include for example, guest Lectures , internship , field studies)	**Textbook, Sarah Philpot and Lesley Curnick**

13. Admissions	
Pre-requisites	
Minimum number of students	**12**
Maximum number of students	**15**

COURSE SPECIFICATION

HIGHER EDUCATION PERFORMANCE REVIEW: PROGRAMME REVIEW

COURSE SPECIFICATION

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

1. Teaching Institution	University of Anbar/ College of Education for Pure Sciences
2. University Department/Centre	Department of biology
3. Course title/code	Plant biotechnology
4. Programme(s) to which it contributes	Personal presence
5. Modes of Attendance offered	Autumn/2023-2024
6. Semester/Year	45
7. Number of hours tuition (total)	1/25/2024
8. Date of production/revision of this Specification	University of Anbar/ College of Education for Pure Sciences
9. Aims of the Course	
A- Knowledge of the principles of plant biotechnology	
B- Study the role of plant biotechnology in the level of food production globally.	
T- Knowing the most important types of modern scientific applications in plant production.	
D- Introducing the historical stages through which the science of plant biotechnology developed.	

10· Learning Outcomes, Teaching ,Learning and Assessment Methode

A- Knowledge and Understanding

A1. The goal is for students to understand the importance of plant biotechnology and its applications.

A2- Teaching the student the cognitive foundations for conducting various applications.

A3- The importance of using technology to increase plant production and improve its quality.

B. Subject-specific skills

B1 - Raising the student's level with regard to conducting various techniques in the laboratory.

B2 - Teaching the student how to interpret and apply the results.

Teaching and Learning Methods

This is done through theoretical lectures and practical application.

Assessment methods

Evaluation is done by participating in dialogue, solving assignments, writing reports, and monthly and final exams.

C. Thinking Skills

C1- Raising the student's abilities and cognitive skills.

C2- Enabling the student with scientific methods in using modern technologies.

Teaching and Learning Methods

This is done through theoretical lectures and practical application.

Assessment methods

Evaluation is done by participating in dialogue, doing assignments, and writing reports.

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

D1- Enables the student to compete for employment

2d- The student can use his skills to develop the career aspect

D3- The student can be a helpful factor in developing the skills of his colleagues in his workplace

11. Course Structure

Week	Hours	ILOs	Unit/Module or Topic Title	Teaching Method	Assessment Method
First	2		The concept of plant biotechnology	Presentation and dialogue	Participate in the lesson
Second	2		Basic requirements for biotechnology applications	Presentation and dialogue	Participate in the lesson
Third	2		Contamination and sterilization	Presentation and dialogue	Participate in the lesson
Fourth	2		Food environments	Presentation and dialogue	Participate in the lesson
Fifth	2		Plant tissue cultures and cell suspensions	Presentation and dialogue	Participate in the lesson
Sixth	2		Basic applications of biotechnology	Presentation and dialogue	Participate in the lesson
Seventh	2		Accurate multiplication	Presentation and dialogue	Participate in the lesson
Eighth	2		Production of secondary metabolites	Presentation and dialogue	Participate in the lesson
Ninth	2		Multiplication of somatic embryos	Presentation and dialogue	Participate in the lesson
Tenth	2		Protoplast fusion technology	Presentation and dialogue	Participate in the lesson
Eleventh	2		Producing stress tolerant plants	Presentation and dialogue	Participate in the lesson
Twelfth	2		Producing plants free of pathogens	Presentation and dialogue	Participate in the lesson
Thirteenth	2		Industrial seed production technology	Presentation and dialogue	Participate in the lesson
Fourteenth	2		Production of genetically mutant plants	Presentation and dialogue	Participate in the lesson
Fifteenth	2		Production of chimera plants	Presentation and dialogue	Participate in the lesson

12. Infrastructure

Required reading: · CORE TEXTS · COURSE MATERIALS · OTHER	Ibrahim, K.M. 2017. Applications in Plant Biotechnology, College of Biotechnology, Al-Nahrain university,pp:680.
Special requirements (include for example workshops, periodicals, IT software, websites)	
Community-based facilities (include for example, guest Lectures , internship , field studies)	https://onlinelibrary.wiley.com/journal/14677652 https://www.jspb.jp/english/sub04/ https://link.springer.com/journal/11816

13. Admissions	
Pre-requisites	The course is developed based on the development of scientific research in the field of plant biotechnology.
Minimum number of students	4
Maximum number of students	4

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	Anbar University, College of Education for Pure Sciences
2. University Department/Centre	Dep. Biology
3. Course title/code	
4. Programme(s) to which it contributes	phD.
5. Modes of Attendance offered	Presence
6. Semester/Year	2023- 2024
7. Number of hours tuition (total)	2
8. Date of production/revision of this Specification	6-6-2024
9. Aims of the Course	
Learn about the latest findings in bacteriology and the modern applications of this science	

10· Learning Outcomes, Teaching ,Learning and Assessment Methode

A- Knowledge and UnderstandingA1Extrapolation

A2- Comprehension and analysis

A3- Conclusion

A4- The lecture

A5- Empowerment of scientific specialization

B. Subject-specific skills
B1. Developing the skill of employing theoretical information for use in the practical aspect

Teaching and Learning Methods

Using modern technology in education through display devices in the thermotical aspect using data show. while the practical aspect is in Laboratories through practical experiments.

Assessment methods

C. Thinking Skills

C1- Thinking that explores the truth through (question and answer)
C2- Managing societal problems by finding appropriate solutions to them through academic concepts
C3- Spreading the spirit of interaction and attraction among students through academic competition
C4- Urging students to employ what they have learned in public life

The student must actively participate in thermotical and practical lectures

Teaching and learning methods

Blackboard + pen + data show +Electronically on some e-learning programs such as Google Form and other forms+ Extrapolation, Analysis+ Conclusion+ The lecture Empowerment+ Discussion.

Theory, practice and discussions

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

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	2		Structure of Bactria	In presence - Theoretical	
2	2		Recent studies on the structure of bacteria	=	
3	2		=	=	
4	2		Predatory bacteria:	=	
5	2		=	=	
6	2		Probiotic:		
7	2		First monthly exam		
8	2		Bioremediation	=	
9	2		Nosocomial bacterial infections:	=	
10	2		=	=	
11	2		Production of antibiotics:		
12	2		=	=	
13	2		Second monthly exam		
14	2		What is biofertilizer?	=	
15	2		Final exam	=	

12. Infrastructure

Required reading: · CORE TEXTS · COURSE MATERIALS · OTHER	

Special requirements (include for example workshops, periodicals, IT software, websites)	
Community-based facilities (include for example, guest Lectures, internship, field studies)	

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

Course description Sample

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

This course description provides a succinct summary of the most important course characteristics and the learning outcomes the student is expected to achieve Demonstrating whether they have made the most of the learning opportunities available. It must be linked to a description the program.

Educational institution١	**University of Anbar - College of Education for Pure Sciences**
University department/center	**College of Education for Pure Sciences/Department of Biology**
Course name/code	**Bacterial Pathogenesis**
Programs in which it is included	**PhD in Biology**
Available attendance forms	**Daily**
Semester/year	**Quarterly**
Number of study hours (total)	**٣٠**
Date this description was prepared	**2023-2024**
Course objectives:	
This course aims to: **6- Preparing specialists in the field of bacterial pathogenesis and practically to fill a market need the job.** **7- I finally conducted a scientific study and tried to keep up with scientific development in the field of bacterial pathogenesis.** **8- Cooperating with the state and the private sector by providing advice, scientific advice and procedures laboratory analyzes in the field of bacteriology, special pathogenic bacteria.** **9- Encouraging scientific research and providing students with basic skills in bacterial pathogenesis and their applications in the fields Medical, environmental and food industries.** **10- Volumes on solving scientific problems to serve national development plans.**	

Learning outcomes, teaching, learning and assessment methods

A- Knowledge and understanding

A1-Enabling students to obtain knowledge and understanding of the intellectual framework and foundations of bacterial pathogenesis applications in various fields.

A2- Enabling students to obtain knowledge and understanding of microbiology and bacterial pathogenesis in the medical, industrial, environmental and food fields.

A3- Enabling students to obtain knowledge and understanding of pathogenic bactriology and diseases.

A4- Bringing the student to a level where he has the ability to interpret the results (research) and turn them into a work reality, from which he will benefit in the future during study and after graduation.

Teaching and learning methods

Blackboard + pen + data show

B- Subject-specific skills

B1 - Scientific and practical skills.
B2 -Memorization and analysis skills. Skills for use and development.
B3 - Developing the student's decision-making skill as it is the essence of the educational and statistical process.

C- Thinking skills

7- External tests
8- Various and interconnected questions to test the student's skills
9- Enabling students to solve problems related to the intellectual framework of the foundations and applications of bacterial diagnosis.
10- Enabling students to solve problems related to bacteriology and medical, industrial, environmental, and food microbiology.
11- Enabling students to solve problems related to bacterial pathology.
12- Enabling students to solve problems related to bacterial diagnosis.

Teaching and learning methods

Blackboard + pen + data show +Electronically on some e-learning programs such as Google Form and other forms+ Extrapolation, Analysis+ Conclusion+ The lecture Empowerment+ Discussion.
Solving a group of practical examples by the academic staff.
Participation of students during the lecture to solve some scientific problems

Evaluation methods

Daily and monthly examinations

General and transferable skills (other skills related to employability and personal development.

Course structure					
Evaluation method	**Teaching method**	**Name of the unit/course or subject**	**Required learning outcomes**	**hours**	**The week**
Attendance and motivational questions.	**A video lecture with a text lecture with a live broadcast**	Introduction in pathogenic bacteriology	**The student to learn the basic principles of pathogenic bacteriology**	**2**	**-**
Exams and daily activities	**A video lecture with a text lecture with a live broadcast**	pathogenesis of bacterial infection	**The student learns the principles pathogenesis of bacterial infection**	**2**	**-**
Exams and daily activities	**A video lecture with a text lecture with a live broadcast**	transmission of infection	**The student will learn the principles to transmission of infection**	**2**	**-**
Exams and daily activities	**A video lecture with a text lecture with a live broadcast**	The infectious process	**The student learns the principles of infectious process**	**2**	**-**
Attendance and motivational questions	**A video lecture with a text lecture with a live broadcast**	genomics and bacterial pathogenicity	**The student learns the principles of genomics and bacterial pathogenicity**	**2**	**-**
Attendance and motivational questions	**A video lecture with a text lecture with a live broadcast**	regulation of bacterial virulence factors	**The student learns the principles of regulation of bacterial virulence factors**	**2**	**-**
Attendance and motivational questions	**A video lecture with a text lecture with a live broadcast**	bacterial virulence factors, Bacterial Biofilms	**The student should know the bacterial virulence factors**	**2**	**-**
Attendance and motivational questions	**A video lecture with a text lecture with a live broadcast**	Invasion of Host Cells and Tissues	**The student learns how a bacterial pathogen Invasion of Host Cells and Tissues**	**2**	**-**
Attendance and motivational questions with grade	**A video lecture with a text lecture with a live broadcast**	Toxins, Bacterial Secretion Systems	**The student will learn the principles of toxins, bacterial secretion Systems**	**2**	**-**
Attendance and motivational questions	**A video lecture with a text lecture with a live broadcast**	Exotoxins Associated with Diarrheal Diseases and Food Poisoning	**The student will learn the principles of Exotoxin and its associated with diarrheal diseases and food poisoning**	**2**	**-**
Attendance and motivational questions	**A video lecture with a text lecture with a live broadcast**	Lipopolysaccharides (LPS) of Gram-Negative Bacteria	**The student learns about Lipopolysaccharides (LPS) of Gram-Negative Bacteria**	**2**	**-**

Attendance and motivational questions	**A video lecture with a text lecture with a live broadcast**	Monthly exam	**Exam**	**2**	**-**
Attendance and motivational questions	**A video lecture with a text lecture with a live broadcast**	Peptidoglycan of Gram-Positive Bacteria	**The student learns about Peptidoglycan of Gram-Positive Bacteria**	**2**	**-**
Attendance and motivational questions with grade	**A video lecture with a text lecture with a live broadcast**	Tissue-Degrading Enzymes, Antiphagocytic Factors	**The student learns the about Tissue-Degrading Enzymes, Antiphagocytic Factors**	**2**	**-**
		Monthly exam	**Exam**		

Admissions	
1. Approval of admission conditions for students in accordance with the regulations of the Ministry of Higher Education and Scientific Research (admission to graduate studies is by university order from the university presidency) **2. To pass the department's personal examination.** **3. Bachelor's average to obtain a master's degree, and bachelor's and master's averages to obtain a doctoral degree.** **4. The department's capacity includes postgraduate students in general, private, and privileges channels.**	**Prerequisites**
4	**The smallest number of gradute students**
15 - 5	**The largest number of graduate students**
Graduation research projects	**Social services (including, for example, guest lectures, vocational training, and field studies(**

Infrastructure	
Jawetz, M. & Adelberg's. 2013. Medical Microbiology , Twenty-Sixth Edition. The McGraw-Hill Companies, Inc. USA Website: https://www.ncbi.nlm.nih.gov/books/NBK8526/	Required readings: 1-Course books 2-Other
	Special requirements
	Social services (including, for example, guest lectures, vocational training, and field studies(

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	Anbar University
2. University Department/Centre	College of Education for Pure Sciences/Department of Life Sciences
3. Course title/code	Scientific journals
4. Programme(s) to which it contributes	My presence
5. Modes of Attendance offered	quarterly
6. Semester/Year	28
7. Number of hours tuition (total)	4/6/2024
8. Date of production/revision of this specification	University Of Anbar
9. Aims of the Course	
1) The student learns the meaning of scientific periodicals, their basics and types.	
2) Putting the student at the present time face to face with the scientific problems facing the publication of research in reputable scientific journals.	
3) Emphasis on the communication in each topic of this subject between scientific principles and functional aspects.	
4) Identifying the components of solid scientific research	
5) Learn about the steps of scientific publishing in reputable journals and how to avoid fake journals	

10· Learning Outcomes, Teaching ,Learning and Assessment Methode

A- Knowledge and nderstanding

A1- Induction

A2- Analysis

A3- Conclusion

A4- The lecture

A5- Empowerment

A5- Test

B. Subject-specific skills

B1 - The student learns how to know reliable magazines.

B2 - To learn how to avoid fake magazines or periodicals.

B3 - That the student learns the steps for publishing in reputable magazines.

B4- That the student learns how to correspond with scientific periodicals.

Teaching and Learning Methods

- lecture
- Discussion
- Direct application using the Internet

Assessment methods

- Written exam
- Oral exam
- Direct questions
- Reports

C. Thinking Skills

C1- Motivating teamwork among students

C2- Developing the student's skills and thinking

C3- Stimulating brainstorming among students

43- To be able to relate and analyze problems that may arise during his work

Teaching and Learning Methods

- lecture
- Discussion
- Direct application using the Internet

Assessment methods

- Written exam
- Oral exam
- Direct questions
- Reports

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

D.1 To be able to interpret the results that he can obtain while practicing his laboratory work

D.2 To be able to relate and analyze the problems that may arise during the publication of research.

D.3 Verbal teaching behavior skills such as discussion, dialogue, explanation and interpretation.

D.4 Behavioral skills such as methods of correspondence and academic style. In correspondence between the researcher and the editor-in-chief of the scientific journal, use means of explanation such as educational videos and pictures.

D.5 Planning skill: such as identifying the appropriate journal according to the student's research and specialization

11. Course Structure

Week	Hours	ILOs	Unit/Module or Topic Title	Teaching Method	Assessment Method
1	2	An introduction to learning about scientific periodicals, what they are, and their benefits	Scientific periodicals	a lecture	Oral questions
2	2	Identify the types of scientific journals and which type is best for an academic researcher	Types of periodicals	a lecture	Oral questions
3	2	The student learns the steps of electronic publishing	Published in electronic journals	a lecture	Oral questions
4	2	The student will be familiar with the most famous scientific research engines to obtain reliable sources	Use scientific search engines to obtain modern and reliable sources	Lecture with live application on the Internet	Oral questions
5		First test	First test	a test	A written test
6	2	The student learns about the process of evaluating research in scientific journals or periodicals	The process of evaluating research in scientific journals or periodicals	Lecture with live application on the Internet	Oral questions
7	2	The student learns how to check the accreditation of journals within the reliable sources of Scopus, Claravit, and Semaco	Examining the accreditation of journals in discreet containers	Lecture with live application on the Internet	Oral questions
8	2	Learn about the	Components of	Lecture with live	Oral questions

		components of scientific research	scientific research	application on the Internet	
9	2	Identify fake scientific journals and publishing houses and their characteristics and avoid them	Fake scientific journals and publishing houses and avoid them	Lecture with live application on the Internet	Oral questions
10	2	Identify the Scopus and Claravit containers and their importance	Scopus, Claravet	Lecture with live application on the Internet	Oral questions
11	2	How to find suitable journals for research within Elsevier Publishing House	Finding suitable journals for my research within Elsevier Publishing House	Lecture with live application on the Internet	Oral questions
12	2	Learn about the publisher's impact factor, the most important tips before publishing in scientific journals, the letter accompanying the research paper, and the international standard serial number for journals.	The publisher's impact factor, the most important tips before publishing in scientific journals, and the international standard serial number for journals	a lecture	Oral questions
13	2	Identify the most important reasons that lead to a research paper being rejected by scientific journals	Reasons for refusing to publish scientific papers in peer-reviewed journals	a lecture	Oral questions
14		Second test	Second test	a test	A written test

12. Infrastructure	
Required reading: · CORE TEXTS · COURSE MATERIALS · OTHER	1. Requirements and conditions for publishing in prestigious journals, Arab Scientific Society Organization, Dr. Fawzi Rajab. 2. The reality of paper and electronic scientific journals in some colleges in the Arab world.
Special requirements (include for example workshops, periodicals, IT software, websites)	Periodicals and research methods for postgraduate students, Dr. Fawzia Al-Shenwi
Community-based facilities (include for example, guest Lectures , internship , field studies)	

13. Admissions	
Pre-requisites	

Minimum number of students	
Maximum number of students	

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	Anbar University
2. University Department/Centre	Department of biology
3. Course title/code	Medicinal and aromatic plants
4. Programme(s) to which it contributes	All scientific fields
5. Modes of Attendance offered	in person
6. Semester/Year	Spring 20٢٣ - 202٤
7. Number of hours tuition (total)	٢٨hours
8. Date of production/revision of this specification	٢٠٢٤ / ٦/ ٦
9. Aims of the Course	
1- Providing students with knowledge of the nature of medicinal plants and how to use them	
2- Keeping abreast of modern global trends in the development of medicinal plant cultivation	
3- Providing students with information related to programs and files related to the methods of developing medicinal plants.	
4 - Dissemination of knowledge in the fields of food sciences and human nutrition and work on its application to serve the community.	

10· Learning Outcomes, Teaching ,Learning and Assessment Methode

1 - Understand the nature of the work of modern agriculture vocabulary and keep pace with what is modern

2- Distinguish between the active compounds in medicinal plants and their impact on human health

3- Distinguishing between the methods of extracting medicinal plants in terms of the method of extraction and the use of their products in industries

Teaching and Learning Methods

1- Adopting the method of giving lectures and linking each topic with examples from the reality of the work situation in agriculture.

2- Giving them some simple practical exercises that are discussed by the students and solved during the lecture

With the participation of all students in the section with the professor, the subject is not given a kind of interaction. Make reports on specific topics

Assessment methods

1- Through the participation of students in the lecture, based on their prior preparation of the subject. 2- Giving them a homework exercise and asking them to bring the solution in a separate paper in the next lecture.

3- Giving the students a case study and dividing the students into groups to write a report about that study.

4- Assessment through monthly exams

C. Thinking SkillsC1.

1 - Demonstrate students' ability to appreciate the real field of learning.

2 - Analyze and discuss problems.

3- Giving students an opportunity to think about solving these problems.

4 - Demonstrate the students' ability to give some possibilities and other ways to solve these problems.

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

- ١Employing computer programs to clarify the study material.
- ٢Use the information studied in the applications.
- ٣Applying this information on the ground.
- ٤Link the information obtained with each other

1. Course Structure

the week	hours	Required learning outcomes	Unit/course or topic name	education method	Evaluation method
the first	٢	Students' knowledge of the importance of medicinal plants, their history and the development of their cultivation	Introduction to medicinal plants	My presence	Discussion, daily exams, monthly exams
The second	٢	Statement of the importance of developing the cultivation of medicinal plants within the global trend of growing medicinal plants	Classifications of morphological, medicinal, chemical, botanical and seasonal medicinal plants	My presence	Discussion, daily exams, monthly exams
the third	٢	Learn how to study these plants and their classifications	Study the most important scientific interests that are a start in the development of the study of medicinal plants	My presence	Discussion, daily exams, monthly exams
the fourth	٢	Students' knowledge of the importance of agricultural processes in the production of medicinal plants	Agricultural operations and plant service operations aimed at increasing production	My presence	Discussion, daily exams, monthly exams
Fifth	٢	Students' knowledge of the importance of environmental factors and their impact on plants	Environmental factors, including heat, water, light, etc	My presence	Discussion, daily exams, monthly exams
	٢	Students' knowledge of the importance of the impact of environmental factors on plants	Environmental factors, including soil and its microorganisms	My presence	Discussion, daily exams, monthly exams
	first month exam				
	٢	Students' knowledge of secondary metabolites	Alkaloids: their composition, composition, effects and chemical extraction methods	My presence	Discussion, daily exams, monthly exams
ninth	٢	Students' knowledge of secondary metabolites	Glycosides: their structure, composition, effects and chemical extraction methods	My presence	Discussion, daily exams, monthly exams
The tenth	٢	Students' knowledge of secondary metabolites	Volatile oils: their composition, composition, effects and chemical extraction methods	My presence	Discussion, daily exams, monthly exams
eleventh	٢	Students' knowledge of secondary metabolites	Tannins: their composition, composition, effects, and methods of chemical extraction	My presence	Discussion, daily exams, monthly exams
twelveth	٢	Students' knowledge of secondary metabolites	Phenols: their composition, composition, effects and chemical extraction methods	My presence	Discussion, daily exams, monthly exams
Thirteenth	٢	Botanical description of some medicinal plants and their economic importance	Plants of the family Oral and Solanaceous family	My presence	Discussion, daily exams, monthly exams
fourteenth	٢	Botanical description of some medicinal plants and their economic importance	The labial family, the sappy family, the legume family, and the grassy family	My presence	Discussion, daily exams, monthly exams
Fifteenth	second month exam				

12. Infrastructure	
Required reading: · CORE TEXTS · COURSE MATERIALS · OTHER	- ١ Herbs is a medicine for every disease, 2015, Dr. Faisal bin Muhammad Iraqi - ٢Medicinal and aromatic plants and their medicinal uses, Dr. Abd Omran
Special requirements (include for example workshops, periodicals, IT software, websites)	
Community-based facilities (include for example, guest Lectures , internship , field studies)	There are practical lessons in the field to apply what students have learned in the theoretical lessons

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

Subject teacher / Assis. Prof. Dr. Osama Hussain Mahidi

Course description Sample

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

Histopathology(Dr. Loay Hatem Ali)

This course description provides a succinct summary of the most important course characteristics and the learning outcomes the student is expected to achieve Demonstrating whether they have made the most of the learning opportunities available. It must be linked to a description the program.

- Educational institution١	**Anbar University - College of Education for Pure Sciences**
University department/center	**College of Education for Pure Sciences/Department of biology**
Course name/code	**Histopathology/BIO239**
Programs in which it is included	**Ph.D of Biology**
Available attendance forms	**Daily**
Semester/year	**Quarterly**
Number of study hours (total)	**٣٠**
Date this description was prepared	**2023-2024**
Course objectives:	
A. Introducing the student to pathology, preparing temporary and permanent tissue slides for animal samples, and studying the histological changes that accompany each disease. B. Preparing university teachers with educational skills to teach biology C. Developing students' scientific attitudes to develop their own abilities D. Providing students with how to innovate teaching aids for teaching biology	

Learning outcomes, teaching, learning and assessment methods
A- Knowledge and understanding
A1 1- A1- The student’s ability to distinguish, understand cognitively, and use modern practical research methods. A2- Providing the student with knowledge and understanding of the main

principles of histopathology
A3- Introducing the student to modern techniques in studying animal histology and the basic methods for distinguishing between different tissues. B - The skills objectives of the course. B1- The student should be able to distinguish between different normal and pathological tissues in the animal's body. B2- Providing the student with knowledge of how to prepare tissue slides and describe and differentiate tissues. B3- Giving the student the skill of linking the theoretical and practical parts of the scientific subjec
Teaching and learning methods
Blackboard + pen + data show
B- Subject-specific skills
C1 Accuracy in diagnosing pathological tissues C2- Credibility and transparency in scientific research C3- Knowing the foundations of histopathological diagnosis .
C- Thinking skills D1- The skill of preparing histological sections. D2- The skill of distinguishing between normal and pathological tissues D3- The skill of self-development by giving him information that will benefit him in the academic future D4- It enables the student to use what he has learned to develop himself
Teaching and learning methods
Blackboard + pen + data show +Electronically on some e-learning programs such as Google Form and other forms+ Extrapolation, Analysis+ Conclusion+ The lecture Empowerment+ Discussion.
Evaluation methods
Daily and monthly examinations
General and transferable skills (other skills related to employability and personal development.

Course structure					
Evaluation method	**Teaching method**	**Name of the unit/course or subject**	**Required learning outcomes**	**hours**	**The week**
Attendance and motivational questions.	directly	Ischemia and necrosis	**Histopathology**	**2**	**-**
Exams and daily activities	directly	Inflammation, its types, and tissue repair	**Histopathology**	**2**	**-**
Exams and daily activities	directly	Blood dysfunction and bleeding	**Histopathology**	**2**	**-**
Exams and daily activities	directly	Infarction, angina, embolism and thrombosis, Edema and shock	**Histopathology**	**2**	**-**
Attendance and motivational questions	directly	Immune dysfunction	**Histopathology**	**2**	**-**
Attendance and motivational questions	directly	Organ transplant immunity	**Histopathology**	**2**	**-**
Attendance					
motivational questions	directly	intestine and large intestine	**Histopathology**	**2**	**-**
Attendance and motivational questions with grade	directly	Appendicitis and liver disease	**Histopathology**	**2**	**-**

Admissions

Prerequisites	**1. Approval of admission conditions for students in accordance with the regulations of the Ministry of Higher Education and Scientific Research (admission to graduate studies is by university order from the university presidency)** **2. To pass the department's personal examination.** **3. Bachelor's average to obtain a master's degree, and bachelor's and master's averages to obtain a doctoral degree.** **4. The department's capacity includes postgraduate students in general, private, and privileges channels.**
The smallest number of gradute students	**4**
The largest number of graduate students	**15 - 5**

Social services (including, for example, guest lectures**, vocational training, and field studies(**	**Graduation research projects**

Infrastructure	
Atlas of Histopathology 1st Edition, by Ivan Damjanov (Author) Histopathology , Second Edition Edited by Guy Orchard and Brian Nation	Required readings: 1-Course books 2-Other
Atlas of Diagnostic and Perspective Histopathology by Shahid Pervez	Special requirements
3- Atlas of Diagnostic and Perspective Histopathology by Shahid Pervez	Social services (including, for example, guest lectures, vocational training, and field studies(