

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



Academic Program Description Form

University Name: Al-Qadisiyah

Faculty/Institute: Education

Scientific Department: Biology

Academic or Professional Program Name: The educational outcomes program expected from the student

Final Certificate Name: Bachelor of Education in biology

Academic System: Annual

Description Preparation Date: 1/10/2025

File Completion Date: 1/10/2025

Signature:

Head of Department Name:

Prof. D. Ahmed Jassem Hasan

Date:

Signature:

Scientific Associate Name:

D. Zaki Abbas Radhi

Date:



The file is checked by:

Department of Quality Assurance and University Performance

Director of the Quality Assurance and University Performance Department:

Prof. Dr. Abed AL-Razak Hussan Hajem

Date:

Signature:

Approval of the Dean

1. Program Vision

The *Department of Biology* is looking forward to a bright future at the hands of students and alumni who are aware of the concept of life and development and can build a new Iraq to rise to the level of developed countries. The department should be a center and a stimulating environment for professors, faculty members, and students in the field of biology and a center for attracting researchers, competencies, and expertise in the field of biology, making its students an influential addition to the local, Arab, and international levels.

2. Program Mission

The *Department of Biology* aims to build a specialized staff of academically and professionally qualified teachers capable of graduating an educated, developed, and cultured generation in intermediate and secondary schools. The staff should be able to provide researchers who are able to provide the community with research capable of solving many of society's health, economic and environmental problems. Finally, finding solutions to many of society's problems and meeting the market's requirements

3. Program Objectives

1. Providing students with scientific and educational qualifications that qualify them to teach in intermediate and secondary schools.
2. Graduating expert students in the scientific and biological disciplines.
3. Provide students with the principles of proper national education, love of others, and rejection of egoism.
4. Raising generations with educational qualifications makes them teachers and an educator in society.
5. Rehabilitation of a generation with educational ideas that lead society toward prosperity.
6. Providing students with some scientific aspects that will help them in their daily life.
7. Provide students with practical skills that can be applied to the market's requirements.
8. Providing students with information that supplements their knowledge in the health, food, environmental, and veterinary fields.

4. Program Accreditation

No

5. Other external influences

no

6. Program Structure

Program Structure	Number of Courses	Credit hours	Percentage	Reviews*
Institution Requirements	8	17	%8	
College Requirements	9	36	%18	
Department Requirements	26	132	74%	
Summer Training	0	0	0	
Other				

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

7. Program Description

Year/Level	Course Code	Course Name	Credit Hours	
			theoretical	practical
The stage: first	101 CB	General biology	2	2
	102 PA	Plant anatomy	2	2
	103CB	Cell biology	2	2
	104GC	General chemistry	1	2
	105C	Computer 1	2	
	106 G	Geology	2	
	107 F	Fundamentals of education		
	108EP	Developmental and Educational Psychology		
	109EL	English language	1	2
	110AL	Arabic language	2	
	111DH	Democracy and Human Rights	2	
	112SE	Sport education	1	-
	113BS	Biological safety and security	1	-

The stage: Second	201I	Invertebrates	2	2
	202H	Histology	2	2
	203E	Embryology	2	2
	204P	Plant taxonomy	2	2
	205B	Biochemistry	2	2
	206AL	Arabic language	1	
	206TT	Teaching thinking	1	
	207C	Computer 2	1	
	208DP	Curricula and textbooks	1	2
	209 EL	Educational leadership and management	2	
	213Tet	Teaching thinking	1	
	211EL	English language	2	
	212CD	Crimes of the defunct Baath Party	2	
The stage: third	301E	Entomology	2	2
	302AA	Algae and Archegonhate	2	2
	303EP	Ecology and pollution environment	2	2
	304CA	Comparative anatomy chordate	2	2
	305M	Mycology	2	2
	306G	Genetics	2	2
	307PC	Psychological counseling and psychological health	2	
	308CM	Curriculums and methods of Teaching	2	
	309FS	Fundamentals of scientific research	1	
	310EL	English language	1	
The stage: four	401 AP	Animal physiology	2	2
	402PP	Plant Physiology	2	2
	403P	Parasitology	2	2
	404M	Microbiology	2	2
	405I	Immunology	1	2
	406O	Optional	2	
	407M	Measurement and evaluation	2	
	408PE	Practical education	2	
	409RP	Research Project	2	
	410EL	English language	1	

8. Expected learning outcomes of the program

A–Knowledge

Learning Outcomes 1	A1- The student gets to know the scientific facts related to plants, animals, health, and the environment. A 2- That the student learns how to transfer what he has learned to daily life and apply it in a way that suits his need. A3- To learn using laboratory equipment, diagnostic methods, and interpret results. A4 - That the student learns modern methods of teaching and learning. . A5- The student must have skills in evaluating the elements of the educational process. A6 - To know how to employ skills and information in ordinary life..
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Skills

Learning Outcomes 2	B - The program's skilled objectives B1 - The student should be able to acquire skills in the practical application of the information and acquired knowledge. B2 - The student should be able to use laboratory equipment, models and the smart board. B3 - The student should be able to discover the information by him\herself.
Learning Outcomes 3	1- The lecture or discussion is supported by a presentation using a data show. 2- Conducting practical educational experiments 3- Using modern technologies and electronic methods to provide information 4 -Using modern sources to obtain knowledge and information

Ethics

Learning Outcomes 4	C1- Comparing and solving the raised questions. C2- Concluding and arriving at appropriate solutions. C 3- evaluating C4- Induction and deduction
Learning Outcomes 5	1- Giving the student self-confidence by conducting experiments.

	2- Strengthening emotional skills by creating a spirit of competition
	3- Building collective skills within the university.

9. Teaching and Learning Strategies

- 1- The lecture or discussion supported by a presentation using a data show.
- 2- Conducting practical educational experiments
- 3- Using modern technologies and electronic methods to provide information
- 4 -Using modern sources to obtain knowledge and information.

10. Evaluation methods

- 1- Daily Short Exams (COZ)
- 2- Monthly exam, submission of reports, extracurricular activities, and the electronic platform
- 3- Teaching skills in conducting experiments and results accuracy.

11. Faculty

Faculty Members

Academic Rank	Specialization		Special Requirement s/Skills (if applicable)		Number of the teaching staff	
	General	Special	Certificate	Scientific title	Staff	Lecturer
	biology	animal Physiology	Doctora	Proph.	Ahmed Jassem Hassan AL-Naely	
	biology	Microbiology	Master	Teacher	Abeer Sami Kadhim muftin Alardhi	
	biology	Plant	Doctora	Assist Proph	Ali obaid shaawiat Ali AL-Hamdawe	
	biology	animal Physiology	Doctora	Assist Proph	Aseel Najah Sabour Ali	
	biology	Genitic	Doctora	Assist Proph	Aseel Raheem Mardan Abbass Alaamiri	

	biology	Parasite	Doctora	Assist Proph	Asifa matrood yassen almaeahi	
	biology	Gographic	Master	Assist Teacher	Ayad kadhim Hasan Abbas alnaily	
	biology	Microbiology	Doctora	Proph	Azhar Noory huusein Talal Almousawi	
	biology	Plant	Doctora	Assist Proph	Dhafir abed Alkhadim jameel Mohammad Hassan	
	biology	Microbiology	Doctora	Proph	Dina M. R. I. Al Khafaf	
	biology	Plant	Doctora	Assist Proph	Dunia Bahel Gadaan Salal Al-Ghanimy	
	biology	animal Physiology	Doctora	Assist Proph	Ennas Mohamed Majhwol Hassan alkhozai	
	biology	Geniticof Entomology	Doctora	Assist Proph	forat abd alhmzah hadi khashan alshebani	
	biology	Microbiology	Doctora	Assist Proph	Hadaf Mahdi Kadhim Bawh Al-Abidi	
	biology	Parasite	Doctora	Proph	Hadi Madlool Hamza younis Al-Mayali	
	biology	Ecology alge plant	Doctora	Proph	Haider Abdul Wahid Malik Mahdi Alghanmi	
	biology	Plant	Doctora	Teacher	haifaa mutter jawad shnawa al-sulaykhi	
	biology	animal histology	Doctora	Proph	Hanaa enaya mahood Alrubaiai	
	biology	Parasite	Doctora	Assist Proph	Hind abdulzahra abdulkadhim meteb Alshaibani	
	biology	Parasite	Doctora	Assist Proph	Hussam Saeed Abdulhussein Mahdi Al-	
	biology	animal histology	Doctora	Proph	hussein abbas selman bady al-hamadawi	
	biology	Parasite	Doctora	Assist Proph	Ikhlas Abbas Marhoon Essa Al-Zubaidi	
	biology	animal Physiology	Doctora	Assist Proph	Jameel kareem wali Hamza Alumeri	
	biology	Parasite	Doctora	Assist Proph	Khaled Thamer Mattar Alshaibani	
	biology	Parasite	Doctora	Teacher	lubna.abdalqade kenya. Al-Ibrihemi	
	biology	Microbiology	Doctora	Proph	Majid Kadhim Aboud Al-Shibly	
	biology	Parasite	Doctora	Teacher	Marwa sami alwan Al-Shabine	
	biology	Microbiology	Doctora	Assist Proph	Mithal Kareem Abas Al-Hassani	

	biology	animal Physiology	Master	Assist Teacher	Mohammed Abdul Ameer Haraj Hussein AL Wazmy	
	biology	Ecology	Master	Assist Teacher	Mohammed Obaid Enad Hasson Al-Mansoori	
	biology	Entomology	Doctora	Teacher	Mohammed Saleh Mahdi Jasem Alyaqobi	
	biology	Ecologyand pollution	Doctora	Assist Proph	Raid Kadhim Abed Aboud Alasady	
	biology	animal Physiology	Doctora	Assist Teacher	Rajwan Jawad Hassan Kshawat Al-Obeidi	
	biology	Microbiology	Doctora	Assist Proph	Rana Salih Jabbar Abbas Al-taweel	
	biology	Parasite	Doctora	Proph	Sadiya Aziz Anah Aboid AL-Jabori	
	biology	Plant	Master	Assist Teacher	Safa ayad jassim Mohammed rida	
	biology	animal Physiology	Doctora	Proph	Wejdan matrood kadhem al-azawi	
	arabic	arabic	Doctora	Assist Teacher	Zahra basem Farhan	
	biology	Method of biology	Doctora	Teacher	Assel Jamaa Ali	
	biology	animal Physiology	Doctora	Teacher	Wisam Abdan Wawi Abdullah Alabdullah	
	biology	Plant	Doctora	Teacher	Zahrah K. AL- Khazali	
	biology	Microbiology	Master	Assist Teacher	Zainab Abdulkareem Oleiwi Atiya Alfarhani	
	biology	Plant	Master	Assist Teacher	Zainab latif khudhair nahar alattaby	

Professional Development

Mentoring new faculty members

- 1- Participation in practical lessons while taking the instructions of teachers with long experience
- 2- Involving them in courses on teaching methods and modern teaching techniques
- 3- Search for methods that suit their abilities and strive to develop them

Professional development of faculty members

- 1- Participate in practical lessons while receiving reward meals for experienced teachers
- 2- Involving them in the modern teaching methods and techniques in teaching course
- 3- Searching for methods that suit their abilities and relying on them

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12. Acceptance Criterion

Average of all lessons + biology grade for the sixth scientific year. student's wish

13. The most important sources of information about the program
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Student graduation document issued by the Ministry of Education Central admission results Educational supervision card and educational supervisors information Student personal documents The external environment and community requirements
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14. Program Development Plan

- | |
|---|
| <ol style="list-style-type: none">1. Establishing admission mechanisms that align with the existing infrastructure.2. Providing adequate material and human resources.3. Creating a more conducive learning environment to prepare teachers who keep pace with current developments.4. Developing plans that adapt to emergency situations, as demonstrated during the COVID-19 pandemic.5. Emphasizing skills development and creating more professional programs in this field.6. Formulating long-term policies (five-year plan, etc.) to highlight key objectives.7. Improving strategic teaching methods through the use of modern technologies and electronic communication. |
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Program Skills Outline															
				Required program Learning outcomes											
Year/Level	Course Code	Course Name	Basic or optional	Knowledge				Skills				Ethics			
				A1	A2	A3	A4	B1	B2	B3	B4	C1	C2	C3	C4
The stage: first	101CB	General biology	Basic	√	√	√	√	√	√	√	x	√	√	√	√
	102PA	Plant anatomy	Basic	√	√	√	√	√	√	√	x	√	√	√	√
	103CB	Cell biology	Basic	√	√	√	√	√	√	√	x	√	√	√	√
	104GC	General chemistry	Basic	√	√	√	√	√	√	√	x	√	√	√	√
	105FE	Fundamentals of education	optional	√	√	√	√	√	√	√	x	√	√	√	√
	106EP	Developmental and Educational Psychology	optional	√	√	√	√	√	√	√	x	√	√	√	√
	107C	Computer 1	optional	√	√	√	√	√	√	√	x	√	√	√	√

	108AL	Arabic language	optional	√	√	√	√	√	√	√	x	√	√	√	√
	109EL	English language	optional	√	√	√	√	√	√	√	x	√	√	√	√
	110DH	Democracy and Human Rights	optional	√	√	√	√	√	√	√	x	√	√	√	√
	112SE	Sport education	optional	√	√	√	√	√	√	√	x	√	√	√	√
The stage: Second	113BS	Biological safety and security	Basic	√	√	√	√	√	√	√	x	√	√	√	√
	201I	Invertebrates	Basic	√	√	√	√	√	√	√	x	√	√	√	√
	202H	Histology	Basic	√	√	√	√	√	√	√	x	√	√	√	√
	203E	Embryology	Basic	√	√	√	√	√	√	√	x	√	√	√	√
	204P	Plant taxonomy	Basic	√	√	√	√	√	√	√	x	√	√	√	√
	205B	Biochemistry	optional	√	√	√	√	√	√	√	x	√	√	√	√
	206TT	Teaching thinking	optional	√	√	√	√	√	√	√	x	√	√	√	√

	207C	Computer 2	optional	√	√	√	√	√	√	√	x	√	√	√	√
	208DP	Curricula and textbooks	optional	√	√	√	√	√	√	√	x	√	√	√	√
	209B	Teaching thinking	optional	√	√	√	√	√	√	√	x	√	√	√	√
	21CT	Curricula and textbooks	optional	√	√	√	√	√	√	√	x	√	√	√	√
	211EL	English language													
	212CD	Crimes of the defunct Baath Party													
The stage: third	301E	Entomology	Basic	√	√	√	√	√	√	√	x	√	√	√	√
	302AA	Algae and Archegonhate	Basic	√	√	√	√	√	√	√	x	√	√	√	√
	303EP	Ecology and pollution environment	Basic	√	√	√	√	√	√	√	x	√	√	√	√
	304CA	Comparative anatomy chordate	optional	√	√	√	√	√	√	√	x	√	√	√	√
	305M	Mycology	optional	√	√	√	√	√	√	√	x	√	√	√	√

	306G	Genetics	optional	√	√	√	√	√	√	√	x	√	√	√	√
	307PC	Psychological counseling and psychological health	optional	√	√	√	√	√	√	√	x	√	√	√	√
	308CM	Curriculums and methods of Teaching	optional	√	√	√	√	√	√	√	x	√	√	√	√
	309FS	Fundamentals of scientific research	optional	√	√	√	√	√	√	√	x	√	√	√	√
	310EL	English language	optional	√	√	√	√	√	√	√	x	√	√	√	√
The stage: fourth	401 AP	Animal physiology	Basic	√	√	√	√	√	√	√	x	√	√	√	√
	402PP	Plant Physiology	Basic	√	√	√	√	√	√	√	x	√	√	√	√
	403P	Parasitology	Basic	√	√	√	√	√	√	√	x	√	√	√	√
	404M	Microbiology	Basic	√	√	√	√	√	√	√	x	√	√	√	√
	405I	Immunology	Basic	√	√	√	√	√	√	√	x	√	√	√	√
	406O	Optional	optional	√	√	√	√	√	√	√	x	√	√	√	√

	407M	Measurement and evaluation	optional	√	√	√	√	√	√	√	x	√	√	√	√
	408PE	Practical education	optional	√	√	√	√	√	√	√	x	√	√	√	√
	409RP	Research Project	optional	√	√	√	√	√	√	√	x	√	√	√	√
	410EL	English language	optional	√	√	√	√	√	√	√	x	√	√	√	√

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

Course Description Form

1. Course Name:					
Biology					
2. Course Code:					
101ع ح					
3. Semester / Year:					
Year 2025-2026					
4. Description Preparation Date:					
1/10/2025					
5. Available Attendance Forms:					
Mandatory attendance					
6. Number of Credit Hours (Total) / Number of Units (Total)					
4 hours (2 hours theoretical + 2 hours practical)					
7. Course administrator's name (mention all, if more than one name)					
Name: Dr. Ikhlas Abbas Marhoon Email: ikhlas.abbas@qu.edu.iq					
8. Course Objectives					
1- Preparing the student to understand biology, its development and its branches, as well as explaining the importance of studying biology as well as understanding the developments that occur in living organisms over time depending on external influences 2- Addressing the foundations of classification of living organisms and studying theories of evolution by studying the evolutionary steps in its various stages and showing if these theories are true or false.. 3- Defining the concept of reproduction and explaining its types in living organisms, studying the behavior of living organisms and some terms related to behavior such as rhythm, migration, biological clock, and innate and learned behavior.			Course Objectives		
9. Teaching and Learning Strategies					
The method of visual presentation of the lecture and discussion, and questioning by asking and answering questions					Strategy
10. Course Structure					
Evaluation	Learning	Unit or subject	Required	Hour	Wee

method	method	name	Learning Outcomes	s	k
Daily quiz	<i>Lecture</i>	Introduction to biology	Definition of biology and its importance.	2	1
Daily quiz	<i>Discussion & question</i>	A historical overview of the emergence of biology	Identifying the role of scientists in the development of biology.	2	2
Daily quiz	<i>Lecture</i>	Branches of biology	Definition of the basic branches of biology.	2	3
Daily quiz	<i>Discussion & question</i>	Characteristics of living organisms	Distinguish between living and non-living organisms.	2	4
Daily quiz	<i>Discussion & question</i>	Metabolism	Definition of metabolism and its importance to living organisms. Life	2	5
Daily quiz	<i>Lecture</i>	Respiration in living organisms	Definition of respiration and its methods in living organisms.	2	6
Daily quiz	<i>Discussion</i>	Growth and reproduction	Definition of the concepts of growth and reproduction.	2	7
Daily quiz	<i>Discussion</i>	Morphogenesis and differentiation	Identify the process of morphology and differentiation of cells.	2	8
Daily quiz	<i>Lecture</i>	Adaptation and homeostasis	Explanation of the adaptation of organisms to environmental changes.	2	9
Daily quiz	<i>Lecture</i>	Classification of living organisms	Identify the principles used in classification	2	10
Daily quiz	<i>Discussion</i>	Classification systems	Definition of classification	2	11

			systems.		
Daily quiz	<i>Lecture</i>	Ecosystem	Identify the components of ecosystems.	2	12
Daily quiz	<i>Lecture</i>	The chemical basis of living organisms	Identify the chemical structure of living organisms.	2	13
Daily quiz	<i>Discussion</i>	Viruses	Definition of viruses, their types, and their danger.	2	14
Daily quiz	<i>Lecture</i>	Biodiversity	Definition of diversity and its forms.	2	15
Daily quiz	<i>Lecture</i>	Asexual reproduction in plants	Identify the methods of asexual reproduction in plants.	2	16
Daily quiz	<i>Lecture</i>	Sexual reproduction in plants	Learn about the methods of sexual reproduction in plants.	2	17
Daily quiz	<i>Lecture</i>	Asexual reproduction in animals	Identify methods of asexual reproduction in animals	2	18
Daily quiz	<i>Lecture</i>	Sexual reproduction in animals	Learn about the methods of sexual reproduction in animals	2	19
Daily quiz	<i>Discussion & question</i>	The behavior	Interpreting the behavior patterns of living organisms.	2	20
Daily quiz	<i>Discussion & question</i>	Autophagy mechanism	Definition of the autophagy mechanism and its importance.	2	21

Daily quiz	<i>Lecture</i>	Tumors	Defining the biological meaning of tumors and their causes	2	22
Daily quiz	<i>Lecture</i>	Types of tumors	Distinguishing between types of tumors.	2	23
Daily quiz	<i>Lecture</i>	Biocloning	Definition of biocloning technology.	2	24
Daily quiz	<i>Lecture</i>	Examples of cloned objects	Identify examples of cloned objects and their characteristics.	2	25
Daily quiz	<i>Lecture</i>	the dangers of cloning to humanity	Identify the disadvantages of biological cloning	2	26
Daily quiz	<i>Lecture</i>	Genetic modification	Learn about molecular techniques	2	27
Daily quiz	<i>Lecture</i>	Benefits and risks of genetic modification	Identify the harms and benefits of genetic modification.	2	28

11. Course Evaluation

daily preparation (10) , daily oral (10) , Scientific reports (10) , Quiz (10), written exams (60)

12. Learning and Teaching Resources

<i>General Biology</i>	Required textbooks (curricular books, if any)
<i>Biology – 2017 ; Peter H. Reven et al.</i>	Main references (sources)
<i>MEJSP journal</i>	Recommended books and references (scientific journals, reports...)
<i>Academia , Google scholar</i>	Electronic References, Websites

Course Description Form

1. Course Name:					
cytology					
2. Course Code:					
3. Semester / Year:					
Year 2025-2026					
4. Description Preparation Date:					
1/9/2025					
5. Available Attendance Forms:					
<i>Mandatory attendance</i>					
6. Number of Credit Hours (Total) / Number of Units (Total)					
<i>4 hours (2 hours theoretical + 2 hours practical)</i>					
7. Course administrator's name (mention all, if more than one name)					
<i>Name: Dr. Wejdan matrood kadhém</i> <i>Email: wejdan.al-azawi@qu.edu.iq</i>					
8. Course Objectives					
1- Preparing the student to understand cytology, its development and its branches, as well as explaining the importance of studying cytology as well as understanding the developments that occur in living organisms over time depending on external influences 2- Discussing the foundations of classification of living cells and studying them structurally and functionally 3- Defining the concept of reproduction and explaining its types in living organisms.			Course Objectives		
9. Teaching and Learning Strategies					
The method of visual presentation of the lecture and discussion, and questioning by asking and answering questions					Strategy
10. Course Structure					
Evaluation method	Learning method	Unit or subject name	Required Learning Outcomes	Hours	Week
Daily quiz	<i>Lecture</i>	Introduction to cytology	General introduction	2	1
Daily quiz	<i>Discussion & question</i>	Chemical components of the cell	Explaining the most important chemical	2	2

			components of the cell		
Daily quiz	<i>Lecture</i>	Types of living cells	Comparison between plant and animal cells	2	3
Daily quiz	<i>Discussion & question</i>	<i>Prokaryotic cells</i>	<i>Explaining Prokaryotic cells and their types</i>	2	4
Daily quiz	<i>Discussion & question</i>	<i>Eukaryotic cells</i>	<i>Explaining Eukaryotic cells and their types</i>	2	5
Daily quiz	<i>Lecture</i>	<i>viruses</i>	Definition and installation of viruses	2	6
Daily quiz	<i>Discussion</i>	<i>cell membranes</i>	<i>Definition of cell membranes and their types</i>	2	7
Daily quiz	<i>Discussion</i>	<i>Substances passing through membranes</i>	Explaining the mechanism of transport of materials across membranes	2	8
Daily quiz	<i>Lecture</i>	<i>plastids</i>	Explaining plastids and their types	2	9
Daily quiz	<i>Lecture</i>	<i>photosynthesis</i>	<i>Definition of the process of photosynthesis and its steps</i>	2	10
Daily quiz	<i>Discussion</i>	<i>Chromosomes</i>	<i>Explaining Its types and composition</i>	2	11
Daily quiz	<i>Lecture</i>	<i>Microbodies</i>	Explaining Its types and functions	2	12
Daily quiz	<i>Lecture</i>	<i>Ribosomes</i>	. Explaining Its composition and types	2	13
Daily quiz	<i>Discussion</i>	<i>Cilia and flagella</i>	To explain the cilia and flagella and their functions	2	14
Daily quiz	<i>Lecture</i>	<i>The exam is the first month</i>		2	15
Daily quiz	<i>Lecture</i>	<i>Nucleus</i>	<i>Explain its components and functions</i>	2	16
Daily quiz	<i>Lecture</i>	<i>Cytoplasm</i>	Explain its parts and components	2	17
Daily quiz	<i>Lecture</i>	<i>Golgi apparatus</i>	<i>Explaining its components and role in secretion</i>	2	18
Daily quiz	<i>Lecture</i>	<i>Plasma membrane</i>	Explain its role in maintaining the internal environment of the cell	2	19
Daily quiz	<i>Discussion & question</i>	<i>Plasma reticulum</i>	Definition Types according to the presence of ribosomes	2	20
Daily quiz	<i>Discussion & question</i>	<i>lysosomse</i>	Explain Its types and role in internal digestion in the cell	2	21
Daily quiz	<i>Lecture</i>	<i>Mitochondria</i>	Explain its role in energy production	2	22
Daily quiz	<i>Lecture</i>	<i>Cellular division</i>	. Explaining the	2	23

			methods of cell division		
Daily quiz	Lecture	Eukaryotic cycle	Explaining the methods of cell division Know the stages of the cycle	2	24
Daily quiz	Lecture	Meiosis and reproductive cycle	Explaining the stages and phases of division	2	25
Daily quiz	Lecture	Amitotic division rs	Explain how division occurs	2	26
Daily quiz	Lecture	Mitosis	Knowing its roles	2	27
Daily quiz	Lecture	Second month exam		2	28

11. Course Evaluation

Grade distribution out of 100 = quest (40) + final exam (60)
 quest (monthly exam 18 + short exams (4) + attendance (5) + practical (13)).

12. Learning and Teaching Resources

Cytology book	Required textbooks (curricular books, if any)
Cell biology book	Main references (sources)
MEJSP journal	Recommended books and references (scientific journals, reports...)
Academia , Google scholar	Electronic References, Websites

Course Description Form

1. Course Name:	
Theoretical plant anatomy	
2. Course Code:	
103 T.N	
3. Semester / Year:	
2025 – 2026 / Year	
4. Description Preparation Date:	
1/12/2025	
5. Available Attendance Forms:	
Mandatory attendance	
6. Number of Credit Hours (Total) / Number of Units (Total)	
4 (2 theoretical + 2 practical)	
7. Course administrator's name (mention all, if more than one name)	
Name: Azhar Abdulameer Sosa Email: azhar.abdalamer@qu.edu.iq	
8. Course Objectives	
-Understand the scientific facts about the internal structures of all plant parts starting from the cell, its contents and arrangement, all the way to the other plant parts -Distinguish between monocotyledonous plants and dicotyledonous plants (root, stem, and leaves).Through anatomical structure and secondary thickening in roots and stems -Study the distinctive anatomical characteristics of environmental plants	Course Objectives
9. Teaching and Learning Strategies	
<i>A-Knowledge and understanding</i> 1- The student should know plant anatomy and study the internal structure of the plant body 2- The student should know the different plant organs and study their locations and the tissues that make them up and adapt them to carry out their various functions. 3- The student gets to know the plant cell, its living and non-living components, the cell wall, and the different types of plant tissues 4- That the student can compare the internal anatomy of each plant organ, including the root, stem, leaf, and flowers	Strategy

- *thinking skills*
 1- *Developing the thinking skill by formulating questions and assignments*
 2- *The student's creative thinking when preparing microscopic plant models*
 3- *Distinguishing between scientific facts about plants and their internal parts.*
 4- *Reaching predictable results by training the student to think critically*
Teaching and learning method
 1- *Giving lectures and using the discussion method*
About the scientific material studied, presenting the lectures to students in PowerPoint format on Data Show, and using the microscope in study
The fine parts of the plant and their preparation
 2- *Evaluating students by giving daily assignments, activities, daily and monthly exams, and brainstorming to students.*

10. Course Structure

Evaluation method	Learning method	Unit or subject name	Required Learning Outcomes	Hours	Week
<i>Monthly exams Daily and oral exams And daily duties</i>	<i>Giving lectures And discussion</i>	Introduction to plant anatomy Introduction to the plant body And organs of the plant body	<i>Introduction to plant anatomy What is the primary plant body? Secondary tissues and organs, and some drawings about that</i>	2	1
		Plant cell concept And cellular theory And vitality in Growth and difference Between growth in Live compositions And non-living	<i>Defining the cell and learning about some theories and the difference between them Definition of growth and the most important differences between biological growth and growth In inanimate objects</i>		2
		cell wall- Cell wall layers And study its structure	<i>Definition of cell wall And clarify its layers The most important differences between</i>		3

		Chemist Its physical characteristics	<i>them</i> <i>Illustrations,</i> <i>drawings and</i> <i>diagrams</i> <i>The wall and its</i> <i>formation stages</i>		
		Types of pits And study the structur Flour to the cell wall	<i>Recognition</i> <i>Most important</i> <i>accessories</i> <i>Cell wall</i> <i>Such as pits, their</i> <i>components and types</i> <i>And drawings and</i> <i>illustrations thereof</i>		4
		Plant cell structure. Living Components of Plant Cell	<i>Learn about live</i> <i>content</i> <i>Inside the cell and</i> <i>clarify</i> <i>Features of each</i> <i>Illustrate it with</i> <i>pictures and</i> <i>diagrams</i>		5
		Plant cell structure. Nonliving Components of Plant Cell	<i>Recognizing non-</i> <i>living content</i> <i>Inside the cell and</i> <i>explain the features of</i> <i>each</i> <i>Illustrate it with</i> <i>pictures and</i> <i>diagrams</i>		6
		Meristematic tissue (construction) Its types and function	<i>Tissue definition</i> <i>and explanation</i> <i>Its types and</i> <i>division</i> <i>Learn about</i> <i>theories of</i> <i>evolution</i> <i>Depending on the</i> <i>plants</i>		7
		Root apex Shoot apex	<i>Illustration of the apical</i> <i>tissue</i> <i>of the root</i> <i>And the leg and take</i> <i>examples of some</i>		8
		permanent tissue/ Dermal Tissues Epidermis & typical of	<i>Identifying permanent</i> <i>tissues and their most</i> <i>important divisions</i> <i>Study of primary and</i> <i>secondary types of</i>		9

		Its cell and Periderm	<i>connective tissue Study of epidermis types and cells</i>	
		Epidermis / Stomata and types of stomatal patterns	<i>Studying the types of stomatal patterns of the epidermis in different plants and illustrating them in pictures and drawings</i>	10
		permanent tissue/ parenchymal tissue	<i>Study its characteristics and types And study its functions Its locations and forms Its cells and see pictures of each Of which</i>	11
		permanent tissue/ Collenchyma Tissue	<i>Study its characteristics and types Recipes of every type Study its functions and examples of their existence Pictures and illustrations thereof</i>	12
		permanent tissue/ Sclerenchymal tissue	<i>Study its characteristics and cell types And study its functions Some pictures and his whereabouts</i>	13
		permanent tissue/ xylem tissue	<i>Study its characteristics and components Its functions and clarification of the types of secondary thickenings Study of longitudinal and cross-sections Display photos and illustrations</i>	14
		permanent tissue/ Phloem tissue	<i>Study its characteristics, components and functions Display photos and illustrations For longitudinal and transverse sections</i>	15
		permanent tissue/ Secretory tissue And compositions	<i>Study its characteristics and cell types And the structures attached to it Where they are located</i>	16

		secretory	<i>and see photos</i>		
		Vascular tissue (Cambium Vascular and corky)	<i>Study their characteristics and locations And the methods of its emergence and formation Display photos and illustrations</i>		17
		Types of vascular bundles	<i>Study its types and features Each species according to plant families And the differences between the vascular bundles Between stems and roots</i>		18
		Internal anatomy For monocot plants For root and stem	<i>Study of characteristics and differences Between roots and stems In monocot plants And see pictures and illustrations</i>		19
		Internal anatomy For dicotyledonous plants For root and stem	<i>Study of characteristics and differences Between roots and stems In dicotyledonous plants And see pictures and illustrations</i>		20
		Internal anatomy of a leaf In monocot plants	<i>Study of the internal structure leaves and features mesophyll in it And the distribution of vascular bundles And study examples</i>		21
		Internal leaf anatomy in dicotyledonous plants	<i>Study of the internal structure leaves and features mesophyll in it And the distribution of vascular bundles And study examples</i>		22
		Secondary thickening (stem and roots of dicots) Annual episodes	<i>Definition of secondary thickening Its types and histological comparison For stem and root And study the annual seminars How to calculate and study it</i>		23

			<i>Examples</i>		
		Spring and autumn wood hard and soft, Annular and diffuse pores	<i>Identify the types of wood And how to spread the vessels in it And its growing seasons</i>		24
		Internal anatomy of a flower	<i>Anatomical study of some Floral parts And the tissues that make up it And longitudinal sections And transverse in every</i>		25
		Internal anatomy of the fruit And the seed	<i>Study of the histological component For types of fruits and classes Wall and installation The interior of dicotyledonous seeds Monocots and the difference between them</i>		26
		Internal structure of the plant And its relationship with the environment	<i>Study of plant tissue Plants have different environments and differences In tissue type and distribution Inside the stems and roots</i>		27
		The effect of the environment on composition Interior of desert Plants And water	<i>Study of histological variations And its influence on environmental conditions In desert plants Water and the differences between them</i>		28

11.

12.

13. Course Evaluation

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

14. Learning and Teaching Resources

	Required textbooks (curricular books, if any)
<i>ESSENTIALS OF PLANT ANATOMY/ DR.B.A.AL-ANI, DR.KAISAR N. SALIH (1979)</i>	Main references (sources)

<i>-THE PLANT WORLD / 5th Edition / Harry J. Fuller, Zane B. Carothers, Willard W. Payne, Margaret K. Balbach (1972) Anatomy of Flowering Plants An Introduction to Structure and Development / PAULA J. RUDALL (2007)</i>	Recommended books and references (scientific journals, reports...)
<i>Using photos and illustrations via the Internet Workshops and website</i>	Electronic References, Websites

Instructor's name : Asst.Prof.Dr. Azhar Abdulameer Sosa

the signature :



Course Description Form

1. Course Name:					
chemistry					
2. Course Code:					
3. Semester / Year:					
2025-2026 Annual					
4. Description Preparation Date:					
1/ 10/ 2025					
5. Available Attendance Forms:					
Mandatory					
6. Number of Credit Hours (Total) / Number of Units (Total):					
2theoretical hours+ 2 practical hours =6 hours per week					
7. Course administrator's name (mention all, if more than one name)					
Name: Ali Noory fajer Email: ali.fajer@qu.edu.iq					
8. Course Objectives					
● Introducing the normal student to chemistry and its relationship to other sciences, .			Course Objectives		
9. Teaching and Learning Strategies					
1- The student should know compound chemical 2- The student should know the basics of concentration and perpetration 3- The student should know the relationship between structure and function for compound chemical 4- That the student can compare different types of salt , acids and bas 5- The student compares the mutations that occur in compound chemical alkane and alkene alkyne .					Strategy
10. Course Structure					
Evaluation method	Learning method	Unit or subject name	Required Learning Outcomes	H ou rs	Wee k

daily exams and asking questions	discussion and lecture	Theoretical chemistry	Introduction for chemistry	4	1
daily exams and asking questions	discussion and lecture	Theoretical chemistry	Type of chemistry	2	2
daily exams and asking questions	discussion and lecture	Theoretical chemistry	Quantitative analytical chemistry	4	3
daily exams and asking questions	discussion and lecture	Theoretical chemistry	Qualitative analytical chemistry	4	4
daily exams and asking questions	discussion and lecture,	Theoretical chemistry	Methods expression concentration	2	5
daily exams and asking questions	discussion and lecture,	Theoretical chemistry	Basic connective tissue	4	6
daily exams and asking questions	discussion and lecture,	Theoretical chemistry	Equilibrium chemical	2	7
daily exams and asking questions	discussion and lecture,	Theoretical chemistry	Water dissociation kw	4	8
daily exams and asking questions	discussion and lecture,	Theoretical chemistry	Solubility	4	9
daily exams and asking questions	discussion and lecture,	Theoretical chemistry	The factors effect on Solubility	2	10
daily exams and asking questions	discussion and lecture,	Theoretical chemistry	PH for solution salts	4	11
daily exams and asking questions	discussion and lecture,	Theoretical chemistry	PH for solution weak and strong acid	4	12
daily exams and asking questions	discussion and lecture,	Theoretical chemistry	PH for solution weak and strong Bases	2	13
daily exams and asking questions	discussion and lecture,	Theoretical chemistry	Buffer	4	14
daily exams and asking questions	discussion and lecture,	Theoretical chemistry	Hydrocarbons	4	15
daily exams and asking questions	discussion and lecture,	Theoretical chemistry	<i>Alkane</i>	2	16
daily exams and asking questions	discussion and lecture,	Theoretical chemistry	Naming system	4	17
daily exams and asking questions	discussion and lecture,	Theoretical chemistry	Preparation methods	2	18
daily exams and asking questions	discussion and lecture,	Theoretical chemistry	Reactions		19
daily exams and asking questions	discussion and lecture,	Theoretical chemistry	<i>Alkene</i>		20
daily exams and asking questions	discussion and lecture,	Theoretical chemistry	Naming system		22
daily exams and asking questions	discussion and lecture,	Theoretical chemistry	Preparation methods		23

asking questions	lecture,				
daily exams and	discussion and	Theoretical chemistry	Reactions		24
asking questions	lecture,				
daily exams and	discussion and	Theoretical chemistry	Alkyne		25
asking questions	lecture,				

11. Course Evaluation

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

12. Learning and Teaching Resources

	<i>Analytical chemistry</i>	Required textbooks (curricular books, if any)
		Main references (sources)
<i>w.w.w Cell_chemistry .com</i>		Electronic Websites References,

Course Description Form

1. Course Name:					
geology Science					
2. Course Code:					
3. Semester / Year:					
Yearly 2025 - 2026					
4. Description Preparation Date:					
1/10 /2025					
5. Available Attendance Forms:					
Mandatory					
6. Number of Credit Hours (Total) / Number of Units (Total)					
2 hours					
7. Course administrator's name (mention all, if more than one name)					
Name: : M.M. ayad Kazem Hassan Email: ayad.kazem@qu.ed.iq					
8. Course Objectives					
1- Upgrading the scientific level of students in earth science. 2- Students acquire theoretical and applied skills in geology. 3 - Understand the relationship between biology and earth science.			Course Objectives		
9. Teaching and Learning Strategies					
1- Giving the lecture and explaining it in detail. 2- Discussion.					Strategy
10. Course Structure					
Evaluation method	Learning method	Unit or subject name	Required Learning Outcomes	Hours	Week
Preparation and attendees and	Lecture + Discussion	General introduction off the ground Branches of	To know a general introduction to geology Knowledge of the		

<i>muzzles & Reports And the exam is the month</i>	<i>science the earth Geological eras The origin of the Earth Earth covers the core of the earth Areas of application of earth science Rock cycle In natural rocks Fireworks Species Fire rocks rocks Sedimentary rocks Sedimentary rocks Mutant Geological processes External features Water Surface water underground water Geological processes Metals Properties of minerals ingredients Metals Species Metals Distribution of minerals Structural geology</i>	<i>branches of geology and their relationship to biology and other sciences Determine geological times Understanding the structure and composition of the Earth Knowing the Earth's covers Identify the Earth's crust and core Explanation of biological earth science: its concept, types, and most important fields Knowledge of rocks: their concept and role in nature Identification of igneous rocks and their chemical and mineralogical composition Know the types of igneous rocks Identification of sedimentary rocks and their chemical and mineralogical composition Know the types of sedimentary rocks Identifying metamorphic rocks and their types Understanding erosion and</i>	
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		<i>Earthquakes</i> <i>Volcanoes</i> <i>distribution</i> <i>Geographic</i> <i>For earthquakes</i> <i>And volcanoes</i> <i>Fossils</i>	<i>weathering</i> <i>Learn about water</i> <i>hydrochemistry</i> <i>Definition of</i> <i>surface water</i> <i>Groundwater</i> <i>recovery</i> <i>Explaining the</i> <i>geological</i> <i>processes of water</i> <i>Definition of</i> <i>minerals</i> <i>Determine the</i> <i>natural properties</i> <i>of minerals</i> <i>Knowing the</i> <i>chemical</i> <i>composition and</i> <i>calculating the</i> <i>chemical formula</i> <i>of metals</i> <i>Description of the</i> <i>most common</i> <i>minerals</i> <i>Identify the</i> <i>geographical</i> <i>distribution of</i> <i>minerals</i> <i>Definition of</i> <i>structural geology:</i> <i>folds, faults, and</i> <i>joints</i> <i>Understanding and</i> <i>studying</i> <i>earthquakes</i> <i>Understanding and</i> <i>studying volcanoes</i> <i>Know the</i> <i>geographical</i> <i>distribution of</i> <i>earthquakes and</i> <i>volcanoes</i> <i>Understandi</i>	
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			<i>ng the study of fossils (fossils), their importance, types and composition</i>		
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11. Course Evaluation

Distribution of the final score out of 100 = the happy ones (40) + the final winners (60)

Email = (First month exam = (15) + Second month exam = (15) + Successful exams (quats and reports) = (5) + Attendance = (5)) = 40

12. Learning and Teaching Resources

Dr.. Farouk Sanallah Al-Omari, A. Jassim Ali Al Jassim, geologist Natural and Historical, 1985	Required textbooks (curricular books, if any)
Dr.. Michel Kamel Atallah, Basics of Geology.	Main references (sources)
Dr.. Abdullah Al-Sayyab and others, Geology of Iraq.	Recommended books and references (scientific journals, reports...)
Geological Structures - AONG website Historical Geology	Electronic References, Websites

Course Description Form

1. Course Name: <i>foundations of education</i>					
2. Course Code:					
3. Semester / Year:					
2025-2026 quarterly					
4. Description Preparation Date:					
1-10-2025					
5. Available Attendance Forms:					
<i>mandatory</i>					
6. Number of Credit Hours (Total) / Number of Units (Total)					
<i>4hours per week</i>					
7. Course administrator's name (mention all, if more than one name)					
<i>Name: wijdan.oudah@qu.edu.iq</i>					
8. Course Objectives					
● That the student knows education ● The student should undertake modern education ● To mention the characteristics of modern education			Course Objectives		
9. Teaching and Learning Strategies					
Make the student able to Comparison Selection The student should notice the differences in modern and ancient education To compare breeding types To distinguish between the factors of educational development Knows the basics of education Compares modern and ancient education in terms of development Explains the role of education for the individual and society Explains the media of Arab educational thought					Strategy
10. Course Structure					
Evaluation	Learning	Unit or subject	Required	Hour	Wee

method	method	name	Learning Outcomes	s	k
daily exams and asking questions	discussion and lecture,	<i>Name:foundations education</i>	Historical development of the foundations of education	2	1
daily exams and asking questions	discussion and lecture,	<i>Name:foundations education</i>	The concept of education	2	2
daily exams and asking questions	discussion and lecture,	<i>Name:foundations education</i>	The importance of education	2	3
daily exams and asking questions	discussion and lecture,	<i>Name:foundations education</i>	Characteristics of education	2	4
daily exams and asking questions	discussion and lecture,	<i>Name:foundations education</i>	of Primitive education	2	5
daily exams and asking questions	discussion and lecture,	<i>Name:foundations education</i>	The role of education for the individual and society	2	6
daily exams and asking questions	discussion and lecture,	<i>Name:foundations education</i>	The role of education for the individual and society	2	7
daily exams and asking questions	discussion and lecture,	<i>Name:foundations education</i>	Forms of primitive education	2	8
daily exams and asking questions	discussion and lecture,	<i>Name:foundations education</i>	Forms of primitive education	2	9
daily exams and asking questions	discussion and lecture,	<i>Name:foundations education</i>	of Media of educational thought	2	10
daily exams and asking questions	discussion and lecture,	<i>Name:foundations education</i>	of Al-Ghazali	2	11
daily	discussion	<i>Name:foundations education</i>	of Khaldun	2	12

exams and asking questions	and lecture,	education			
daily exams and asking questions	discussion and lecture,	Name:foundations education	of Ibn Sina	2	13
daily exams and asking questions	discussion and lecture,	Name:foundations education	Flags of Western thought	2	14
daily exams and asking questions	discussion and lecture,	Name:foundations education	John Dewey	2	15
daily exams and asking questions	discussion and lecture,	Name:foundations education	of Jean-Jacques Rousseau Jean-Jacques Rousseau	2	16
daily exams and asking questions	discussion and lecture,	Name:foundations education	of the society	2	17
daily exams and asking questions	discussion and lecture,	Name:foundations education	Community features	2	18
daily exams and asking questions	discussion and lecture,	Name:foundations education	Community characteristics	2	19
daily exams and asking questions	discussion and lecture,	Name:foundations education	Chinese education	2	20
daily exams and asking questions	discussion and lecture,	Name:foundations education	Science	2	21
daily exams and asking questions	discussion and lecture,	Name:foundations education	Objectives of science	2	22
daily exams and asking questions	discussion and lecture,	Name:foundations education	Characteristics of science	2	23
daily exams and asking questions	discussion and lecture,	Name:foundations education	Descriptive method	2	24

daily exams and asking questions	discussion and lecture,	Name: foundations education	Experimental method	2	25
daily exams and asking questions	discussion and lecture	Name: foundations education	Formal method	2	26
daily exams and asking questions	discussion and lecture	Name: foundations education	The concept of scientific research	2	27
daily exams and asking questions	discussion and lecture	Name: foundations education	Steps of scientific research	2	28

11. Course Evaluation

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

12. Learning and Teaching Resources

Educational foundations book	Required textbooks (curricular books, if any)
External sources	Main references (sources)
Educational foundations	Recommended books and references (scientific journals, reports...)
https://www-aljazeera-net.translate.goog	Electronic References, Websites

L.DR.Wihdan.Oudah@qu.edu.iq

Course Description Form

1. Course Name:					
General Arabic language					
2. Course Code:					
110 G A					
3. Semester / Year:					
Year 2026-2025					
4. Description Preparation Date:					
1 / 10 / 2025					
5. Available Attendance Forms:					
Mandatory					
6. Number of Credit Hours (Total) / Number of Units (Total)					
4 hours a week					
7. Course administrator's name (mention all, if more than one name)					
<i>Name:</i> zahraa basem farhan <i>Email:</i> zahraa. johni @qu.edu.iq					
8. Course Objectives					
-Providing students with words, structures, and sentences that develop our linguistic wealth -The student acquires the habit of loving reading and reading books -Consolidating the foundations of the tolerant Islamic faith and instilling noble morals and ideals				Course Objectives	
9. Teaching and Learning Strategies					
1- Cooperative learning strategy 2- Problem solving strategy 3- Discovery learning strategy 4- Listening strategy 5- Vocabulary learning strategy					Strategy
10. Course Structure					
Evaluation method	Learning method	Unit or subject name	Required Learning Outcomes	Hours	Week
	Discussion and understanding	Punctuation marks in written text	Recognition punctuation marks in the sentence	2	1
	Discussion and understanding	Drawing the ta' marbuta	how to write T' marbuta	2	2

	Discussion and understanding	Drawing the simple ta'	how to write Al-Ta'a Al-Mabastu	2	3
	Discussion and understanding	alf altafriq	Know the words Which is written with alf altarriq Differentiation of words Which is devoid of it	2	4
	Discussion and understanding	Hamza in the Arabic language	Know the types Hamzas and their positions in the sentence	2	5
	Discussion and understanding	Writing the letter dhaad	How to draw dhaad Her pronunciation and words	2	6
	Discussion and understanding	Writing the letter dha	How to draw dha Her pronunciation and words	2	7
	Discussion and understanding	Rhetoric among the Romans and Greece	Learn about public speaking Among the Greeks and Romans	2	8
	Discussion and understanding	Rhetoric in Islam	Learn about public speaking Islamic	2	9
	Discussion and understanding	Praise style	Definition of language, terminology and methods	2	10
	Discussion and understanding	Method of slander	Definition of language, terminology and methods	2	11
	Discussion and understanding	Lineage in the Arabic language	Its definition and purposes And examples of it	2	12
	Discussion and understanding	Linguistic borrowing	Study theory And its historical roots	2	13
	Discussion and understanding	Active factors in occurrence Linguistic borrowing	Knowing the effective factors In the occurrence of borrowing And save it	2	14
	Discussion and understanding	Tandem	Know the definition of synonymy Its conditions and effects Positivity	2	15
	Discussion and understanding	Contrast	Know the opposition Language, its conditions and its effects Positivity	2	16
	Discussion and understanding	Verbal common	Knowing the verbal common Language, its conditions and its effects Positivity	2	17
	Discussion and understanding	Nickname	Defining the nickname and memorizing it Examples of it	2	18
	Discussion and understanding	Title	Definition of surname and memorization I represented it	2	19
	Discussion and understanding	Lineage	Definition of lineage And memorize his examples	2	20
	Discussion and understanding	Linguistic differences	Memorizing the definition of linguistic differences linguistically and idiomatically, the student recognizes the differences between some words of	2	21

			the Qur'an		
	Discussion and understanding	Parsing signs The original	Definition and enumeration	2	22
	Discussion and understanding	Parsing signs sub	Definition and enumeration	2	23
	Discussion and understanding	the number	How to convert a sentence Number of style Digital to style Written	2	24
	Discussion and understanding	Imam Ali's sermon	Read the sermon And extracting meanings The difficult one	2	25
	Discussion and understanding	surat aljumuea	Memorize it and preserve its meanings	2	26
	Discussion and understanding	al-Kursi verse	Memorize it and preserve its meanings	2	27
	Discussion and understanding	mimiat alfarzudaq	Memorize it and preserve its meanings	2	28

11. Course Evaluation

Grade distribution of 100 = quest (40) + final exam (60)

Pursuit (monthly exam 18 + short exams (quizzes + reports) 4 + attendance 5 + practical 13 (8 monthly + activity 2 + attendance 3)

12. Learning and Teaching Resources

<i>General arabic language for departments other than specialization</i>	Required textbooks (curricular books, if any)
<i>Foundations of the Arabic language for university students</i>	Main references (sources)
<i>In the basics of the Arabic language</i>	Recommended books and references (scientific journals, reports...)
<i>Edraak website</i>	Electronic References, Websites

zahraa basem farhan

Course Description Form

1. Course Name:	
English Language	
2. Course Code:	
3. Semester / Year:	
Annual/ 2024-2025	
4. Description Preparation Date:	
01-10-2024	
5. Available Attendance Forms:	
<i>In-person</i>	
6. Number of Credit Hours (Total) / Number of Units (Total)	
<i>2 hours/ 1 credit</i>	
7. Course administrator's name (mention all, if more than one name)	
<i>Name: Asst. Lect. Jassm jabber jassem</i> <i>Email jasim.jaber@qu.edu.iq</i>	
8. Course Objectives	
Course Objectives Students will be able to: - learn the basics of the English language that will form the foundation for mastering the language in the future. - use the English language structures. - learn the assigned vocabulary for this stage that would enable them to express themselves in different life situations. - listen to and understand the English language. - express themselves orally using correct English. - read and understand the materials, which are written in English. - write a short, guided paragraph. - be aware of the importance of English as an international language of communication for benefiting from the achievements of other cultures through texts representing various life situations.	
9. Teaching and Learning Strategies	
<i>Exploratory methods and thought-provoking discussion supported by a data show and appropriate visual presentation.</i>	Strategy
10. Course Structure	

Evaluation method	Learning method	Unit or subject name	Required Learning Outcomes	Hours	Weeks
• Participation • Quizzes • Monthly exams • Final exam	thought-provoking discussion	English Language		2	1
				2	2
				2	3
				2	4
				2	5
				2	6
				2	7
				2	8
				2	9
				2	10
				2	11
				2	12
				2	13
				2	14
				2	15
				Spring Break	
				2	1
				2	2
				2	3
				2	4
				2	5
				2	6
				2	7
				2	8
				2	9
				2	10
				2	11
				2	12
				2	13
				2	14
				2	15
11. Course Evaluation					
The score distribution is as follows: 40 marks for the monthly and daily exams and 60 marks for the final exams.					
12. Learning and Teaching Resources					
John and Liz Soars, <i>New Headway Plus: Beginner Student's Book</i> . Oxford University Press.			Required textbooks (curricular books, if any)		
			Main references (sources)		

	Recommended books and references (scientific journals, reports...)
www.youtube.com https://www.bbc.co.uk/learningenglish/	Electronic References, Websites

Name: Asst. Lect. Jassm jabber jassem

Course Description Form

1. Course Name:	
General biology practical	
2. Course Code:	
3. Semester / Year:	
2025-2026 Annual	
4. Description Preparation Date:	
1-10-2026	
5. Available Attendance Forms:	
<i>mandatory</i>	
6. Number of Credit Hours (Total) / Number of Units (Total)	
<i>2hours per week</i>	
7. Course administrator's name (mention all, if more than one name)	
Name: : Marwa Sami Alwan Email: marwa.alwan@qu.edu.iq	
8. Course Objectives	
● Preparing the student to understand biology and the level of organization of the organism's body, from the simplest to the most complex, which includes: the cell - tissue - organ - systems, then the organism's body.	Course Objectives
9. Teaching and Learning Strategies	
The student knows the cell. The student can compare the process of meiosis and mitosis. To mention the distinctive characteristics of each animal phylum. Note. Comparison. Selection. Induction and deduction. Conclusion. Comparison and analysis. Calendar. Using external sources for scientific and cultural enlightenment. Transferring the impact of learning to the emotional aspects of students. Developing the spirit of criticism and self-criticism through self-evaluation.	Strategy

10. Course Structure					
Evaluation method	Learning method	Unit or subject name	Required Learning Outcomes	Hours	Week
Daily quiz	lecture,	The student knows the instructions that must be followed in the laboratory, including warning signs and signs of the danger of chemicals	Laboratory security and safety	2	1
Daily quiz	lecture,	The student knows the parts of the microscope	Microscopic	2	2
Daily quiz	lecture,	The student's use of the microscope and knowledge of the types of microscopes	Microscopic	2	3
Daily quiz	lecture,	Know the shape of the cell	The cell	2	4
Daily quiz	lecture,	Know the components of the animal cell	Animal cell	2	5
Daily quiz	discussion	Know the components of the plant cell	Plant cell	2	6
Daily quiz	discussion	Distinguish between animal and plant cells by making a comparison between the two cells	Animal cell and Plant cell	2	7
Daily quiz	lecture,	Definition of cell division and what are the stages of cell division	Cellular division	2	8
Daily quiz	lecture,	Identify the types of cell division and where they occur	Types of cell division	2	9
Daily quiz	lecture,	Identify the stages of mitosis	Mitosis	2	10
Daily quiz	lecture,	Find out where meiosis occurs	Meiosis	2	11
Daily quiz	discussion	Make a comparison between the two divisions in terms of stages and the final result of the number of cells resulting from the division with pictures	Mitosis and meiosis	2	12
Daily quiz	discussion,	Knowing the main types of primary tissues in the body	The main primary tissues of the body	2	13

Daily quiz	lecture,	Knowing the types and locations of simple epithelial tissues	Simple epithelial tissue	2	14
Daily quiz	lecture,	Make a comparison between simple and complex types of tissue	Compound epithelial tissue	2	15
Daily quiz	lecture,	Definition of connective tissue and what its components are Draw a diagram	Connective tissues	2	16
Daily quiz	discussion	showing the types of connective tissue	Types of connective tissue	2	17
Daily quiz	lecture,	Identify the types of fibers found in loose connective tissue	Loose connective tissue	2	18
Daily quiz	lecture,	Drawing the fibers found in dense connective tissue	Dense connective tissue	2	19
Daily quiz	lecture,	Definition structural connective tissue	Structural connective tissue	2	20
Daily quiz	discussion	Identify the basic substance that makes up the types of cartilage	Cartilage	2	21
Daily quiz	discussion	A comparison between the types of bones: solid bone and spongy bone	Bone	2	22
Daily quiz	lecture,	Defining blood and knowing the components of blood	The blood	2	23
Daily quiz	lecture,	Distinguish between red blood cells, white blood cells, and platelets	Blood components	2	24
Daily quiz	lecture,	Make a comparison between skeletal muscle, cardiac muscle, and smooth	Muscle tissue	2	25

		muscle			
Daily quiz	lecture,	Drawing the types of nerve cells	Nervous tissue	2	26
Daily quiz	lecture,	Learn about the features of each kingdom	Animal kingdoms	2	27
Daily quiz	lecture,	Learn about animal phyla	The major phyla of the animal kingdom	2	28

11. Course Evaluation

Grade distribution: Pursuit 13 is distributed as follows: monthly exam (8), activity (2), attendance (3)

12. Learning and Teaching Resources

Biology/Author Prof. Hussein Ali Al-Saadi, Prof. Hussein Abdel Moneim Daoud, Prof. Talib Al-Khazraji, A.M. Najm Shalimon Gorgis/year of publication 2005	Required textbooks (curricular books, if any)
<i>biology</i> <i>By: Peter Haven and others - 2017</i> <i>Principles of practical histology / Dr. Kawakib Al-Mukhtar, Dr. Amal Al-Khatib, Dr. Abdul Hakim Al-Rawi / 1984</i>	Main references (sources)
<i>Middle East Journal for Scientific Publishing / Egypt - Cairo MEJSP</i>	Recommended books and references (scientific journals, reports...)
<i>Academia scientific website, Google scholar</i>	Electronic References, Websites

Marwa Sami Alwan

Course Description Form

1. Course Name:	
Plant anatomy	
2. Course Code:	
103 T.N	
3. Semester / Year:	
Semester/2025-2026	
4. Description Preparation Date:	
1-10-2025	
5. Available Attendance Forms:	
mandatory	
6. Number of Credit Hours (Total) / Number of Units (Total)	
4 hours (2 Theoretical + 2 Practical)	
7. Course administrator's name (mention all, if more than one name)	
Name: Zahra Klaeb Mahdi AL-Khazali Email: zahraa.al-khazaali@qu.edu.iq	
8. Course Objectives	
1-The of practical plant dissection is that it is an integral part of theoretical study. Through practical study, The student develops the ability to understand scientific facts, arrange them, and draw conclusions from them. • 2-Teaching the student the processes of microscopic preparation of plant models • 3-use of the microscope to study the minute parts of the plant Observations • are recorded with diagrams showing the internal parts of the plant	Course Objectives
1- That the student knows plant anatomy and studies the internal structure of the plant body, and that the student can compare the internal anatomy of the root, stem, and leaf. The student should know the various plant organs and study their locations and the tissues that make up these organs and their adaptation to carry out their various functions. 3- The student gets to know the plant cell, its living and non-living components, the cell wall, and the various types of plant tissues	A-Knowledge and understanding
1 - Improving the student's skills through microscopic preparation of plant models and the preparation of dyes and reagents. 2 - Developing skills using measurement methods and microscopic imaging 3- Providing realistic explanations for many plant science results.	B-Subject-specific skills
1- The student's creative thinking when preparing microscopic plant models 2- Distinguishing between scientific facts about plants and their internal parts 3- 3 Reaching predictable results by training the student to think critically	C- Thinking skills
Cultivate self-confidence and self-esteem by finding appropriate solutions - Community spirit through discussions and explanation of causes - Transferring the impact of learning to the emotional and collective aspects of students	General and transferable skills (other skills related to employability and personal development)
9. Teaching and Learning Strategies	
1--Discussion about the scientific material studied. 2-Solving direct questions	Strategy

10. Course Structure					
Evalu ation metho d	Learning method	Unit or subject name	Required Learning Outcomes	Hour s	Wee k
daily exams	The student knows the parts of an Light microscope and how to examine it	Light microscope lecture	Discussing and examining plant slides	10	1
daily exams	The student knows the components of the plant cell and draws the plant cell and compares it to the animal cell	Plant Cell	Defining the plant cell and explaining its importance to the plant	10	2
daily exams	The student knows the living contents of the plant cell, such as the cytoplasm, nucleus, and plastids of all types, and compares these types.	The living contents of the cytoplasmic plant cell, the nucleus, all types of plastids, plasmodesms, and cytoplasmic filaments	Explain the living contents of the cytoplasmic plant cell	10	3
daily exams	The student knows the non-living contents of the plant cell, knows each type, and compares these contents	Non-living contents in the plant cell (vacuoles of starch granules of various types and shapes, aleurone granules	Definition of non-living contents in the plant cell Explanation of all types of clicking	10	4
daily exams	the student to know crystals and compare their types and shapes	Crystals with their many types and shapes.	Explanation of crystals with their many types and shapes.	10	5
daily exams	The student knows the components of the cell wall and its chemical composition, draws the cell wall, and compares the middle lamella, the primary wall, and the secondary wall.	The cell wall (cell lamina, middle lamina, primary wall, secondary wall, primary pits fields	Explanation of the cell wall.	10	6
daily exams	The student knowclick and distinguishes its types and draws each type	Types of pits : simple, ramiform, borderd, association of pits with its five types	Explanation of types of pits	10	7
daily exams	the student to know meristematic tissues and their most important characteristics, and to	meristematic tissues, their features and how to identify them, their types in terms of their	definition of meristematic tissues	10	8

	divide them according to their location in the plant body and according to their origin,	location in the plant body, their types in terms of origin,			
daily exams	The student knows the theories regarding the growing apex of the root and the stem and compares those theories,	the theories of the apical meristem of the stem and the root, the theory of the apical cell, tissue development, the tonica and cops, growth of regions.	explanation of the theories of the apical meristem of the stem and the root.	10	9
daily exams	The student knows permanent tissues, such as the epidermis, and distinguishes between the types of epidermis cells and compares the epidermis with the periderm.	permanent tissues: the epidermis, its features, types of epidermis cells, the surrounding epidermis,	explanation of the permanent tissues	10	10
daily exams	The student knows the stomata and types of stomata and compares those styles and draws each type	Types of stomata Anomocytic type, Anisocytic, Diacytic type, type Paracytic, Actinocytic, Graminae – Cyperaceae Sunken stomata	Explanation of the types of stomata	10	11
daily exams	The student will know the hairs epidermal and compare their types and shapes	epidermal appendages: epidermis appendages of many types and shapes	Explanation of the Epidermal hairs (Trichomes)	10	12
daily exams	The student knows the vascular cambium, the cork cambium, and the lateral meristems	Permanent tissues, vascular cambium, cork cambium,	Explanation of lateral meristems, permanent tissues	10	13
daily exams	The student knows the types of parenchymal tissue according to the shape of the cells and according to the function, and draws each shape and compares the types	Parenchymal tissue and its types	Explanation of parenchymal tissue	10	14
daily exams	The student knows the characteristics of collenchymal tissue	Ollenchyma tissue, its characteristics, types of tissue	Explanation of collenchyma tissue	10	15

	and its types, compares the types, and knows the function of collenchymal tissue.	according to function			
daily exams	The student knows the characteristics of sclerenchyma and its types, compares the types, and knows the function of sclerenchyma	Sclerenchymal tissue, its features	Explanation of sclerenchymal tissue	10	16
daily exams	The student knows the types of sclereids and compares the shapes of these sclereids	Sclereides, their types and shapes	Explanation of scleridoids, their types and shapes	10	17
daily exams	The student knows the types of fibers and compares the types and their different shapes and the nature of their distribution and draws their different shapes.	Fibers, their different types and shapes, and the nature of their distribution within the plant	Explanation of fiber	10	18
daily exams	The student knows the xylem and distinguishes between its elements and draws the wrinkles	xylem and its elements	Explanation of wood and its elements	10	19
daily exams	The student knows the phloem and distinguishes between its elements and draws those elements	the phloem and its elements	Explanation of the phloem and its elements	10	20
daily exams	The student knows the types of vascular bundles and compares the types and distinguishes between their various forms.	Vascular bundles of all kinds and shapes	Explanation of vascular bundles	10	21
daily exams	The student will know the various types of secretory tissues and compare the types and distinguish between their various forms	Secretory tissues of various types and shapes, and how they are formed	Explaining the different types of secretory tissues	10	22
daily exams	The student knows the milky and oily	the milky and oily resin ducts.	Explanation of the milky and oily resin ducts	10	23

	resin ducts and compares them. Knows each type and compares				
daily exams	The student's knowledge of the root and its internal parts, and to compare the root of a monocot and dicotyledons, and to draw a root of a monocot and two cotyledons. t.	The internal anatomy of the root, monocotyledon, dicotyledons,.	Explanation of the internal anatomy of the root	10	24
daily exams	The student knows the stem and its internal parts, compares a monocot and a dicotyledon stem, and draws a monocot and dicotyledon stem.	Internal anatomy of the stem, monocotyledonous, dicotyledonous	Explaining the internal anatomy of the stem	10	25
daily exams	The student knows the secondary growth in dicotyledons and draws the growth rings	secondary growth in the dicotyledons, annual growth rings,	Explanation of secondary growth in dicotyledons	10	26
daily exams	The student knows the spring wood and autumn and distinguishes between hard and soft, annular and diffuse pores	Spring and autumn wood is hard and soft, annular and diffusely porous	Explanation of the spring and autumn wood	10	27
daily exams	The student's knowledge of the steps that must be followed while preparing the sample for study, such as how to obtain the plant sample and treat it with chemicals and dyes so that it becomes easy to study its structural components using optical microscopes.	Plant microscopic techniques	Explanation of plant microscopic techniques	10	28

11. Course Evaluation

Distributing the score out of 100 = Annual quest(40)+ final exam(60).

Annual quest(40)={ doctrinarian(27)+ Practical(13)}

Practical(13)={ monthly exams(8)+, daily preparation , daily exams(2)+ Attendance(3).

12. Learning and Teaching Resources

Vocabulary for the methodological book.

Required textbooks (curricular books, if any)

Ministerial decisions.	Main references (sources)
Using some scientific research and reports.	Recommended books and references (scientific journals, reports...)
Using photos and illustrations via the Internet, slides, workshops, and the website.	Electronic References, Websites

Zahra Klaeb Mahdi AL-Khazali



Course Description Form

1. Course Name:					
Cytology practical					
2. Course Code:					
3. Semester / Year:					
2025-2026 Annual					
4. Description Preparation Date:					
1/ 10/ 2026					
5. Available Attendance Forms:					
Mandatory					
6. Number of Credit Hours (Total) / Number of Units (Total):					
2 hours per week					
7. Course administrator's name (mention all, if more than one name)					
Name: Hind abzulzahrz abzul kadhlm					
Email: hind.alshablny@qu.edu.lq					
8. Course Objectives					
- Introducing the student to cell science and methods of fixing cells on glass slides - Study the components of the plant cell, its difference from the animal cell, examples of plant and animal cells, and their most prominent features - As well as the difference between eukaryotic and prokaryotic cells, with examples Course Objectives					
9. Teaching and Learning Strategies					
1- The student should know the prokaryotic cell 2- The student should know the eukaryotic animal cell 3- The student should know the cytoplasm 4- That the student can compare between an animal cell and a plant cell.					Strategy
10. Course Structure					
Evaluation method	Learning method	Unit or subject name	Required Learning Outcomes	Hours	Week

daily exams and asking questions	discussion and lecture	To know the components of a light microscope	2	1
daily exams and asking questions	discussion and lecture	Differentiate between light microscope and electron microscope	2	2
daily exams and asking questions	discussion and lecture	Demonstrates how to prepare cells on glass slides ready for examination	2	3
daily exams and asking questions	discussion and lecture	Distinguish between living cells and fixed cells	2	4
daily exams and asking questions	discussion and lecture,	Enumerate the organic components of the cell	2	5
daily exams and asking questions	discussion and lecture,	Mention the main function of cytoplasm	2	6
daily exams and asking questions	discussion and lecture,	Mention the types of macrobodies and microbodies	2	7
daily exams and asking questions	discussion and lecture,	Knows the Golgi apparatus and its functions	2	8
daily exams and asking questions	discussion and lecture,	Distinguish between the components of an animal cell and a plant cell	2	9
daily exams and asking questions	discussion and lecture,	Knows enzymes and their importance	2	10
daily exams and asking questions	discussion and lecture,	Knows the centrosomes and how they can be seen with an electron microscope	2	11
daily exams and asking questions	discussion and lecture,	Knows mitochondria, their shapes, and their main functions	2	12
daily exams and asking questions	discussion and lecture,	Distinguishes between cilia and flagella	2	13

		<i>flagella and their structures</i>		
daily exams and asking questions	discussion and lecture,	<i>Explains the components of the kernel</i>	<i>kernel configuration</i>	2 14
daily exams and asking questions	discussion and lecture,	<i>Known as cytoplasmic vacuolar system</i>	<i>cytoplasmic vacuolar apparatus</i>	2 15
daily exams and asking questions	discussion and lecture,	<i>Enumerate inorganic components</i>	<i>the inorganic components of the cell</i>	2 16
daily exams and asking questions	discussion and lecture,	<i>Knows the filling tubes, threads and their components</i>	<i>cytoplasmic filling, tubules and microfilaments</i>	2 17
daily exams and asking questions	discussion and lecture,	<i>Explains the types of plastids and their locations</i>	<i>Plastids</i>	2 18
daily exams and asking questions	discussion and lecture,	<i>Explains how the membrane can be obtained and where it is located</i>	<i>Plasma membrane</i>	2 19
daily exams and asking questions	discussion and lecture,	<i>Known deoxosomes</i>	<i>deoxosomes</i>	2 21
daily exams and asking questions	discussion and lecture,	<i>Explains chromosomes and their numbers living organisms</i>	<i>Special chromosomes and heterochromatic chromosomes</i>	2 22
daily exams and asking questions	discussion and lecture,	<i>Explains methods of mitosis and meiosis</i>	<i>Mitosis and meiosis</i>	2 23
daily exams and asking questions	discussion and lecture,	<i>Distinguish between free ribosomes and attached ribosomes</i>	<i>Free ribosomes and bound ribosomes</i>	2 24
daily exams and asking questions	discussion and lecture,	<i>Explains and defines connections free diffusion</i>	<i>Corridor path communication and free diffusion</i>	2 25
daily exams and asking questions	discussion and lecture,	<i>Explains the control of the nucleus over cytoplasmic activities</i>	<i>Control of the nucleus over cytoplasmic activities</i>	2 26
daily exams and asking questions	discussion and lecture,	<i>He knows the lipids and where they are</i>	<i>lipids</i>	2 27

		<i>found</i>			
daily exams and asking questions	discussion and lecture,	<i>Explains the mechanism of spindle threads</i>	<i>the spindle threads</i>	2	28
daily exams and asking questions	discussion and lecture,	<i>Knows proteins</i>	<i>Proteins</i>	2	29
11. Course Evaluation					
<i>Distributing the score Daily preparation (10), daily short exams (10), oral exam (10), reports (10) and written exam (60)</i>					
12. Learning and Teaching Resources					
<i>A committee from the Department of Life Sciences/ College of Education/ University of Baghdad</i>		<i>Cell life science</i>	Required textbooks (curricular books, if any)		
<i>Prof. Hussein Ali Al-Saadi, Prof. Hussein Abdel Moneim Daoud, Prof. Talib Al-Khazraji, A.M. Najm Shlemon Gorgis</i>		<i>biology</i>	Main references (sources)		
<i>Dr.. Kawakib Al-Mukhtar, Dr. Amal Al-Khatib, Dr. Abdul Hakim Al-Rawi</i>		<i>Principles practical histology</i>	Recommended books and references (scientific journals, reports...)		
<i>w.w.w Cell_biology.com</i>			Electronic References, Websites		

Course Description Form

1. Course Name:					
Theoretical invertebrates					
2. Course Code:					
3. Semester / Year:					
Yearly 2025-2026					
4. Description Preparation Date:					
1-9-2025					
5. Available Attendance Forms:					
Mandatory					
6. Number of Credit Hours (Total) / Number of Units (Total)					
On hour per week (6theoretical hours + 4 practical supervision) hours 10					
7. Course administrator's name (mention all, if more than one name)					
Name: Dr ,Khaled Thamer Mattar Email: khaled.alshaebani@qu.edu.iq					
8. Course Objectives					
Introducing students to invertebrate Science by studying the classification Of invertebrate and the characteristics' Of each phylum while taking invertebrate Models for each class.			Course Objectives		
9. Teaching and Learning Strategies					
This course description provides anecessary summary of the most Important characteristics of the course and the learning outcomes Expected of the student to whether he or she has made the most Of the learing opportunities available and these must be linked To the program description.					Strategy
10. Course Structure					
Evaluat ion method	Learnin g method	Unit or subject name	Required Learning Outcomes	Hours	Week
Exams	discussion	1-Introduction to invertebrate 2- Importance and harm	That the student learns the concept Invertebrates and their importance	6	1
Exams	discussion	1- Bio kingdoms	Student knowledge of types Kingdoms of life and how	6	2

		2-Theories of the emergence of invertebrates -	tion		
Exams	discussion	1-Introduction to protozoa 2- Its characteristics 3- protozoa forms	We give the student an introduction to protozoa and its characteristics And its shapes	6	3
Exams	discussion	1-Movement organelles 2-Illusionary foot movement 3- Excretion and regulation of osmosis	The student learns the types Movement organelles and how Excretion occurs	6	4
Exams	discussion	1- Nutrition in protozoa 2- Reproduction 3- Cyst	For the student to learn concepts Nutrition, reproduction and encystation	6	5
Exams	discussion	1-Colonial formation 2-Models of protozoa	That the student understands how Colony formation With some protozoa	6	6
Exams	discussion	1- Phylum : Ciliates	The student learns the advantages Ciliates	6	7
Exams	discussion	1-The benefits and harms of protozoa 2- Animals with many low cells	The student knows the benefits and harms protozoa	6	8
Exams	discussion	1- Phylum : Porifera 2-Types of transportation systems 3-Types of cells in Porifera	The student learns the advantages Sponges and their cell types	6	9
Exams	discussion	1-Nutrition, sensation and movement 2-Classification of Porifera 3- Reproduction 4-The origin and development of Porifera	Student knowledge of jobs Nutrition, sensation and movement Methods of reproduction in Porifera	6	10
Exams	discussion	1- Phylum : Cnidaria 2- Its general characteristics 3-Form and function 4-Nematovesicles	The student learns the advantages Cnidarians and their forms And its functions	6	11
Exams	discussion	1-Types of filament vesicles 2-Classes of Cnidarians 3-The body wall and its components 4-The vital activities of Hydra	The student's knowledge of the types filament vesicles With study classification Cnidarians	6	12
Exams	discussion	1-Supplementing the Classes of stingers 2-Vital activities of the rest of the Classes	For the student to learn the activities The vitality of each type of Cnidarians	6	13
Exams	discussion	1-The emergence of cnidarians 2-Types of body cavities 3-Methods of forming the body	The student learns how to create Cnidarians with cavitation study Her body	6	14

		cavity			
Exams	discussion	1- Phylum : Platyhelminthes 2- Its general characteristics 3- Its Classes 4- Characteristics of each Class and examples	The student's knowledge of the attributes Platyhelminthes with study Its characteristics and classification	6	15
Exams	discussion	1-Cestoda class 2- Its general characteristics with examples	The student learns classification Characteristics of Cestoda	6	16
Exams	discussion	1-Phylum : Bag worms, their general characteristics 2 - The phylum of bagworms and their characteristics	The student's knowledge of the attributes Bagworms	6	17
Exams	discussion	1- Phylum : Annelida 2- Its general characteristics	The student's knowledge of the attributes Annelids	6	18
Exams	discussion	1-Classification of Annelida 2- Characteristics of each class with examples 3-Vital systems in Earthworms	The student learns Classification and the advantages of annelid worms with Earthworm	6	19
Exams	discussion	1-Complementing the vital systems in the Earth worm 2- What is Clitellum and what are its layers?	Student knowledge of worm devices Land and the meaning of the term The Clitellum and its installation	6	20
Exams	discussion	1- Class of Hirudo 2- Its general characteristics 3 - Vital activities in Hirudo	The student learns classification And the advantages of Hirudo	6	21
Exams	discussion	1 - Polychaeta class 2- Its general characteristics 3 - Vital devices	The student learns classification The advantages of worms Polychaeta	6	22
Exams	discussion	1- Phylum : Onychophora 2- Its general characteristics 3- Examples of them with an explanation of the devices Vitality	The student learns classification And animal features The Onychophora	6	23
Exams	discussion	1- Phylum : Arthropoda 2- Its general characteristics 3- Its categories with examples 4- Characteristics of each class	Student know of arthropods Explaining its characteristics And its types	6	24
Exams	discussion	1- Class of Crustaceans 2- Its general characteristics 3- Water fleas(<i>Daphnia</i>)	The student learns classification And features Crustaceans with their advantages	6	25
Exams	discussion	1- <i>Cambarus</i> 2-Vital devices for <i>Cambarus</i> 3- Suffixes 4- Types of larvae in crustaceans	The student's knowledge of an animal <i>Cambarus</i> with various types of larvae in crustaceans	6	26

Exams	discussion	1-Class of Arachnids 2- Scorpio and its most important characteristics 3- Body systems in Scorpio	The student learns classification And the features of Arachnids and scorpions	6	27
Exams	discussion	1 - Phylum : Crustacea 2- Its general characteristics 3 - Examples of them with the characteristics of each example	The student's knowledge of the attributes Crustacea with some examples on her	6	28
Exams	discussion	1-Snails 2- Its general characteristics 3- The body systems of the conch	The student's knowledge of the attributes Snails and types of devices Animal	6	29
Exams	discussion	1 - phylum : Echinodermata, its general characteristics 2- Echinoderma species 3- Comparison between types 4-General characteristics of starfish 5-The body systems of the starfish	The student learns characteristics And the classification of echinoderms with A detailed explanation of a star the sea	6	30

11.Course Evaluation

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

12.Learning and Teaching Resources

Required prescribed books (methodology –if any)	Required textbooks (curricular books, if any)
External sources	Main references (sources)
Recommended supporting book And references (scientific journals, reports...)	Recommended books and references
Different scientific sites	Electronic References, Websites

Teaching name : Dr ,Khaled Thamer Mattar

Signature :

Course Description Form

1. Course Name:	
Histology	
2. Course Code:	
3. Semester / Year:	
2025-2026 Annual	
4. Description Preparation Date:	
1/ 9/ 2025	
5. Available Attendance Forms:	
Mandatory	
6. Number of Credit Hours (Total) / Number of Units (Total):	
4 theoretical hours+ 2 practical hours =6 hours per week	
7. Course administrator's name (mention all, if more than one name)	
Name: Hussein Abbas Selman Email: hussein.selman@qu.edu.iq	
8. Course Objectives	
● Introducing the normal student to histology and its relationship to other sciences, for example, physiology, embryology, histology, and his understanding of tissues and their function. He gradually learns what occurs in the cells.	Course Objectives
9. Teaching and Learning Strategies	
1- The student should know tissues 2- The student should know the basics of tissue division 3- The student should know the relationship between structure and function 4- That the student can compare different types of tissues 5- The student compares the mutations that occur in tissues according to	Strategy

their location and function.

10. Course Structure

Evaluation method	Learning method	Unit or subject name	Required Learning Outcomes	Hours	Week
daily exams and asking questions	discussion and lecture	Theoretical histology	Cell structure and components	4	1
daily exams and asking questions	discussion and lecture	Theoretical histology	Introduction to histology and its relationship to other sciences	2	2
daily exams and asking questions	discussion and lecture	Theoretical histology	Epithelial tissue	4	3
daily exams and asking questions	discussion and lecture	Theoretical histology	Changes in epithelial tissue and cell connections	4	4
daily exams and asking questions	discussion and lecture,	Theoretical histology	Glandular epithelium	2	5
daily exams and asking questions	discussion and lecture,	Theoretical histology	Basic connective tissue	4	6
daily exams and asking questions	discussion and lecture,	Theoretical histology	Ghadlov	2	7
daily exams and asking questions	discussion and lecture,	Theoretical histology	bone	4	8
daily exams and asking questions	discussion and lecture,	Theoretical histology	the blood	4	9
daily exams and asking questions	discussion and lecture,	Theoretical histology	Introduction to muscle tissue	2	10
daily exams and asking questions	discussion and lecture,	Theoretical histology	Types of muscles	4	11
daily exams and asking questions	discussion and lecture,	Theoretical histology	Introduction to the nervous system	4	12
daily exams and asking questions	discussion and lecture,	Theoretical histology	Parts of the nervous system	2	13
daily exams and asking questions	discussion and lecture,	Theoretical histology	Spinal Cord	4	14
daily exams and asking questions	discussion and lecture,	Theoretical histology	Brain and cerebellum	4	15
daily exams and asking questions	discussion and lecture,	Theoretical histology	leather	2	16
daily exams and asking questions	discussion and lecture,	Theoretical histology	Skin accessories	4	17

daily exams and asking questions	discussion and lecture,	Theoretical histology	Introduction to blood circulation	2	18
daily exams and asking questions	discussion and lecture,	Theoretical histology	Structure of the wall of arteries and veins		19
daily exams and asking questions	discussion and lecture,	Theoretical histology	Lymphatic system		20
daily exams and asking questions	discussion and lecture,	Theoretical histology	Lymphatic organs		22
daily exams and asking questions	discussion and lecture,	Theoretical histology	digestive		23
daily exams and asking questions	discussion and lecture,	Theoretical histology	Installation of the stomach and intestine wall		24
daily exams and asking questions	discussion and lecture,	Theoretical histology	Glands accessory to the digestive system		25

11. Course Evaluation

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

12. Learning and Teaching Resources

<i>A committee from the Department of Life Sciences/ College of Education/ University of Baghdad</i>	<i>Histology</i>	Required textbooks (curricular books, if any)
<i>Victor p. Eroschenko</i>	<i>Atlas of histology</i>	Main references (sources)
<i>w.w.w Cell_biology.com</i>		Electronic Websites References,

Course Description Form

1. Course Name:	
<i>Embryology</i>	
2. Course Code:	
203 E	
3. Semester / Year :	
2025-2026 Anuula	
4. Description Preparation Date	
: 1\9\2025	
5. Available Attendance Forms:	
Mandatory	
6. Number of Credit Hours (Total) / Number of Units (Total):	
4 hours (2 lectures + 2 labs)	
7. Course administrator's name (mention all, if more than one name)	
<i>Name: hanaa enaya</i> <i>Email: hanaa.enaya@qu.edu.iq</i>	
8. Course Objectives	
This course aims to provide the student with basic information about embryology and the stages that the embryo goes through during its formation, such as the stages of gamete formation, fertilization, cleavage, the formation of the three embryonic layers, the stage of formation of some basic organs, and their comparison between different embryos.	
9. Teaching and Learning Strategies	
<i>1. The lecture</i> <i>2. Discussion and dialogue</i> <i>3. Some pictures in the form of a presentation</i>	Strategy
10. Learning and Teaching Resources	

Required textbooks (curricular books, if

	any)
	Main references (sources)
<i>Embryology Book \Dr. Kawakib Abdel Qader, Muhammad Amin, Amal Ali</i>	Recommended books and references (scientific journals, reports...)
	Electronic References, Websites

11. Course Structure

Evaluation method	Learning method	Unit or subject name	Required Learning Outcomes	Hours	Week
<i>exams</i>	Theoretical lecture Show illustrations Discuss the topic with the students	Oogenesis /egg structure/egg covers/ egg classification	The student's knowledge of the history of embryology and the most important theories developed by scientists in this field	2	1
<i>exams</i>	Theoretical lecture Show illustrations Discuss the topic with the students	Embryology - gamete formation	Definition of embryology and the process of formation Male and female gametes	2	2
<i>exams</i>	Theoretical lecture Show illustrations Discuss the topic with the students	Primary germ cells / sperm formation / spermatid/ mature sperm	The student's knowledge of the emergence of germ cells And the process of sperm conversion	2	3
<i>exams</i>	Theoretical lecture Show illustrations Discuss the topic with the students	Oogenesis /egg structure/egg covers /egg classification	The student's knowledge of the egg formation process And the types of covers that surround the eggs How are eggs classified based on the amount of yolk?	2	4
<i>exams</i>	Theoretical lecture Show illustrations Discuss the topic with the students	Fertilization/differentiation phenomenon/fertilizer and anti-fertiliser	The student's knowledge of how this happens Fertilization and what is fertile? And the antifertiliser	2	5
<i>exams</i>	Theoretical lecture Show illustrations Discuss the topic with the students	Formation of the fertilization membrane/cleavage /its characteristics, levels, and types	The student knows how the fertilization membrane is formed and the types of cleavage	2	6
<i>exams</i>	Theoretical lecture Show illustrations Discuss the topic with the students	Formation of the morula/formation of the blastula/formation of gastrula/fate maps	The student's knowledge of morula formation The blastula and how to draw the map Fate of the fetus	2	7
<i>exams</i>	Theoretical lecture Show illustrations Discuss the topic with the students	Growth/differentiation/ the role of hormones in controlling growth and differentiation	The student's knowledge of the role of hormones in controlling growth and differentiation Fetus	2	8
<i>exams</i>	Theoretical lecture Show illustrations	Embryonic of Aphioxus/gamete,	Student knowledge of fetal	2	9

	Discuss the topic with the students	fertilization, cleavage, blastula, gastrula, fate map	development For Amphioxus as a simple example To study embryonic formation		
<i>exams</i>	Theoretical lecture Show illustrations Discuss the topic with the students	Embryonic of Amphioxus/gamete, fertilization, cleavage, blastula, gastrula, fate map	Student knowledge of fetal development For Amphioxus as a simple example To study embryonic formation	2	10
<i>exams</i>	Theoretical lecture Show illustrations Discuss the topic with the students	Formation of the primitive organs/ nervous system/ notochord/ hatching	Learn about the organ formation process Such as the formation of the nervous system and cord Dorsal	2	11
<i>exams</i>	Theoretical lecture Show illustrations Discuss the topic with the students	Embryology of amphibians (frog)/gametes, fertilization, cleavage, blastula, gastrula, fate map	Identify the embryonic formation in Amphibians, the process of fertilization and cleavage	2	12
<i>exams</i>	Theoretical lecture Show illustrations Discuss the topic with the students	External appearance/internal structure, formation of the nervous system, notochord, mesoderm, endoderm	Recognizing the external appearance of the frog and what structures exist On the ventral and dorsal region For the fetus	2	13
<i>exams</i>	Theoretical lecture Show illustrations Discuss the topic with the students	Embryology of birds (chickens)/gametes, molars, cleavage, blastula, gastrula, stages of the primitive streak	The student's knowledge of embryonic formation in Birds and how fertilization occurs And the formation of the primitive streak	2	14
		<i>Exam</i>			15
<i>exams</i>	Theoretical lecture Show illustrations Discuss the topic with the students	Embryonic changes in chickens 18 hours incubation/primitive streak, ectoderm, endoderm, mesoderm	Identify fetal changes Which happens to an embryo after 18 hours of incubation	2	16
<i>exams</i>	Theoretical lecture Show illustrations Discuss the topic with the students	Embryonic changes between 24-33 hours of incubation/nervous system, somites, foregut	Identify the fetal changes that The embryo undergoes 33-24 hour incubation	2	17
<i>exams</i>	Theoretical lecture Show illustrations Discuss the topic with the students	Vascular system (cardiac formation - blood vessel formation)	Learn how the device is formed Blood vessels in the fetus	2	18
<i>exams</i>	Theoretical lecture Show illustrations Discuss the topic with the students	Embryonic changes in a chicken embryo between 33-48 hours of incubation / nervous system, sense organs	Identify the fetal changes that Happens to the embryo after 33-48 hours of incubation	2	19
<i>exams</i>	Theoretical lecture	Circulatory system,		2	20

	Show illustrations Discuss the topic with the students	digestive system, general features of the fetus	Learn how to configure the device Digestive system and the most important general features of the fetus		
<i>exams</i>	Theoretical lecture Show illustrations Discuss the topic with the students	Embryonic changes of 72-hour incubation chickens	Identify the fetal changes that The embryo undergoes 72 hours of incubation	2	21
<i>exams</i>	Theoretical lecture Show illustrations Discuss the topic with the students	The outer membranes are embryonic	Identify the most important membranes outside embryonic, which contributes significantly to Protection and formation of the fetus	2	22
<i>exams</i>	Theoretical lecture Show illustrations Discuss the topic with the students	Artificial insemination in humans/internal and external artificial insemination	The student's knowledge of the vaccination process Internal and external artificial	2	23
<i>exams</i>	Theoretical lecture Show illustrations Discuss the topic with the students	Multiple births	Learn about the process of multiple births	2	24
<i>exams</i>	Theoretical lecture Show illustrations Discuss the topic with the students	Twins/fraternal or fraternal twins, identical twins, multiple twins	The student knows the difference between fraternal and fraternal identical twins	2	25
<i>exams</i>	Theoretical lecture Show illustrations Discuss the topic with the students	Congenital malformations	Identifying congenital malformations For the fetus and the reasons for its occurrence	2	26
<i>exams</i>	Theoretical lecture Show illustrations Discuss the topic with the students	The sexual cycle in mammals	Learn about the sex cycle in Mammals and how they are obtained	2	27
<i>exams</i>	Theoretical lecture Show illustrations Discuss the topic with the students	Placenta formation in mammals	Student knowledge of how to compose Placenta in mammals	2	28
<i>exams</i>	Theoretical lecture Show illustrations Discuss the topic with the students	Types of reproduction	Identify the types of reproduction in organisms and how they occur	2	29
<i>exams</i>	Theoretical lecture Show illustrations Discuss the topic with the students	<i>Exam</i>			30

12-Course Evaluation

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

preparation, daily oral, monthly, or written exams, reports etc

Score : 27= (20monthly + 3 student activity + 4 student attendance)

Course Description Form

1. Course Name:
plant taxonomy
2. Course Code:
204PT
3. Semester / Year:
Annual / 2025-2026
4. Description Preparation Date:
1-9-2025
5. Available Attendance Forms:
obligatory
6. Number of Credit Hours (Total) / Number of Units (Total)
4 hours (2 theoretical + 2 practical)
7. Course administrator's name (mention all, if more than one name)
<i>Name: Azharr abed al-ameer</i> <i>Email: Azhar.abed@qu.edu.iq</i>
8. Course Objectives
• This course aims to introduce the student to the history of taxonomy and its importance - the goals and foundations of plant taxonomy. • The student gets to know the meaning of a herbarium - flora - scientific nomenclature - taxonomic categories. • Defining plant classification and its relationship to other sciences, studying the vegetative structures of plants such as leaves, stems, and roots. • The student's familiarity with the structure of the flower and its characteristics in detail, the types of inflorescences, the fruits and their types, and the use of these characteristics in plant classification. Course Objectives The taxonomic study of a number of

plant families belonging to dicotyledons and monocots.

9. Teaching and Learning Strategies

Strategy

A- Knowledge and understanding

A1- That the student understands the basics of plant classification and differentiates between monocotyledonous and dicotyledonous plants.

A2- That the student understands the importance of each part of the plant in the classification process.

A3- The student gets to know the most important plants around us.

A4- The student will recognize the economic and medicinal importance of some types of plants.

A5- The student learns how to use what he has learned in diagnosing and classifying plants found in different environments and learns how to name them according to the rules of scientific nomenclature.

B- Subject-specific skills

B1 - The student should be able to diagnose and differentiate between plants.

B2- To distinguish between different plant species in appearance.

B3- To explain the reasons for phenotypic differences between the races of plant families.

B4- To know how to prepare and preserve plant models for long periods

C- Thinking skills

C1- Induction and deduction

C2- Comparison and analysis

C 3- Inference based on the facts of some plant phenomena C 4- Calendar D- General and transferable skills (other skills related to employability and personal development). D1- Using external sources for scientific and cultural enlightenment. D2- Transferring the impact of learning to the emotional aspects of students. Teaching and learning method 1. The lecture 2. Some dried and fresh plant specimens. 3. Some pictures and documentaries on some plant phenomena in the form of a presentation	
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10. Course Structure

Evaluation method	Learning method	Unit or subject name	Required Learning Outcomes	Hours	Week
<i>Quiz</i>	<i>a lecture</i>	<i>Objectives of taxonomy</i>	<i>For the student to know the purpose of studying plant taxonomy</i>	<i>4</i>	<i>1</i>
<i>//</i>	<i>a lecture</i>	<i>Important scientific terms</i>	<i>The student should know the most important scientific terms used in plant classification</i>	<i>4</i>	<i>2</i>
<i>//</i>	<i>discussion</i>	<i>History of taxonomy</i>	<i>The student should</i>	<i>4</i>	<i>3</i>

			distinguish between the most important historical eras that taxonomy has gone through and the role of scientists in each era	
Quiz	a lecture	The relationship of taxonomy to other sciences	For the student to recognize the extent to which classification science is related to other sciences	4
//	discussion	Classification systems	The student should compare and distinguish between the most important classification systems	4
//	discussion	Foundations of scientific nomenclature	For the student to become familiar with the most important principles used in naming a plant and to compare the scientific and common names	4

//	a lecture	Seed plants	The student 4 should know the importance of seed plants and their types	7
//	a lecture	The most important features of gymnosperms	For the student 4 to recognize the characteristics of gymnosperm plants	8
//	discussion	The most important features of seed coated	The student 4 should remember the most important characteristics of seed plants in order to know the developments taking place in them	9
//	a lecture	The roots	The student 4 knows the importance of the taxonomic root and recognizes its main types with examples to distinguish between them	10
//	discussion	The Stems	For the student 4 to recognize the taxonomic importance of the stem by identifying its	11

			<i>main types with botanical examples</i>	
//	<i>discussion</i>	<i>The Leaves 1</i>	<i>The student knows the parts of leaves, their importance, and how to draw them</i>	<i>12</i>
//	<i>a lecture</i>	<i>The Leaves 2</i>	<i>The student should compare different plants through the shape of the margin of the leaf blade, the blade apex, and its base</i>	<i>13</i>
//	<i>a lecture</i>	<i>The Leaves 3</i>	<i>For the student to recognize the importance of veins and the most important modifications that may occur in the leaf</i>	<i>14</i>
<i>Paper exam</i>	<i>a lecture</i>	<i>First month exam</i>	<i>4</i>	<i>15</i>
//	<i>discussion</i>	<i>The Flower 1</i>	<i>The student knows the most important parts of the flower with the drawing</i>	<i>16</i>
//	<i>a lecture</i>	<i>The Flower 2</i>	<i>To compare different plants through the symmetry</i>	<i>17</i>

			<i>of their flowers and the shape of the calyx and corolla</i>	
<i>Quiz</i>	<i>discussion</i>	<i>The Flower 3</i>	<i>The student 4 will learn about the importance of the stamens, their location and structure, and the ways in which the anther is connected to the filament</i>	<i>18</i>
<i>//</i>	<i>discussion</i>	<i>The Flower 4</i>	<i>The student 4 will know the types of pistils, the shapes of the style, and its position</i>	<i>19</i>
<i>//</i>	<i>a lecture</i>	<i>Placentation</i>	<i>The student 4 should distinguish between the different ways of attaching ovules to the ovary with plant examples</i>	<i>20</i>
<i>//</i>	<i>a lecture</i>	<i>Floral systems (Inflorescences)</i>	<i>The student 4 gets to know the parts of the floral system, the basis of their classification, and their types with examples</i>	<i>21</i>
<i>//</i>	<i>a lecture</i>	<i>The fruits</i>	<i>The student 4 should</i>	<i>22</i>

			compare the main types of fruits with drawings and examples	
//	a lecture	Seeds and their shapes	The student 4 gets to know the components of the seed and its most important forms with botanical examples	23
//	discussion	Pollen and pollination methods	The student 4 should know the most important forms of pollen, its components, and the different Agencies of pollination depending on the characteristics of the flowers	24
//	a lecture	The floral formula	For the student 4 to recognize the importance of the floral formula and learn its symbols and how to write it	25
//	discussion	Evolutionary trends in flowering plants	The student 4 should compare primitive and	26

			advanced traits while knowing the most important principles in the process of evolution		
//	discussion	Some plant families and their economic importance	The student gets to know the characteristics of some plant families and the most important economic uses of their species	4	27
Paper exam		Second month exam		4	28

11. Course Evaluation

Distributing the score out of 100= Quest score (40) + Final Exam (60)
 Quest score (monthly exam (18) + short exams (daily tests + reports) 4 + attendance 5 + practical 13 (monthly exam (8) + activities (2) + attendance (3))

12. Learning and Teaching Resources

Classification of seed plants (Al-Kateb, Youssef Mansour)	Required textbooks (curricular books, if any)
Flora's encyclopedias include encyclopedias - a study and description of the plants of a specific region, such as the European Encyclopedia.	Main references (sources)
Taxon journal, American journal of Botany, Brittonia, and some botanical dictionaries such as Botanical Latin	Recommended books and references (scientific journals, reports...)
https://ar.wikipedia.org/wiki	Electronic References, Websites

Teaching name: Dr. Dunia Bahel Gadaan

The signature: 

Course Description Form

1. Course Name:	
Biochemistry	
2. Course Code:	
205 B	
3. Semester / Year:	
2025-2026 Annual	
4. Description Preparation Date:	
1/ 9/ 2025	
5. Available Attendance Forms:	
Mandatory	
6. Number of Credit Hours (Total) / Number of Units (Total):	
2theoretical hours+ 2 practical hours =6 hours per week	
7. Course administrator's name (mention all, if more than one name)	
Name: Ali Noory fajer Email: ali.fajer@qu.edu.iq	
8. Course Objectives	
● Introducing the normal student to biochemistry and its relationship to other sciences, He gradually learns what occurs in the cells.	Course Objectives
9. Teaching and Learning Strategies	
1- The student should know compound chemical in cell 2- The student should know the basics of biochemical division 3- The student should know the relationship between structure and function for compound chemical 4- That the student can compare different types of saccharide ,lipid and protein 5- The student compares the mutations that occur in compound chemical according to their location and function.	Strategy

10. Course Structure					
Evaluation method	Learning method	Unit or subject name	Required Learning Outcomes	Hours	Week
daily exams and asking questions	discussion and lecture	Theoretical biochemistry	Molecular biochemical in cell	4	1
daily exams and asking questions	discussion and lecture	Theoretical biochemistry	Introduction to saccharide	2	2
,daily exams and asking questions	discussion and lecture	Theoretical biochemistry	Monosaccharide	4	3
, daily exams and asking questions	discussion and lecture	Theoretical biochemistry	oligosaccharide	4	4
, daily exams and asking questions	discussion and lecture,	Theoretical biochemistry	Polysaccharide	2	5
, daily exams and asking questions	discussion and lecture,	Theoretical biochemistry	Basic connective tissue	4	6
daily exams and asking questions	discussion and lecture,	Theoretical biochemistry	Lipid	2	7
daily exams and asking questions	discussion and lecture,	Theoretical biochemistry	Classification lipid	4	8
daily exams and asking questions	discussion and lecture,	Theoretical biochemistry	Fatty acid	4	9
daily exams and asking questions	discussion and lecture,	Theoretical biochemistry	Sample lipid	2	10
daily exams and asking questions	discussion and lecture,	Theoretical biochemistry	Derivation lipid and compound	4	11
daily exams and asking questions	discussion and lecture,	Theoretical biochemistry	Amino acid	4	12
daily exams and asking questions	discussion and lecture,	Theoretical biochemistry	Classification amino acid and	2	13
daily exams and asking questions	discussion and lecture,	Theoretical biochemistry	Peptide	4	14
daily exams and asking questions	discussion and lecture,	Theoretical biochemistry	Enzyme	4	15
daily exams and asking questions	discussion and lecture,	Theoretical biochemistry	Classification enzyme and	2	16
daily exams and asking questions	discussion and lecture,	Theoretical biochemistry	Nucleic acid	4	17
daily exams and asking questions	discussion and lecture,	Theoretical biochemistry	Nitrogen base	2	18
daily exams and asking questions	discussion and lecture,	Theoretical biochemistry	Metabolism		19

daily exams and asking questions	discussion and lecture,	Theoretical biochemistry	Introduction for Metabolism		20
daily exams and asking questions	discussion and lecture,	Theoretical biochemistry	Type of Metabolism		22
daily exams and asking questions	discussion and lecture,	Theoretical biochemistry	Metabolism the carbohydrate		23
daily exams and asking questions	discussion and lecture,	Theoretical biochemistry	Absorption carbohydrate		24
daily exams and asking questions	discussion and lecture,	Theoretical biochemistry	Type glycolysis		25

11. Course Evaluation

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

12. Learning and Teaching Resources

<i>lipincot</i>	<i>Biochemistry</i>	Required textbooks (curricular books, if any)
		Main references (sources)
<i>w.w.w Cell_biochemistry .com</i>		Electronic References, Websites

Course Description Form

1. Course Name:	
<i>Biostatistics</i>	
2. Course Code:	
3. Semester / Year:	
Year – 2024/2025	
4. Description Preparation Date:	
1/9/2024	
5. Available Attendance Forms:	
Mandatory Attendance	
6. Number of Credit Hours (Total) / Number of Units (Total)	
60 hours Theoretical	
7. Course administrator's name (mention all, if more than one name)	
Name: <i>Assist. Lec. Muna Abbas Mseer</i>	
Email: muna.abbas@qu.edu.iq	
8. Course Objectives	
- The student is introduced to life statistics, its importance, its branches, and the role of scientists in developing it, and is trained on statistical tests in the vital field, studying the most important methods of collecting health data and how to analyze it. - Assist in the study of mortality and morbidity prevention. - Investigate conditions that affect the health and well-being of communities over a period of time to identify possible causes of such conditions. - Forming conclusions from the data collected to reach a set of accurate results - Display all results in the form of a set of figures, tables and graphics. - Save time and effort for the researcher while obtaining results.	Course Objectives
9. Teaching and Learning Strategies	
The method of pictorial presentation of the lecture and discussion	Strategy

- The method of interrogation by asking questions and answering them.

10. Course Structure

Evaluation method	Learning method	Unit or subject name	Required Learning Outcomes	Hours	Week
Daily Testing	Lecture	Introduction to Biostatistics	General introduction	2	1
Daily Testing	Lecture	Statistics Science, Its Divisions, and Its Application Areas	The Nature of Statistical Data	2	2
Daily Testing	Lecture	Sample and its Types, Population	Some Basic Statistical Concepts	2	3
Daily Testing	Lecture	Frequency Distribution Tables	Display Statistical Data	2	4
Daily Testing	Lecture	Range, Class Center, Class Length,...	Some Important Definitions	2	5
Daily Testing	Lecture	Simple Frequency Distribution Table	Frequency Distributions	2	6
Daily Testing	Lecture	Relative Frequency, Percent Frequency, Ascending Clustered Iteration and the Descendant	Types of Frequency Distributions	2	7
Daily Testing	Lecture	Representing Classified and Unclassified Data	Graphic Display	2	8
Daily Testing	Lecture	Arithmetic Mean, Median, Mode	Measures of Central Tendency	2	9
Daily Testing	Lecture	Standard Score	Measures of Dispersion	2	10
Daily Testing	Lecture	Range, Variance, Standard Deviation	Measures of Absolute Dispersion	2	11
Daily Testing	Lecture	Relative Coefficient of Variation	Measures of Relative Dispersion	2	12
Daily Testing	Lecture	Central Moments, Simple	Moments	2	13

		Moments, the Relationship Between Central Moments and Simple Moments			
Daily Testing	Lecture	Moment Skewness Coefficient, Karl Pearson Coefficient	Measures of Skewness	2	14
Daily Testing	Lecture	Moment Kurtosis Coefficient	Measures of Kurtosis	2	15
Monthly Exam	Exam	The Exam is the First Month		1	16
Daily Testing	Lecture	Probability, Random Experiment	Introduction to Probability Theory	2	17
Daily Testing	Lecture	Throw a Coin, Throwing Backgammon (Dice), Balls Box, Play Cards	Random Experiment	2	18
Daily Testing	Lecture	Limited, Infinite Countable, Infinite	Sample Space	2	19
Daily Testing	Lecture	Simple, Composed, Confirmed, Empty, Complement, Disjoint, Non-Disjoint	The Event	2	20
Daily Testing	Lecture	Probability Measures	Probability Axioms	2	21
Daily Testing	Lecture	Probability Theorems	Probability Rules	2	22
Daily Testing	Lecture	Independent Events, Non-Independent Events	Independence	2	23
Daily Testing	Lecture	Pearson Moment Correlation Coefficient	Correlation	2	24
Daily Testing	Lecture	Coefficient of Rank Correlation		2	25
Daily Testing	Lecture	Spearman's Rank Correlation Coefficient		2	26
Daily Testing	Lecture	Exercises		2	27
Daily Testing	Lecture	Estimating Simple Linear Regression Coefficients Using The Least Squares	Regression	2	28

		Method		
Daily Testing	<i>Lecture</i>	Total Sum of Squares, Sum of Squares For Regression, Sum of Squares of Errors	2	29
Daily Testing	<i>Lecture</i>	The Coefficient of Determination	2	30
Daily Testing	<i>Lecture</i>	Exercises	2	31
Monthly Exam	Exam	The Exam is the Second Month	1	32

11.Course Evaluation

Daily Preparation (10)

Daily Oral (10)

Scientific Reports (10)

Quiz (10)

Written Exams (60).

12.Learning and Teaching Resources

The book Biostatistics: A Basis for Analysis in the Health Sciences, written by Wayne Daniel, translated by Dr. Ziad Al-Rawi	Required Textbooks (Curricular Books, If Any)
Biostatistics for the College of Nursing, Dr. Adnan Shamkhi	Main References (Sources)
Statistical tests, computer applications using SPSS Kamal Alwan	Recommended Books And References (Scientific Journals, Reports...)
Academia Google scholar	Electronic References, Websites

Administrator's Name: *Assist. Lec. Muna Abbas Mseer*

The signature:

Course Description Form

1. Course Name:					
English language					
2. Course Code:					
3. Semester / Year:					
First and second / 2024-2025					
4. Description Preparation Date:					
2025					
5. Available Attendance Forms:					
Full Time – Daily					
6. Number of Credit Hours (Total) / Number of Units (Total)					
7. Course administrator's name (mention all, if more than one name)					
Name: Asst.lect. kamila abed al-kadem.					
Email:					
8. Course Objectives					
-Help the students to communicate with English and developed Their linguistic proficiency -Make the students able to read and write In English Make the students to pronounce the English words Correctly			Course Objectives In		
9. Teaching and Learning Strategies					
					Strategy
10. Course Structure					
Evaluation method	Learning method	Unit or subject name	Required Learning Outcomes	Hours	Week
Daily and month exams	Lectures and tutorials	Unit 1 -Tenses Present,past, future	English		1-2

		-Questions -Questions words		
		Unite 2 -present simple -present continuous -have\have got		3-4
		Unite 3 -past tenses -past simple -past continuous		5-6
		Unite 4 -Quantity Much-many -Articles		7-8
		Unite 5 -Verb patterns1 -Future intentions Going to and will		9-10
		Unite 6 -What's is like? -comparative and Superlative		11-12
		Unite 7 -present perfect And past simple -for and since -tenses revision		13-14
		Mid-term Exam		15-16
		Unite 8 -have(got)to -should		17-18

		-must			
		Unite 9 -time and condition clauses -as soon as, when,while untile -what if...?			19-20
		Unite 10 - verbs patterns -infinitives -purpose -what, etc.+infinitive			21-22
		Unite 11 -passive			23-24
		Unite 12 -second conditional -might			25-26
		Unite 13 -present perfect continous -present perfect simple Versus continuous			27-28
		Unite 14 -past perfect for Clarification -reported statements			29
		Review			30

11. Course Evaluation

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

12. Learning and Teaching Resources

*Pre-Intermediate Book: Headway plus
by Soars and Liz*

Required textbooks (curricular books, if
any)

	Main references (sources)
	Recommended books and references (scientific journals, reports...)
	Electronic References, Websites

Course Description Form

1. Course Name:	
Educational administration and educational supervision	
2. Course Code:	
3. Semester / Year:	
2025-2026 quarterly	
4. Description Preparation Date:	
1-10-2025	
5. Available Attendance Forms:	
mandatory	
6. Number of Credit Hours (Total) / Number of Units (Total)	
6hours per week	
7. Course administrator's name (mention all, if more than one name)	
Name: : wijdan neder oudah Email: wijdan.oudah@qu.edu.iq	
8. Course Objectives	
The student should know administration The student must carry out modern educational supervision Mention the qualities of a good manager	Course Objectives
9. Teaching and Learning Strategies	
Make the student able t Comparison Selection Compares the introduction to the humanistic school and the classical school Explains the concept of management List the characteristics of planning Knows educational supervision	Strategy
10. Course Structure	

Evaluation method	Learning method	Unit or subject name	Required Learning Outcomes	Hours	Week
daily exams and asking questions	discussion and lecture,	Educational administration and educational supervision	Management development	6	1
daily exams and asking questions	discussion and lecture,	Educational administration and educational supervision	Management concept	6	2
daily exams and asking questions	discussion and lecture,	Educational administration and educational supervision	Administration entrances	6	3
daily exams and asking questions	discussion and lecture,	Educational administration and educational supervision	Entrance to the classical school	6	4
daily exams and asking questions	discussion and lecture,	Educational administration and educational supervision	Entrance to the humanitarian school	6	5
daily exams and asking questions	discussion and lecture,	Educational administration and educational supervision	Definition of educational administration	6	6
daily exams and asking questions	discussion and lecture,	Educational administration and educational supervision	Planning	6	7
daily exams and asking questions	discussion and lecture,	Educational administration and educational supervision	Management development	6	8
daily exams and asking questions	discussion and lecture,	Educational administration and educational supervision	Calendar	6	9

daily exams and asking questions	discussion and lecture,	Educational administration and educational supervision	Management styles	6	10
daily exams and asking questions	discussion and lecture,	Educational administration and educational supervision	The school administration	6	11
daily exams and asking questions	discussion and lecture,	Educational administration and educational supervision	Management theories	6	12
daily exams and asking questions	discussion and lecture,	Educational administration and educational supervision	Leadership theories	6	13
daily exams and asking questions	discussion and lecture,	Educational administration and educational supervision	<i>Leader traits</i>	6	14
daily exams and asking questions	discussion and lecture,	Educational administration and educational supervision	Parent and teacher councils	6	15
daily exams and asking questions	discussion and lecture,	Educational administration and educational supervision	Manager qualities	6	16
daily exams and asking questions	discussion and lecture,	Educational administration and educational supervision	Administrative tasks	6	17
daily exams and asking questions	discussion and lecture,	Educational administration and educational supervision	School administration and public relations	6	18
daily exams and asking	discussion and lecture,	Educational administration and educational	School discipline	6	19

questions		supervision			
daily exams and asking questions	discussion and lecture,	Educational administration and educational supervision	Classroom management	6	20
daily exams and asking questions	discussion and lecture,	Educational administration and educational supervision	Classroom management jobs	6	21
daily exams and asking questions	discussion and lecture,	Educational administration and educational supervision	Classroom management methods	6	22
daily exams and asking questions	discussion and lecture,	Educational administration and educational supervision	Effective classroom management skills	6	23
daily exams and asking questions	discussion and lecture,	Educational administration and educational supervision	Educational Supervision	6	24
daily exams and asking questions	discussion and lecture,	Educational administration and educational supervision	Stages of educational supervision	6	25
daily exams and asking questions	discussion and lecture,	Educational administration and educational supervision	Comprehensive supervision	6	26
daily exams and asking questions	discussion and lecture,	Educational administration and educational supervision	Preventive supervision	6	27
daily exams and asking questions	discussion and lecture,	Educational administration and educational supervision	Corrective supervision	6	28

11. Course Evaluation

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

preparation, daily oral, monthly, or written exams, reports etc

12. Learning and Teaching Resources

Management book	Required textbooks (curricular books, if any)
External sources	Main references (sources)
Reports	Recommended books and references (scientific journals, reports...)
https://www.google.com/search?q=	Electronic References, Websites

1. Course Name:	
Computers	
2. Course Code:	
208 c	
3. Semester / Year:	
1 st + 2 nd / Second 2025-2026	
4. Description Preparation Date:	
01/10/2025	
5. Available Attendance Forms:	
Attends	
6. Number of Credit Hours (Total) / Number of Units (Total)	
2/3	
7. Course administrator's name (mention all, if more than one name)	
Name: Assist.Lect.Rasha Hmzah obaid Email: rasha.hamzah@qu.edu.iq	
8. Course Objectives	
Course Objectives	1. Basic Proficiency: • Understand the fundamental features and functions of Excel. • Navigate the Excel interface efficiently. 2. Data Entry and Formatting: • Enter and format data effectively to improve readability and clarity. • Apply various formatting options such as font styles,

Course Description Form

	borders, and cell colors. 3. Formulas and Functions: • Learn how to create basic formulas for mathematical calculations. • Explore common functions for data analysis and manipulation. 4. Data Analysis: • Use Excel's built-in tools for sorting, filtering, and analyzing data. • Generate summary reports using PivotTables and PivotCharts. 5. Charts and Graphs: • Create and customize different types of charts and graphs to visually represent data. • Interpret and analyze chart data effectively. 6. Basics of networks and the Internet
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Course Description Form

	• Introduction to computer networks • Definition of computer networks • Benefits of computer networks • Components of computer networks • Types of computer networks • Classification of networks according to connection method • Classification of networks according to type of service • Classification of networks according to network scope • World Wide Web • Intranet and Extranet • Areas of Internet use 7. Browsing and searching the Internet • Web browsers
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Course Description Form

	• The browser “Internet Explorer” • Components of the Internet Explorer interface • Additional tasks in the browser • Search on the Internet • Using search engines 8. Messages and electronic chat • E-mail and E-Chatting • Features of e-mail • Create a new email account • Log in to email 9. Ethics of the Internet • Internet law and types of infringements in the digital space • Technology ethics • Etiquette and ethics in dealing with the Internet • Information security • Weaknesses in the Internet • Security problems
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9. Teaching and Learning Strategies

Strategy	
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1. Lecture and discussion
2. Practical in computer lab

3. Course Structure

Week	Hou rs	Require d Learnin g Outcom es	Unit or subject name	Learnin g method	Evaluati on method
the first	2	Referred to, each according to the content	1. Basic principles:	Lecture and discussion	Class questions and written tests
The second	2	Referred each according to the content	Understand the fundamental features and functions of Excel.	Lecture and discussion	Class questions and written tests
the third	2	Referred each according to the content	Navigate Excel interface efficiently.	Lecture and discussion	Class questions and written tests
the fourth	2	Referred each according to the content	Data Entry and Formatting:	Lecture and discussion	Class questions and written tests
The Fifth	2	Referred each according to the content	Enter and format data effectively to improve readability and clarity.	Lecture and discussion	Class questions and written tests
The sixth	2	Referred each according to the content	Apply various formatting options such as font styles, borders, and cell colors.	Lecture and discussion	Class questions and written tests

The Seventh	2	Referred each according the content	Formulas and Functions: to	lecture and discussion	class questions and written tests
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Course Description Form

Eighth the	2	Referred each according the content	Learn how to create basic formulas for mathematical calculations.	Lecture and discussion	Class questions and written tests
The Ninth	2	Referred each according the content	Explore common functions for data analysis and manipulation	Lecture and discussion	Class questions and written tests
The tenth	2	Referred each according the content	Data Analysis: to	Lecture and discussion	Class questions and written tests
eleventh	2	Referred each according the content	Use Excel's built-in tools for sorting, filtering, and analyzing data.	Lecture and discussion	Class questions and written tests
twelveth	2	Referred each according the content	Generate summary reports using PivotTables and PivotCharts.	Lecture and discussion	Class questions and written tests
Thirteenth	2	Referred each according the content	Charts and Graphs: to	Lecture and discussion	Class questions and written tests
fourteenth	2	Referred each according the content	Create and customize different types of charts and graphs visually	Lecture and discussion	Class questions and written tests
Fifteenth	2	Referred each according the content	Exam to		
sixteen	2	Referred each according the content	Basics of networks and Internet	Lecture and discussion	Class questions and written tests
seventeenth	2	Referred each according the content	Web browsers to	Lecture and discussion	Class questions and written tests
eighteen	2	Referred each	The browser "Internet Explorer"	Lecture and discussion	Class questions and written tests

		according the content	to		
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Course Description Form

nineteenth	2	Referred each according the content	Additional tasks to the browser	Lecture and discussion	and questions and written tests
The twentieth	2	Referred each according the content	Search on the Internet to	Lecture and discussion	and questions and written tests
Twenty-first	2	Referred each according the content	Messages and electronic chat to	Lecture and discussion	and questions and written tests
twenty two	2	Referred each according the content	E-mail and E-Chatting to	Lecture and discussion	and questions and written tests
twenty third	2	Referred each according the content	Features of e-mail to	Lecture and discussion	and questions and written tests
twenty fourth	2	Referred each according the content	Create a new email account to	Lecture and discussion	and questions and written tests
twenty fifth	2	Referred each according the content	Ethics of the Internet to	Lecture and discussion	and questions and written tests
twenty sixth	2	Referred each according the content	Ethics of the Internet to	Lecture and discussion	and questions and written tests
twenty seventh	2	Referred each according the content	Internet law and types of infringements in the digital space to	Lecture and discussion	and questions and written tests
Twenty eighth	2	Referred each according the content	Information security to	Lecture and discussion	and questions and written tests
twenty ninth	2	Referred each according the content	Security problem to	Lecture and discussion	and questions and written tests
Thirty			Exam		

4. Course Evaluation

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

5. Learning and Teaching Resources

Required textbooks (curricular books, if any)	<i>Fundamentals of computer science and office applications</i>
Main references (sources)	<i>Office</i>
Recommended books and references (scientific journals, reports...)	
physics References, Websites	

Course Description Form

Course Description Form

1. Course Name:					
Practical embryology					
2. Course Code:					
Practical embryology					
3. Semester / Year:					
Annual 2025-2026					
4. Description Preparation Date:					
17/9/2025					
5. Available Attendance Forms:					
Is mandatory					
6. Number of Credit Hours (Total) / Number of Units (Total)					
4 hours per week (2 theoretical + 2 practical)					
7. Course administrator's name (mention all, if more than one name)					
Name: Rajwan Jawad Hassan Email: rajwan.jwad@qu.edu.iq					
8. Course Objectives					
Introducing the student to 1. The concept of embryology 2. Stages of Spermatogenesis and oogenesis 3. Stages of embryonic development for many examples, such as frogs, birds, and mammals, with dissection of some of them and identification of their reproductive organs.					Course Objectives
9. Teaching and Learning Strategies					
1- The student should know cleavage 2- The student should know the phenomenon of polyspermy 3- To know the Amphioxus 4- That the student can compare the process of Spermatogenesis and oogenesis 5- Mention the distinctive characteristics of each type.					Strategy
10. Course Structure					
Evaluation method	Learning method	Unit or subject name	Required Learning Outcomes	Hours	Week
			After the end of the course, the student will be able to know some	4	

			concepts such as cleavage and Morula. To enumerate the stages of embryogenesis in the Amphioxus Compares the embryonic formation of the Amphioxus and the frog The shape of the sperm distinguishes between a frog and a rabbit.		
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11.Course Evaluation

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

12.Learning and Teaching Resources

Ministerial decisions (vocabularies for the methodological book), equipment and tools (compound microscope, slides, models, preserved models, samples) Display devices (Data show) and computers Viewing ready-made slides (slides), dissecting available organisms such as frogs, birds, and mice, extracting their reproductive organs, and examining sperm under a microscope.	Required textbooks (curricular books, if any)
	Main references (sources)
	Recommended books and references (scientific journals, reports...)
	Electronic References, Websites

Course Description Form

1. Course Name:	
Practical animal tissues	
2. Course Code:	
202 H	
3. Semester / Year:-	
2025-2026	
4. Description Preparation Date:	
1/9/2025	
5. Available Attendance Forms:	
Mandatory	
6. Number of Credit Hours (Total) / Number of Units (Total)(12)/(2)	
7. Course administrator's name (mention all, if more than one name)	
Name: Ennas Mohamed Majhwol Email: ennas.alkhozaae@qu.edu.iq	
8. Course Objectives	
1-Prepare the student practically to understand animal histology.. 2-Teaching the student the skill of using a microscope 3-Examining and identifying histological slides of different body tissues 4-The student understands the concept of animal histology 5-The student will understand the methods of preparing histological slides and diagnosing tissues using a microscope 6-The student gets to know the types and locations of tissues found in the animal's body 7-The student will learn to use an optical microscope 8-To learn the steps for preparing histological slides 9-The student learns how to deal with laboratory animals 10-Comparison of organ tissues 11- Comparison of animal tissues 12-Conclusion	Course Objectives
9. Teaching and Learning Strategies	
1-The student understands the concept of animal histology 2-The student will understand the methods of preparing histological slides and diagnosing tissues using a microscope 3-The student gets to know the types and locations of tissues found in the animal's body	Strategy

10. Course Structure					
Evaluation method	Learning method	Unit or subject name	Required Learning Outcomes	Hou rs	Wee k
<i>exams</i>	Discussion and examination of histological slides	Practical histology	Know the steps used preparing permanent slides	2 ^h	1
<i>exams</i>	Discussion and examination of histological slides	Epithelial tissues	The student knows the classification of epithelial tissues	2	2
<i>exams</i>	Discussion and examination of histological slides	Epithelial tissues	The student should distinguish between the types of simple and layered epithelial tissues, their composition, and their locations in the body	2	3
<i>exams</i>	Discussion and examination of histological slides	Epithelial tissues	The student should distinguish the glandular epithelial tissues, their locations and functions	2	4
<i>exams</i>	Discussion and examination of histological slides	Connective tissues	The student knows the description and classification of connective tissues	2	5
<i>exams</i>	Discussion and examination of histological slides	Proper Connective tissues	The student knows the types, locations, and functions of general connective tissue	2	6
<i>exams</i>	Discussion and examination of histological slides	Structural connective tissue	The student knows how to describe and classify skeletal connective tissue and distinguish between its types	2	7
<i>exams</i>	Discussion and	Vascular connective		2	8

	examination of histological slides	tissue	The student knows how to describe and classify the types of vascular connective tissue		
<i>exams</i>	Discussion and examination of histological slides	Muscular co.t	The student should distinguish between types of muscles in terms of structure, function, and location	2	9
<i>exams</i>	Discussion and examination of histological slides	Muscular co.t	The student should distinguish between types of muscles in terms of structure, function, and location	2	10
<i>exams</i>	Discussion and examination of histological slides	Nervous co.t	The student should distinguish between the components of nervous tissue	2	11
<i>exams</i>	Discussion and examination of histological slides	Nervous co.t	The student knows the description and structure of the nervous system	2	12
<i>exams</i>	Discussion and examination of histological slides	Skin	The student knows the histological structure of the skin	2	13
<i>exams</i>	Discussion and examination of histological slides	Skin	The student knows the types of skin appendages and their tissue composition	2	14
<i>exams</i>	Discussion and examination of histological slides	Cardiovascular system	The student knows the description and structure of the cardiovascular system	2	15
<i>exams</i>	Discussion and examination of histological slides	Cardiovascular system	The student knows the histological structure, description and classification of the types of blood vessels	2	16

<i>exams</i>	Discussion and examination of histological slides	Digestive system	The student knows the description and structure of the parts of the digestive system	2	17
<i>exams</i>	Discussion and examination of histological slides	Digestive system	The student will know the description, structure and function of the oral cavity and the alimentary canal	2	18
<i>exams</i>	Discussion and examination of histological slides	Digestive system	The student knows the function and structure of the accessory glands in the digestive system	2	19
<i>exams</i>	Discussion and examination of histological slides	Respiratory sy	The student knows the description and structure of the parts of the respiratory system	2	20
<i>exams</i>	Discussion and examination of histological slides	Respiratory sy	The student knows the histological structure of the parts of the respiratory system	2	21
<i>exams</i>	Discussion and examination of histological slides	Urinary sys	The student knows the description and structure of the urinary system	2	22
<i>exams</i>	Discussion and examination of histological slides	Urinary sys	The student knows the histological structure of the ureter and kidney	2	23
<i>exams</i>	Discussion and examination of histological slides	Glandular sys	The student knows and describes the types of endocrine glands	2	24
<i>exams</i>	Discussion and examination of histological slides	Glandular sys	The student knows the histological structure of some types of endocrine glands	2	25
<i>exams</i>	Discussion and examination of histological slides	Female reproductive sys	The student knows the description, structure and function of the female reproductive system	2	26

<i>exams</i>	Discussion and examination of histological slides	Female reproductive sys	The student knows the histological structure of the ovary and uterus	2	27
<i>exams</i>	Discussion and examination of histological slides	male reproductive sys	The student knows the description, structure and function of the parts of the male reproductive system	2	28

11. Course Evaluation

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

Score : 13 = (8 monthly + 2 student activity + 3 student attendance)

12. Learning and Teaching Resources

<i>Principles of practical histology (Dr.kawakib almukhtar and Dr. Amal Al-Khatib)</i>	Required textbooks (curricular books, if any)
<i>Textbook of human histology(Ph.D. INDERBIR SINGH)</i>	Main references (sources)
	Recommended books and references (scientific journals, reports...)
	Electronic References, Websites

Course Description Form

1. Course Name:					
Practical plant taxonomy					
2. Course Code:					
20T N					
3. Semester / Year:					
Annual/2025-2026					
4. Description Preparation Date:					
1/10/2025					
5. Available Attendance Forms:					
<i>Is mandatory</i>					
6. Number of Credit Hours (Total) / Number of Units (Total)					
<i>4 hours per week (2 theoretical + 2 practical)</i>					
7. Course administrator's name (mention all, if more than one name)					
<i>Name: hamida ayal maktof</i> <i>Email: hamida.ayal@qu.edu.iq</i>					
8. Course Objectives					
• Introducing the student to the science of plant classification • Introducing the student to the parts of the plant, their shapes, and the mutations that occur in them • Introducing the student to how to preserve plant models..... Creates templates for different leaves..... Save the leaves and dry them			Course Objectives		
9. Teaching and Learning Strategies					
The lecture and some dried and fresh plant samples					Strategy
10. Course Structure					
Evaluation method	Learning method	Unit or subject name	Required Learning Outcomes	Hours	Week
<i>Daily Exams And</i>	<i>Discussion, lecture</i>	The student knows how to collect plants and how to press them, dry them, and attach them to the model	Methods of collecting and preparing plant specimens in	2	1

asking questions			plant herbaria.		
Daily Exams And asking questions	Discussion, lecture	The student should distinguish between plant roots	Plant roots and their most important Forms With botanical examples	2	2
Daily Exams And asking questions	Discussion, lecture	The student compares the types of plant stems and learns the shape and mutation of the stem of some plants	Plant stems and their types with modifications, shapes and botanical examples.	2	3
Daily Exams And asking questions	Discussion, lecture	The student should enumerate the parts of the leaf	Plant leaves and their parts	2	4
Daily Exams And asking questions	Discussion, lecture	The student draws the blade shapes of some plant parts	Blade shapes with botanical models.	2	5
Daily Exams And asking questions	Discussion, lecture	The student should compare the top and base of the blade of different plant models	Shapes of the tip and base of the blade with vegetal patterns.	2	6
Daily Exams And asking questions	Discussion, lecture	To distinguish between blade edges of different plants	Blade edge shapes with some floral patterns.	2	7
Daily Exams And asking questions	Discussion, lecture	The student's knowledge of leaf venation for different plants	Leaf venation with vegetative patterns	2	8
Daily Exams And asking questions	Discussion, lecture	The student's knowledge of the changes that occur in leaves	Leaf mutations with plant models.	2	9

<i>questions</i>					
Daily Exams And asking questions	Discussion, lecture	he student should distinguish between the petiole, the auricles, and surface covering	Leaf petiole, auricles, and leaf surface covering.	2	10
Daily Exams And asking questions	Discussion, lecture	The student explains changes in the auricles of some plant models	the trial mutations vegetative patterns	2	11
Daily exams and asking questions	Discussion, lecture	The student knows how to arrange the leaves on the stem of the plant	Methods of arranging leaves on the stem with botanical examples	2	12
Daily Exams And asking questions	Discussion, lecture	To compare simple compound leaves, giving examples	Simple leaves and compound leaves botanical examples	2	13
Daily Exams And asking questions	Discussion, lecture	First semester exam	practical plant Taxonomy	2	14
Daily Exams And asking questions	Discussion, lecture	To know the flower and enumerate parts of the flower	Plant flowers and their basic parts.	2	15
Daily Exams And asking questions	Discussion, lecture	To mention the changes in calyx in the flower and give examples	Calyx mutations botanical examples.	2	16
Daily Exams And asking questions	Discussion, lecture	To know the corolla mention its types and shapes	The pink corolla and its most important types and shapes	2	17

Daily Exams And asking questions	Discussion, lecture	To draw the male organ in the flower and enumerate its shapes and changes that occur in it	The masculine device in flower with its shapes and modifications.	the 2 and	18
Daily Exams And asking questions	Discussion, lecture	To know the ways in which the anther is connected to the filament the ways in which the stamens are attached	Ways the anther connects to the filament and ways the stamens are attached.	2 the	19
Daily Exams And asking questions	Discussion, lecture	To distinguish between stamen variation symmetry in plant flowers with examples	Stamen variation, symmetry in plant flowers with examples.	2	20
Daily Exams And asking questions	Discussion, lecture	The student's knowledge of flower squares, their shapes and some plant models	Floral square shapes with some plant models	2	21
Daily Exams And asking questions	Discussion, lecture	The student draws the female system in the flower with its shapes	The feminine device in the flower with its forms.	the 2	22
Daily Exams And asking questions	Discussion, lecture	The student should distinguish location of the ovary relation to the rest of the floral parts	The feminine device in the flower with its forms. in	the 2	23
Daily Exams And asking questions	Discussion, lecture	To know the design drawing of its shapes and most important plant models	Illustration with its shapes and the most important plant models	2	24
Daily Exams And asking questions	Discussion, lecture	The student's knowledge of floral systems (inflorescences), their types and examples	Floral systems (inflorescences) with their types and examples	2	25
Daily Exams	Discussion, lecture	The student should compare the fruits and	Plant fruits and seeds with their types and examples.	2	26

And asking questions		seeds of some plants			
Daily Exams And asking questions	Discussion, lecture	The student's knowledge of plant families and their diagnosis based taxonomic keys	Training students diagnose some plant families based on taxonomic keys.	to 2	27
Daily Exams And asking questions	Discussion, lecture	Second semester exam	practical plant Taxonomy	2	28

11.

Course Evaluation

Distributing degree : 13(8 degrees monthly+2 activity + 3 attendance)+20 The final degree

12. Learning and Teaching Resources

book, Classification of seed plants By Youssef Mansour Al-Kateb - 2000 Plant taxonomy By the author Ali Hussein Issa Al-Moussawi - 1989 , Classification of flowering plants By Abdel Fattah Jabr - 2006	Required textbooks (curricular books, if any)
External sources , The Families and Genera Vascular Plants By the author K. Kubitzki – 2007	Main references (sources)
Various scientific sites	Recommended books and references (scientific journals, reports...)
The website <i>Google scholar</i> and YouTube	Electronic References, Websites

videos about some plants and their shapes	
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Course Description Form

1. <i>Course Name:</i>	
Practical biochemistry	
2. <i>Course Code:</i>	
3. <i>Semester / Year</i>	
: Annual (2025 _ 2026)	
<i>Description Preparation Date</i>	
: 9/1/2025	
4. Available Attendance Forms: mandatory	
5. Number of Credit Hours (Total) / Number of Units (Total) 12 hours in the morning and 6 hours in the evening / number of units 2	
6. Course administrator's name (mention all, if more than one name)	
Name: D .Ali Noree A.L Noora Sallah	
Email: edu-teacher18@qu.edu.iq	
7. Course Objectives	
• 1- 1- Introduces students practical biochemistry • 2- Identify the tools and equipment in the laboratory • 3- Introducing students to the chemicals that are used in the laboratory	Course Objectives

and how to deal with them

- 4-Learn about the most important experiments in biochemistry
-
-
-

8. Teaching and Learning Strategies

A- Knowledge and understanding: The student must know the science of biochemistry

The student should know laboratory equipment and tools

- The student should know how to deal with chemicals

B- Subject-specific skills 1 - Work on developing skills by preparing chemicals.

2- Developing skills by conducting carbohydrate detection experiments

3- Developing skills by conducting protein detection experiments

C- Thinking skills

1- Induction and deduction

2- Comparison and analysis

3- Conclusion based on the facts of some chemical experiments

4-Evaluation

E- General and transferable skills (other skills related to employability and personal development). 1- Using external sources for scientific and cultural enlightenment.

2- Transferring the impact of learning to the emotional aspects of students.

- 3 Community spirit by dividing students into groups to conduct chemical experiments

D4: Instilling confidence in students and encouraging them to deal with chemicals

5. Realizing the importance of knowledge in our lives and the power of God Almighty

Teaching and learning method 1. Lecture

2. Student discussion

3- Solve the questions related to each experiment

Evaluation method	Learning method	Unit or subject name	mes	Hou rs	Week
Koza ask questio ns and monthly exams	Discussing, conducting experiments, and showing their documentari es	Practical biochemistry	Laboratory equipment, tools and chemicals	18	11 n,
		Learn about the carbohydrates, their types, and how to classify them	Identify carbohydrat es		2
		Identifying colors with while conducting experiments	Experiment 1 Color charts of carbohydrat es		3
		and colors the materials negative	Experiment 2 Mulch test Benedict's revelation		4
		Identify the materials connotations.	Experiment 4 to detect pExperiment		5
		used in the experiment, such as	5 revealed Selivanov arvoid		6
		naphthol alcohols, sulfuric acid, and sugars that give a positive result in the reaction, such as	Experiment 6 Bial detection		7
		monosaccharid es.	Experiment 7 revealed by Hahlink		8
		5- application	Experiment 8 Osazone		9
					10
					11

		identifies the detection Benedict's Completion of statement used the ozone in the detection experiment, experiment such as copper Discussing sulphate, and solving sodium citrate azozone and mono- and detection disaccharides questions that give Proteins and positive result amino acids Identify the	12
		6- The student chemical should structure of distinguish amino acids reduced Experiment 9 monosaccharides Biuret es detection from reduced Experiment 10. di-saccharides Detection of ninhydrin	13
		7- The student gets to know the ketone sugars detection and aldehyde questions sugars and how Experiment 12 to distinguish Mellon between them detection	14
		8- Completion The student and solution of will recognize Mellon's pentasaccharides examination es and questions distinguish Experiment 13 them from Sakajoji hexasaccharide revealed s, and learn Experiment 14 about orcinol, Sulfur	15
			16
			17
			18
			19
			20
			21
			22
			23
			24

		hydrochloric acid, and ferric chloride 9- The student gets to know the components of the Fehling's reagent type A, such as copper sulphate and distilled water. He also learns about the components of the Fehling's reagent type B which are sodium potassium tartrate, and how to distinguish between them. 10- The student will recognize the shapes of the osazone crystals of monosaccharides and disaccharides, draw these shapes, and be able to distinguish between them under the microscope. 12- The student should be able to solve	detection of complete and solve sulfur detection questions Experiment 15: Vanillin detection Experiment 16: Pauli revealed As continuation of Pauli's detection and solution Questions and Precipitation of proteins Protein precipitation reactions	
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		discussion questions, such as how to distinguish between the shapes of crystals under a microscope 13- For the student to learn about proteins and amino acids and how to distinguish between them, and to know the benefits of amino acids 14- recognize the chemical structure of amino acids, draw the shape of each acid, and how to distinguish between one amino acid and another through To learn how proteins are distinguished from other substances by observing the appearance of a violet color when conducting the experiment		
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		<i>the side group R</i> <i>15- The student should know how to detect ninhydrin and be able to distinguish amino acids from proteins and sugars</i> <i>16- The student will be familiar with nitric acid, the basic component of detection, and will be able to distinguish aromatic amino acids from other acids.</i> <i>The student should be able to solve questions such as what is the principle of the experiment and what are the components of xanthoprotective detection</i> <i>17- The student will be familiar with the types of Mellon tests, distinguish between them,</i>		
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		and identify the amino acid that gives a positive result with this experiment. 18 To be able to solve questions such as what are the types of Mellon's test, what is the principle of the test's work, and what is the amino acid that responds to the experiment? 19- The student will be familiar with the test for arginic acid and the components of this test, such as phanpthol alcohol and sodium hypochlorate 20- The student gets to know organic sulfur and the sulfur amino acids, which are methionine, cysteine, and cysteine 21- The student should		
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		<i>be able to solve discussion questions such as what is organic sulfur, what is the principle of detection, and what are sulfur amino acids</i> <i>22- The student will be able to identify the amino acid tryptophanone and be able to distinguish it from other acid</i> <i>23- The student will be familiar with the detection of the amino acid histidine and the chemicals used in the experiment, such as sodium nitrite, sodium carbonate, and hydrochloric acid</i> <i>24- To be able to solve discussion questions such as what is the purpose of using ice cooling and what are the materials used in the</i>		
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		experiment 25- The student will be familiar with the types of protein precipitation and the chemicals used, such as sodium chloride, sodium sulfate, and magnesium chloride 26- The student will learn about the reactions that precipitate proteins, such as the precipitation reaction with heavy salts and the precipitation reaction with alcohol		
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9. Course Evaluation

Distribution of practical grades out of 13 (8 monthly exam grades, 2 short exam grades, 2 attendance, and 1 activity)

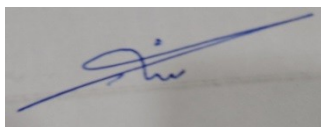
10. Learning and Teaching Resources

almuqararat alkhassa (almufrad lilkitab altatbiqii), external sources deffirent Scientific sites	Required textbooks (curricular books, if any)
Practical biochemistry book	Main references (sources)
Theoretical and practical biochemistry	Recommended books and references

<i>book (Al-Maqala Magazine). Scientific Issue No. 62 and No. 50)</i>	(scientific journals, reports...)
<i>Websites, chemical experiments, educational videos on chemical experiments to detect carbohydrates and proteins, and the digital repository of messages and theses.</i>	Electronic References, Websites

Name :noora salah

Signe :



Course Description Form

1. Course Name:	
<i>Practical invertebrates</i>	
2. Course Code:	
3. Semester / Year:	
<i>2025-2026</i>	
4. Description Preparation Date:	
<i>1/9/2025</i>	
5. Available Attendance Forms:	
<i>Mandatory attendance</i>	
6. Number of Credit Hours (Total) / Number of Units (Total):	
<i>Two hours theory + two hours practical</i>	
7. Course administrator's name (mention all, if more than one name)	
<i>Name: Dr. Hussam Saeed Abdulhussein</i> <i>Email: hussam.saeed@qu.edu.iq</i>	
8. Course Objectives	
Course Objectives	1-Introducing the student to the science of invertebrates and the most important phylums related to it. 2- Studying the characteristics of each phylum, knowing its species, and comparing the characteristics of these species. 3- Studying samples of invertebrate organisms and preparing slides for examination. 4- Study of life cycles, pathogenic effects, prevention and treatment of pathogenic species.
9. Teaching and Learning Strategies	
Knowledge and understanding	<i>1-define as invertebrates.</i> <i>2- The student should know the different phylum's of invertebrates.</i> <i>3-The student should know the types of invertebrate organisms.</i> <i>4- That the student can compare different types of people.</i> <i>5- To know their classification and distinguish their forms</i>
special skills	<i>1-Developing skills in diagnosing and distinguishing invertebrate organisms.</i> <i>2- Interpreting the causes of medical conditions.</i> <i>3-Thinking about more effective ways to prevent infection with pathogenic species</i>
thinking skills	<i>1- Induction and deduction</i> <i>2-- Comparison and analysis</i>

	3- Conclusion based on the living facts of some invertebrate organisms 4-Evaluation
General transferable skills (other skills related to employability and personal development).	and 1- Enhancing self-confidence and self-esteem by finding appropriate solutions 2 - Community spirit through discussions and explanation of the causes 3- Realizing the importance of science and development in discovering treatment.
Teaching and learning method	The lecture 2-Discussion 3- Some pictures and documentaries about some medical cases in the form of a presentation

10. Course Structure

Wee k	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2	Invertebrate science: benefits and harms of invertebrate organisms	Introduction to invertebrate science	Lecture and discussion	Quiz and monthly exam
2	2	protozoa, its characteristics and classification	Phylum:protozoa	Lecture and discussion	Quiz and monthly exam
3	2	Flagellate, its characteristics and the importance of its individuals	Class: Flagellate	Lecture , discussion and examination of slides	Quiz and monthly exam
4	2	Sarcodina, its characteristics and the importance of its individuals	Class: Sarcodina	Lecture , discussion and examination of slides	Quiz and monthly exam
5	2	Ciliate, its characteristics, and the importance of its individuals	Class: Ciliate	Lecture , discussion and examination of slides	Quiz and monthly exam
6	2	Sporozoa, its characteristics and the importance of its individuals	Class: Sporozoa	Lecture , discussion and examination of slides	Quiz and monthly exam
7	2	Suctoria, its characteristics, and the importance of its individuals	Class: Suctoria	Lecture , discussion and examination of slides	Quiz and monthly exam
8	2	Spongi and their general characteristics	Phylum: Spongi	Lecture and discussion	Quiz and monthly exam

9	2	Study of individuals belonging to each class	Classes of the phylum Spongi	Lecture and discussion	Quiz and monthly exam
10	2	Models of spongi organisms and an example of each model	Canal structure of spongi	Lecture , discussion and examination of slides	Quiz and monthly exam
11	2	Cnidaria, its characteristics, and the importance of its individuals	Phylum: Cnidaria	Lecture and discussion	Quiz and monthly exam
12	2	Study its species and the features of each it	Class: Hydrozoa	Lecture , discussion and examination of slides	Quiz and monthly exam
13	2	Platyhelminthes, Its general characteristics	Phylum: Platyhelminthes	Lecture and discussion	Quiz and monthly exam
14	2	Characteristics of this class and its orders	Class: trematode	Lecture and discussion	Quiz and monthly exam
15	2		Monthly exam		
16	2	<i>Fasciola hepatica</i> and its importance	<i>Fasciola hepatica</i>	Lecture , discussion and examination of slides	Quiz and monthly exam
17	2	Tapeworms, importance and their life cycle	Class:Cestode	Lecture , discussion and examination of slides	Quiz and monthly exam
18	2	Nematode, its general characteristics	Phylum: Nematode	Lecture and discussion	Quiz and monthly exam
19	2	Features of this class	Phasmidia and A phasmidia	Lecture and discussion	Quiz and monthly exam
20	2	Description of this worm, its life cycle, and its medical importance	<i>Ascaris lumbricoides</i>	Lecture , discussion and examination of slides	Quiz and monthly exam
21	2	Description of this worm, its life cycle, and its medical importance	<i>Trichuris trichiura</i>	Lecture , discussion and examination of slides	Quiz and monthly exam
22	2	Arthropoda, its general characteristics	Phylum: Arthropoda	Lecture and discussion	Quiz and monthly exam
23	2	Classes belonging to the arthropoda, and the characteristics of each class	Classes of Arthropoda	Lecture and discussion	Quiz and monthly exam
24	2	Characteristics of insects and its order	Class: Aves	Lecture and discussion	Quiz and monthly exam
25	2	Classification of insects, the characteristics and importance of each order	Order belong to insect	Lecture and discussion	Quiz and monthly exam

26	2	Annelida, its general characteristics	Phylum: Annelida	Lecture and discussion	Quiz and monthly exam
27	2	Classes of this phylum and the features of each class	Classification of Annelida	Lecture and discussion	Quiz and monthly exam
28	2	Mollusca, its general characteristics	Phylum: Mollusca	Lecture and discussion	Quiz and monthly exam
29	2	Classes of Mollusca and the features of each class, with examples	Classification of Mollusca	Lecture , discussion and examination of slides	Quiz and monthly exam
30			Monthly exam		

11. Course Evaluation

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

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	<i>Invertebrate science</i>
Main references (sources)	<i>Practical invertebrate science</i>
Electronic References, Websites	<i>The website, slides, workshops, and YouTube videos about invertebrates</i>

Name: Dr. Hussam Saeed Abdulhussein

Course Description Form

1. Course Name:	
Entomology	
2. Course Code:	
301 E	
3. Semester / Year:	
2025-2026 Annual	
4. Description Preparation Date:	
1/ 10/ 2025	
5. Available Attendance Forms:	
Mandatory	
6. Number of Credit Hours (Total) / Number of Units (Total):	
4 theoretical hours+ 2 practical hours =6 hours per week	
7. Course administrator's name (mention all, if more than one name)	
Name: Abbas Kadhim Hamzah Email: Abbas.hamza@qu.edu.iq	
8. Course Objectives	
• Introducing the student to entomology, the science of insects and its relationship to other sciences, their categorical location, their spread, the composition of their parts and nymphs, their cycle of movement and reproduction, their presence with examples, and knowing the best way to combat harmful ones, and there is nothing wrong with them and their abundance. - Introducing the student to cell science and methods of fixing cells on glass slides • Study the components of the plant cell, its difference from the animal cell, examples of plant and animal cells, and their most prominent features • As well as the difference between eukaryotic and prokaryotic cells, with examples	Course Objectives
9. Teaching and Learning Strategies	
A 1- The student should know the characteristics of insects 2- The student should know the conditions for an arthropod to be an insect	Strategy

3- The student should know the parts of insects and their mutations 4- That the student can compare insects and arthropods 5- The student compares the mutations of different insect parts .	
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10. Course Structure

Evaluation method	Learning method	Unit or subject name	Required Learning Outcomes	Hours	Week
daily exams and asking questions	discussion and lecture	Site Taxonomy of insects and importance	Know Site taxonomy of insects and its importance and distribution	4	1
daily exams and asking questions	discussion and lecture	Insect succession and distribution	Know season of insect success	2	2
daily exams and asking questions	discussion and lecture	The body Parts of insect/ Head	Structure of body wall and its benefit	4	3
daily exams and asking questions	discussion and lecture	Ecdysis(molting)	Know how insect molting	4	4
daily exams and asking questions	discussion and lecture,	Head of insect	Know head modification	2	5
daily exams and asking questions	discussion and lecture,	Modified antenna and mouthparts	Know types of ante and mouthpart	4	6
daily exams and asking questions	discussion and lecture,	Thoracic/ leg and wings	Know types of legs and wings in insects	2	7
daily exams and asking questions	discussion and lecture,	Abdomen	Know ovipositor and cerci	4	8
daily exams and asking questions	discussion and lecture,	Digestive system	Type of food entering and how digesting	4	9
daily exams and asking questions	discussion and lecture,	Digestion	Know digestive structure and absorption	2	10
daily exams and asking questions	discussion and lecture,	Excretory system	How excrete waste and rest food	4	11
daily exams and asking questions	discussion and lecture,	Muscular system	Muscle structure and movement	4	12
daily exams and asking questions	discussion and lecture,	Circulatory system	Role of blood cell	2	13

asking questions	lecture,				
daily exams and asking questions	discussion and lecture,	Reproductive system	Structure of male and female genital	4	14
daily exams and asking questions	discussion and lecture,	Respiratory system	Type of breathe in insect terrestrial and water	4	15
daily exams and asking questions	discussion and lecture,	Nervous system	Type of nerve cells and ganglion	2	16
daily exams and asking questions	discussion and lecture,	Sense organ insects	Know sense organ and its reaction with environment		17
daily exams and asking questions	discussion and lecture,	Immature stage insect	Know egg, larva, pupa and adult stage		18
		Metamorphosis	Type of metamorphosis	2	19
		Forensic Entomology	Use of insect in forensic investigation	2	20
		The Application Nano	Use of nano in insect control	2	22
		The Pest	Meaning of Pest	2	23
		Pests Control	Type of insecticides	2	24
		Economic threshold	Fit time to control	2	25

11. Course Evaluation

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

12. Learning and Teaching Resources

A committee from the Department of Life Sciences/ College of Education/ University of Baghdad	Theoretical entomology	Required textbooks (curricular books, if any)
Thabir Abdul-Mona, m Al-drgzli/Ministry of high Education 1982	biology Insect physiology	Main references (sources)
Dr.. Shalan malef Al-, Dr. Araji and Dr.Saadi.M, Halal.	Essential of Entomology	of references (scientific journals, reports...)
w.w.w Cell_biology.com		Electronic References, Websites

Course description form

1. Course Name :	
<i>Algae & Archegoniate</i>	
2. Course Code	
302 AA	
3. Semester / year	
-2025-2026	
4. Date this description was prepared	
1-10-2025	
5. Available forms of attendance :	
Is mandatory	
6. Number of study hours (total)/number of units (total)	
4 hours (2 theoretical + 2 practical)	
7. Name of the course administrator (if more than one name is mentioned)	
<i>Email : raid.al-asady@qu.edu.iq _ _ _</i> <i>the name : Dr.. Raid Kadhim Abdel Asady</i>	
Course objectives. ⁸	
<i>1-The course aims to give the student sufficient information to identify low-lying plant groups.</i> <i>2- Prepare the student scientifically to understand the similarities and differences between these groups</i> <i>3-Understanding the developments of algal communities over time</i> <i>. 4-Explaining the benefits of algae for the ecosystem and its great benefits for humans at all levels.</i>	Objectives of the study subject
Teaching and learning strategies. ⁹	
<i>For the student to understand the position of algae in relation to living organisms</i>	The strategy
A-	Knowledge

To	<i>That the student understands the difference between algae -2 .and living organisms such as bacteria, fungi, and higher plants</i>	<i>and understanding</i>
	<i>For the student to recognize algal groups according to -3 .different classifications</i>	
	<i>For the student to recognize the importance of algae, its role -4 .in biotechnology and medicine, and its role in gaseous balance</i>	
	<i>.The student can distinguish between different algal groups</i>	<i>B - Subject-specific skills</i>
	<i>diagnose algae laboratory by preparing permanent and .temporary slides</i>	
	<i>The student can describe the mechanisms used by algae to survive and resist different environmental conditions</i>	
	<i>.Classification skill -1 .Comparison skill -2 .Skill of alternatives and options 3 .Analysis skill -4 .Deduction skill-5</i>	<i>C- Thinking skills</i>
	<i>Using external sources for scientific and cultural - 1 .enlightenment</i>	<i>E- General and transferable skills (other skills related to employability and personal .development)</i>
	<i>Transferring the impact of learning to the emotional aspects of - 2 .students</i>	
	<i>The lecture is supported by power point presentations</i> <i>Some dried and fresh plant specimens.</i> <i>Some pictures and documentaries on some plant phenomena in the form of a presentation</i>	Teaching and learning method

Course structure.10				
Evaluation method	Learning method	Name of the unit or topic	Required learning outcomes	hours the week
Daily tests	Directed lecture	The position of algae among living organisms	The student knows the taxonomic position of algae	6 1-3
the test	Interrogative lecture	Blue-green algae	To distinguish between blue-green algae, bacteria, and eukaryotic algae, and to recognize different types of cyanophyta	6 4-5
the test	Interviewer	Green algae	Learn about eukaryotic algae, the first of which are green algae, and their economic, environmental, and scientific importance	7 6-9
Quarterly test	Interviewer	Euglena algae	To learn about different nutrition as well as self-nutrition	2 10
writing reports	lecture	Golden algae	Evaluates the role of golden algae in the environment, oil production, and various other industries	6 11-13
Daily tests	Interviewer	Cryptophyta & Pyrrophyta	To analyze the cause of the appearance of toxic blooms resulting from the red tide phenomenon	7 14-18
	lecture	Brown algae	To learn about the importance of brown algae in the manufacture of many products	6 19-21
Reports	lecture	Red algae	To evaluate the role of red algae as the main producers in the deep sea	6 22-24
Daily tests	Interviewer	Archegoniates	To recognize the role of archaeta as a link between algae and seeds	2 25-26
	Interviewer	MossesBryophyta	The student will learn about embryonic organisms and the occurrence of the phenomenon of succession	4 27-28

			of generations		
	lecture	To learn about the origins of ferns and the nature of vascular plants		4	29
Lecture supported by discussion		Gymnosperms. The student should distinguish the importance of economic seeds for humans		4	30
Course evaluation.11					
Distribution of the grade out of 100 according to the tasks assigned to the student, such as .daily preparation, daily, oral, monthly, written exams, reports , etc					
Learning and teaching resources.12					
1- Al -Saadi, Hussein Ali and Suleiman, Nidal Idris (2002) Required textbooks (methodology, if any) Algae and Archaea . Baghdad University. 2- Athbi , Ahmed Mohsen (2014). Practical Algae. Albasrah university. Athbi, Ahmed Mohsen (2021). Practical Archegoniate University of Basra			A.		
Sharma, O.P.(2011).Algae. Tata McGraw Hill Education Private Limited .NEW DELHI			Main references (sources)		
.Lee,E . (2008)Phycology Graham, L (2000) Algae			Recommended supporting books and references (scientific journals, reports....)		
YouTube website https://www.youtube.com/channel/UCQuDfA-CLJrc44YFDZMdomA			Electronic references , Internet sites		

Teaching name: A.ssist.Prof..DrRaid Kadhim Al Assadi

:the signature

Course Description Form

1. Course Name:	
<i>comparative anatomy of chordates</i>	
2. Course Code:	
304 CA	
3. Semester / Year:	
<i>Annual/2025-2026</i>	
4. Description Preparation Date:	
<i>1/10/2025</i>	
5. Available Attendance Forms: Is mandatory	
6. Number of Credit Hours (Total) / Number of Units (Total)	
<i>4 hours a week/ 6</i>	
7. Course administrator's name (mention all, if more than one name)	
<i>Name: Aseel Najah Sabour</i> <i>Email: Aseel.Najah@qu.edu.iq</i>	
8. Course Objectives	
Understanding developments of organisms over time depending on external influences, studying the functions of organs and systems, and comparing them with those of other organisms through studying the evolutionary ladder at different stages.....	Course Objectives
9. Teaching and Learning Strategies	
Knowledge and understanding 1- The student will be familiar with the characteristics of the phylum Chordata and how to classify it 2- For the student to understand the structure of the body systems of the different cord groups 3- For the student to become familiar with the developments that have occurred in the various devices, starting from the first	Strategy

chordates to the advanced chordates.

Subject-specific skills

- 1- *Examining the similarities and differences between the composition of the bodies of leftover animals and then comparing the results and information obtained from them*
- 2- *To explain to the student the structures of different chordate animals through diagrams*
- 3- *Discovering the changes that occur in the bodies of animals in order to trace the biological relationships between them*

thinking skills

- 1 –*The ability to classify any chordate animal into its taxonomic ranks*
- 2- *Tracking the stages of development of the structure of any bodily system from low chordates to high chordates*
- 3- *Anatomy of the animal and determining the location of a specific organ in relation to other organs*

10. Course Structure

Evaluation method	Learning method	Unit or subject name	Required Learning Outcomes	Hours	Week
<i>Daily testing</i>	<i>Directed lecture</i>	<i>Phylum Chordata</i>	<i>*General description of chordates</i>		<i>2</i>
	<i>Directed lecture</i>	<i>Phylum Chordata</i>	<i>* Classification of the phylum Chordata</i>		
	<i>Directed lecture</i>	<i>excretory system</i>	<i>*Functions and components of the excretory system</i>		
	<i>Directed lecture</i>	<i>Coelom cutaneous system</i>	<i>*Coelom * Functions and components of the cutaneous system</i>		
			<i>Functions and components of the cutaneous system</i>		

	<i>Directed lecture</i>	<i>cutaneous system</i>	<i>Functions and components of the cutaneous system</i>	2	7
	<i>Directed lecture</i>	<i>digestive system</i>	<i>Structure of the digestive system</i>	2	8
	<i>Directed lecture</i>	<i>digestive system</i>	<i>Structure of the digestive system</i>	2	9
	<i>Directed lecture</i>	<i>Respiratory system</i>	<i>Structure of the Respiratory system</i>	2	10
	<i>Lecture and discussion</i>	<i>Respiratory system</i>	<i>Structure of the Respiratory system</i>	2	11
	<i>Lecture and discussion</i>	<i>Skeletal system</i>	<i>Axial skeleton</i>	2	12
	<i>Lecture and discussion</i>	<i>Skeletal system</i>	<i>Axial skeleton</i>	2	13
	<i>Lecture and discussion</i>	<i>Skeletal system</i>	<i>Axial skeleton</i>	2	14
	<i>Lecture and discussion</i>	<i>Skeletal system</i>	<i>Axial skeleton</i>	2	15
	<i>Lecture and discussion</i>	<i>Skeletal system</i>	<i>Appendicular skeleton</i>	2	16
	<i>Lecture and discussion</i>	<i>Skeletal system</i>	<i>Appendicular skeleton</i>		17
	<i>Lecture and discussion</i>	<i>Skeletal system</i>	<i>Appendicular skeleton</i>		
	<i>Lecture and discussion</i>	<i>Skeletal system</i>	<i>Appendicular skeleton</i>		
	<i>Lecture and discussion</i>	<i>Nervous system</i>	<i>Structure of the nervous system</i>		

	<i>Lecture and discussion</i>	<i>Nervous system</i>	<i>Types of nerves</i>		
	<i>Lecture and discussion</i>	<i>Nervous system</i>	<i>Spinal chord</i>		
	<i>Lecture and discussion</i>	<i>Nervous system</i>	<i>brain</i>		
	<i>Lecture and discussion</i>	<i>Sense organs</i>	<i>Sense organs</i>		
	<i>Lecture and discussion</i>	<i>Sense organs</i>	<i>Sense organs</i>		
	<i>Lecture and discussion</i>	<i>Sense organs</i>	<i>Sense organs</i>		

11. Course Evaluation

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

The annual pursuit score of 40 degrees consists of

The average monthly examination for chordates is 22

Attendance score: 5 marks

Practical chordate class 13

The final theoretical exam score is 40 and the final practical exam is 20

12. Learning and Teaching Resources

<i>Fundamentals of comparative anatomy of chordates / Shukri Habib Khalil & Abdul Zahra Kazem Muhammad</i>	Required textbooks (curricular books, if any)
<i>Comparative anatomy Written by Dr. Muhammad Salim Saleh</i>	Main references (sources)
<i>Comparative anatomy of vertebrates Translated by Salah al-Deen al-AL-Nouri</i>	
	Recommended books and references (scientific journals, reports...)
	Electronic References, Websites

Course Description Form

1. Name of the course	
Environment and Pollution	
2. Course Code	
303 bt	
3. Semester/year	
Annual 2025-2026	
4. The date this description was prepared	
1-10-2025	
5. Available forms of attendance	
In-Person	
6. Number of study hours (total)/number of units (total)	
2 hr	
7. Name of the course administrator (if more than one name is mentioned)	
Name: Prof. Dr. Haider Abdul Wahid Malik Email: haider.alghanmi@qu.edu.iq	
8. Course objectives	
1. Study of the relationship between organisms and the ecosystem 2- Studying the types of ecosystems and the factors affecting them 3- Providing learners with knowledge of the principles of environmental geography 4- Identifying the curricula of the study of environmental geography	Objectives of the course :
A1. Comparison of trends in the study of environmental geography according to the historical development of this science. A2- Method of delivery and live interrogation. A3- Include in teaching methods the use of educational technology (Data Show). A4-Encourage students to self-learn.	Knowledge and understanding
1- Preparing researchers specialized in the field of environment and pollution . 2 Contribute to addressing the problems facing students in learning the subject of ecology and pollution and guide them to correct career guidance.	Subject specific skills

3 Practicing the use of the International Information Network in accessing the required references and information.					
Ability to deal with library and bibliographic indexes to obtain the required references and resources .					
<i>C1- Extrapolation and Elicitation</i> <i>C2-Comparison and Analysis</i> <i>C3- Conclusion through the facts of some environmental phenomena</i> <i>Assessment</i>					<i>-Thinking Skills</i>
<i>D1- The use of external sources in scientific and cultural enlightenment.</i> <i>D2- .Moving the impact of learning to the emotional aspects of students.</i>					<i>(e) General and transferred skills (other skills related to employability and personal development).</i>
9. TEACHING AND LEARNING STRATEGIES					
<i>Course</i> 2- Include teaching methods using educational technology (Data Show). <i>3. Some photos and documentaries of some environmental phenomena in the form of a presentation</i>					Strategy
10. 10. Course Structure					
Valuation Method	Learning method	Unit or Topic Name	Learning outcomes required for the program*	Hours	Week
Written and verbal test	Lecture and Discussion	Ecosystem Concept and Ecosystem Composition	<i>To mention the ecosystem</i>	<i>2</i>	<i>1</i>
Written and verbal test	Lecture and Discussion	Identification of abiotic and biotic components	<i>To enumerate biological components</i>	<i>2</i>	<i>2</i>
Written and verbal test	Lecture and Discussion	Identifying the chemical and life		<i>2</i>	<i>3</i>

		cycles			
Written and verbal test	Lecture and Discussion	Learn about the water cycle in nature		2	4
Written and verbal test	Lecture and Discussion	Learn about the carbon cycle in nature		2	5
				2	6
Written and verbal test	Lecture and Discussion	Identifying the sulfur cycle in nature		2	7
Written and verbal test	Lecture and Discussion	Identifying the course of the phosphorus cycle in nature		2	8
Written and verbal test	Lecture and Discussion	Identify the concept of pollution and its impact on health		2	9
Written and verbal test	Lecture and Discussion	Identifying the sulfur cycle in nature		2	10
Written and verbal test	Lecture and Discussion	Air Pollution Recognition		2	11
Written and verbal test	Lecture and Discussion	Identify water pollution		2	12
				2	13
Written and verbal test	Lecture and Discussion	Identify soil contamination		2	14
Written and verbal test	Lecture and Discussion	Identify the risks of population growth and its impact on the environment		2	15
Written and verbal test	Lecture and Discussion	Learn about the concept of environmental education		2	16
Written and verbal test	Lecture and Discussion	Learn about the concept of environmental education fields		2	17
Written and verbal test	Lecture and Discussion	Identify the objectives of environmental		2	18

		education			
Written and verbal test	Lecture and Discussion	Identify the emotional goals and the skill and knowledge objectives of environmental education		2	19
				2	20
Written and verbal test	Lecture and Discussion	Recognize the concept and attributes of environmental education		2	21
Written and verbal test	Lecture and Discussion	Learn about environmental awareness and its relationship to development		2	22
Written and verbal test	Lecture and Discussion	Identify the interests of the countries of the world in environmental education		2	23
Written and verbal test	Lecture and Discussion	Identify environmental concerns in Iraq and related legislation		2	24
Written and verbal test	Lecture and Discussion	Learn about environmental awareness and its relationship to development		2	25

11. Course Evaluation

Distribution of the score of 100 according to the tasks assigned to the student such as daily preparation, daily, oral, monthly and written examinations and reports etc.

12. Learning and Teaching Resources

Ministerial Courses (Ecology Book/ Written by Dr. Hussein Al-Saadi), External Sources Geography and Environment by Dr. Mohammed Mahmoud Suleiman Various Scientific Sites Ecosystem and Community Health Book by Dr. Kawthar Mahmoud Abu Al-Ain	Required textbooks (methodology if any)
Ministerial Courses (Ecology Book/ Written by Dr. Hussein Al-Saadi)	Key References (Sources)
External Sources Geography and Environment by Dr. Mohammed Mahmoud Suleiman Various Scientific Sites Ecosystem and Community Health Book by Dr. Kawthar Mahmoud Abu Al-Ain	Recommended supporting books and references (scientific journals, reports...)
	E-References , Websites

Teacher's Name: Prof. Dr. Haider Abdul Wahid Malik

Signature:

Course Description Form

2.	1. <i>Course Name:</i>		
	Mycology		
4.	3. <i>Course Code:</i>		
	3036 M		
6.	5. <i>Semester / Year:</i>		
	2025-2026		
8.	7. <i>Description Preparation Date:</i>		
	1-10-2025		
10.	9. Available Attendance Forms:		
	weekly		
12.	11. Number of Credit Hours (Total) / N		
	2		
14.	13. Course administrator's name		
	<i>Name: Majid kadhim abbood</i> <i>Email: majid.shibly@qu.edu.iq</i>		
16.	15. Course Objectives		
	• The student should graduate with knowledge of the basics of mycology in terms of classification, life cycles, and other skills. • Graduating teachers who have the scientific skills to differentiate between fungi and other organisms and between fungi and plants. • In the future, the student will be able to identify poisonous species and differentiate between edible ones, as well as be able to reproduce them.		
18.	17. Teaching and Learning Strategies		
	<i>Introduction about subjects and learning methods</i>		
20.	19. Course Structure		
	Evaluation method		Learning method
	Evaluation		Learning method
	Student activity and attendance		Interaction

	Activity	Interaction	Fu
	Activity	Interaction	
	Daily student activity	Interaction	Re
	Daily exam	Interaction	Se
	Daily exam	Interaction	Th
	Student activity and attendance	Interaction	Fu
	Student activity and attendance	Interaction	Jel
	Daily exam	Interaction	Jel
	Student class activity	Interaction	Sir
	Student activity	Interaction	Sir
	Daily exam	Interaction	Re
	#VALUE!		
	Student activity	Interaction	Sa
	Daily exam	Interaction	As
	Reports	Interaction	zyg
	Classification	Interaction	zyg
	Daily exam	Interaction	chy
	Classification	Interaction	chy
	Classification	Interaction	asc
	Daily exam	Interaction	Ba
	Student activity	Interaction	Ba
	Student activity	Interaction	Ba
	#VALUE!	#VALUE!	
	Daily exam	Interaction	Fa
	Classification	Interaction	Fa

	Classification	Interaction	Fa
	Daily exam	Interaction	Me
	activity	Interaction	Me
	Classification	Interaction	Inc
	Daily exam	Interaction	Inc
	Classification	Interaction	Fu
	Daily exam	Interaction	To
	Classification	Interaction	rev
22.	21. Course Evaluation		
	<i>Distributing the score out of 100 according to the written exams, reports etc 50 Monthly Exam</i>		
24.	23. Learning and Teaching Resou		
	<i>Mycology Abdul Aziz Nekilan</i>		
	<i>The fungi Alsuhaily</i>		
	<i>An introduction to Fungi</i>		
	<i>Mr.Fungus.com</i>		

Course Description Form

1. Course Name:					
Curriculum and Methods of Teaching					
2. Course Code:					
3038 CM					
3. Semester / Year:					
2025/ 2026					
4. Description Preparation Date:					
1-10 / 2025					
5. Available Attendance Forms:					
<i>In presence</i>					
6. Number of Credit Hours (Total) / Number of Units (Total)					
3					
7. Course administrator's name (mention all, if more than one name)					
<i>Name: Professor Dr. Ali Raheem Mohammed</i> <i>Email: ali.raheem@qu.edu.iq</i>					
8. Course Objectives					
● Providing the basics of teaching students ● Training students on the skills necessary for teaching			Course Objectives		
9. Teaching and Learning Strategies					
<i>Lecture, discussion, practical demonstrations, concept maps, exploration</i>					Strategy
10. Course Structure					
Evaluation method	Learning method	Unit or subject name	Required Learning Outcomes	Hours	Week
		● <i>The concept of science and scientific thinking</i> ● <i>Scientific thinking skills</i> ● <i>Science process skills</i>			

		• <i>Basic science processes</i> • <i>Integrated science processes</i> • <i>Levels of scientific knowledge</i> • <i>Philosophy of science teaching</i> • <i>Teaching science in light of Bloom's taxonomy</i>			
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11. Course Evaluation

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

12. Learning and Teaching Resources

<i>Modern trends in science teaching</i>	Required textbooks (curricular books, if any)
<i>General teaching methods</i>	Main references (sources)
<i>Methods of teaching science concepts and applications</i>	Recommended books and references (scientific journals, reports...)
	Electronic References, Websites

Name: Professor Dr. Ali Raheem Mohammed

Email: ali.raheem@qu.edu.iq

Course Description Form

1. Course Name:					
Scientific research method					
2. Course Code:					
3039 SR					
3. Semester / Year:					
2025-2026 Annual					
4. Description Preparation Date:					
1-10-2025					
5. Available Attendance Forms:					
mandatory					
6. Number of Credit Hours (Total) / Number of Units (Total)					
2hours per week (4) Units					
7. Course administrator's name (mention all, if more than one name)					
Name: Ihsan Hameed Abed Email: ehsan.aljanabi@qu.edu.iq					
8. Course Objectives					
• Training students to follow approved scientific methods and rules in writing research. • Developing the student researcher's abilities in the field of scientific research and its steps • Training students on using documents, books, and information sources and linking them • Helping students understand and comprehend topics related to the general foundations of philosophy Science, and different schools of thought. • Providing the student with experiences about the experimental method in studying scientific phenomena, And the methods and means used to achieve the two basic features of science: objectivity and generalization.					Course Objectives
9. Teaching and Learning Strategies					
Developed lecture - discussion - thought-provoking questions					Strategy
10. Course Structure					
Evaluation method	Learning method	Unit or subject name	Required Learning	Hours	Week

			Outcomes		
class questions	Lecture with discussion	Concept of science	Identify the concept of science and the components of scientific knowledge	2	1
class questions	Lecture with discussion	Scientific thinking skills	Identify scientific thinking skills	2	2
class questions	Lecture with discussion	Characteristics and goals of science	Identify the characteristics and goals of science	2	3
class questions	Lecture with discussion	Methods of acquiring knowledge	Identify methods of acquiring knowledge	2	4
class questions	Lecture with discussion	Scientific research - its concept - stages of its development	Identify the concept of scientific research and the stages of its development	2	5
class questions	Lecture with discussion	Various divisions of scientific research	Identify the different divisions of scientific research	2	6
class questions	Lecture with discussion	Characteristics of a scientific researcher	Identify the characteristics of a scientific researcher	2	7
class questions	Lecture with discussion	The research problem, its components, and sources for obtaining it	Identify the research problem, its components, and sources for obtaining it	2	8
class questions	Lecture with discussion	The originality of the problem and its formulation	Recognizing the concept of problem originality and its formulation	2	9
class questions	Lecture with discussion	research importance	Identify the topic of the importance of research	2	10
class questions	Lecture with discussion	Research objectives and how to write them	Identify the research objectives and how to write them	2	11
class questions	Lecture with discussion	Research methodology and types of research methods	Learn about defining the research methodology and types of research methods	2	12
class questions	Lecture with discussion	Search parameters	Identify the search parameters	2	13
class questions	Lecture with discussion	Research hypotheses, their types, and how to formulate them	Identify research hypotheses, their types, and how to formulate them	2	14
class questions	Lecture with discussion	Literary research and previous studies	Getting to know the literature of research and previous studies	2	15
class questions	Lecture with discussion	Intellectual product and selection criteria	Identify the intellectual product and the criteria for selecting it	2	16
class questions	Lecture with discussion	Research tools Questionnaire	Getting to know the research tools (questionnaire)	2	17
class questions	Lecture with discussion	Observational research tools	Getting to know the research tools	2	18

			(observation)		
class questions	Lecture with discussion	Interview research tools	Familiarity with corresponding research tools	2	19
class questions	Lecture with discussion	Population and sample	Identify the population and sample	2	20
class questions	Lecture with discussion	Quotation, citation, methods and conditions	Learn about citation and citation, its methods and conditions		21
class questions	Lecture with discussion	Documentation in scientific research, its types and methods	Identify documentation in scientific research, its types and methods	2	22
class questions	Lecture with discussion	Types of curricula: First, the historical curriculum	Identify the types of curricula, first the historical curriculum	2	23
class questions	Lecture with discussion	Comparative approach	Learn about the comparative method	2	24
class questions	Lecture with discussion	Case study methodology	Learn about the case study methodology	2	25
class questions	Lecture with discussion	Content analysis approach	Learn about the content analysis method	2	26
class questions	Lecture with discussion	Tracing approach	Learn about the follow-up approach	2	27
class questions	Lecture with discussion	Experimental method	Learn about the experimental method	2	28

11. Course Evaluation

Grade distribution: daily preparation (10), short daily exams (10), monthly exam (20), written exam (60)

12. Learning and Teaching Resources

<i>Mandatory research method material</i>	Required textbooks (curricular books, if any)
	Main references (sources)
Introduction to Research Methods, 2014, Muhammad Khalil Abbas et al Scientific Research Methods, 2006, Anwar Hussein Abdel Rahman Scientific research, its foundations, methods and tools, by Rabhi Mustafa Alyan	Recommended books and references (scientific journals, reports...)

Instructor's name : Ihsan Hameed Abed

Course Description Form

1. Course Name:							
Counseling and Mental Health							
2. Course Code:							
307 C M							
3. Semester / Year:							
The first and Second semester 2025- 2026							
4. Description Preparation Date:							
1-10-2025							
5. Available Attendance Forms:							
Weekly							
6. Number of Credit Hours (Total) / Number of Units (Total)							
4 hours weekly							
7. Course administrator's name (mention all, if more than one name)							
Name: Abaas Raheeq Adnan Email: Raheeq.Adnan@qu.edu.iq							
8. Course Objectives							
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; vertical-align: top;"> - Identity the concept counseling. And mental health.... - Identity the theory counseling - The teaching assistant help - Students find solution for problems..... </td> <td style="width: 50%; vertical-align: top;"> Course Objectives </td> </tr> </table>						- Identity the concept counseling. And mental health.... - Identity the theory counseling - The teaching assistant help - Students find solution for problems.....	Course Objectives
- Identity the concept counseling. And mental health.... - Identity the theory counseling - The teaching assistant help - Students find solution for problems.....	Course Objectives						
9. Teaching and Learning Strategies							
<i>Using behavioral guidance</i> <i>Using Brain storming strategy</i>					Strategy		
10. Course Structure Learn the student discovering patterns behavioral and Ability to Edit undesirable behavioral							
Evaluation method	Learning method	Unit or subject name	Required Learning Outcomes	Hours	Week		

			<i>Ability present Help for Individuals And Find Solution in problems</i>	<i>to all</i>	
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11. Course Evaluation

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

12. Learning and Teaching Resources

	Required textbooks (curricular books, if any)
<i>Resarch Gate</i>	Main references (sources)
<i>The counseling and mental health from D. Mallik AL – Kirriashey</i>	Recommended books and references (scientific journals, reports...)
<i>The guid books Email</i>	Electronic References, Websites

Course Description Form

1. Course Name:					
English language					
2. Course Code:					
310 E					
3. Semester / Year:					
First and second / 2025-2026					
4. Description Preparation Date:					
2025-10-1					
5. Available Attendance Forms:					
<i>Full Time – Daily</i>					
6. Number of Credit Hours (Total) / Number of Units (Total)					
7. Course administrator's name (mention all, if more than one name)					
<i>Name: Asst.lect. Nourah Ali Hussain.</i>					
<i>Email:</i>					
8. Course Objectives					
-Help the students to communicate with English and developed Their linguistic proficiency -Make the students able to read and write In English Make the students to pronounce the English words Correctly			Course Objectives In		
9. Teaching and Learning Strategies					
					Strategy
10. Course Structure					
Evaluation method	Learning method	Unit or subject name	Required Learning Outcomes	Hours	Week
<i>Daily and month exams</i>	<i>Lectures and tutorials</i>	<i>Unite 1</i> <i>- Auxiliary verbs</i> <i>-Naming the tenses</i> <i>-Questions</i>	<i>English</i>		<i>1-2</i>

		<i>and negatives</i> <i>-Short answers</i>			
		<i>Unite 2</i> <i>-present simple</i> <i>-present continuous</i> <i>-present passive</i>			3-4
		<i>Unite 3</i> <i>past tenses</i> <i>-past simple and perfect</i> <i>-past passive</i>			5-6
		<i>Unite 4</i> <i>-modal verbs</i> <i>Obligation and permission</i> <i>-should and must</i>			7-8
		<i>Unite 5</i> <i>- future form</i> <i>Going and will</i> <i>-present continuous</i>			9-10
		<i>Unite 6</i> <i>- questions with like</i> <i>-verb patterns</i>			11-12
		<i>Unite 7</i> <i>- present perfect</i> <i>-present perfect passive</i>			13-14
		<i>Mid-term Exam</i>			15-16
		<i>Unite 8</i> <i>-conditionals</i> <i>-first conditional</i>			17-18

		<i>-time clauses</i>			
		<i>Unite 9</i> <i>- modal verbs(2)</i> <i>-probability</i> <i>-must, could, might,</i> <i>can't</i>			<i>19-20</i>
		<i>Unite 10</i> <i>- present perfect</i> <i>continuous</i> <i>-question and answer</i> <i>-time expressions</i>			<i>21-22</i>
		<i>Unite 11</i> <i>--indirect questions</i> <i>-question tags</i>			<i>23-24</i>
		<i>Unite 12</i> <i>- reported speech</i> <i>-reported questions</i> <i>-reported requests</i>			<i>25-26</i>
		<i>- Project your most</i> <i>Treasured</i> <i>possession p.49</i> <i>talking about you</i> <i>your</i> <i>Kitchen p.50</i> <i>-discussion first</i> <i>born\</i> <i>Second-born children</i> <i>Who do you closest</i> <i>to in Your family?</i> <i>p.52</i>			<i>27-28</i>
		<i>Review</i>			<i>29-30</i>

11. Course Evaluation

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

preparation, daily oral, monthly, or written exams, reports etc

12. Learning and Teaching Resources

*Intermediate Book: Headway plus
by Liz and Soars*

Required textbooks (curricular books, if any)

Main references (sources)

Recommended books and references
(scientific journals, reports...)

Electronic References, Websites

Course Description Form

1. Course Name:	
Counseling and mental health / third stage	
2. Course Code:	
307 CM	
3. Semester / Year:	
Annual for the year 2025/2026	
4. Description Preparation Date:	
1/10/2025	
5. Available Attendance Forms:	
<i>Daily attendance</i>	
6. Number of Credit Hours (Total) / Number of Units (Total)	
<i>Two hours</i>	
7. Course administrator's name (mention all, if more than one name)	
<i>Name: M.D. Nahla Abdel Hadi Messer</i> <i>Email: nahlah.maseer@qu.edu.iq</i>	
8. Course Objectives	
- Students familiarize themselves with the origins of psychological counseling and educational guidance and their historical development. - Students learn about the basic concepts of psychological counseling and guidance, its principles and the need for it. - Explains to students the relationship of psychological counseling to other sciences and to mental health services. - Students learn about the general principles on which psychological counseling is based. - Students learn about the fields of psychological guidance and counseling (educational guidance and counselling, vocational counselling, and family counselling). - Students demonstrate methods of psychological counseling (individual, group, direct and indirect counselling). - Students learn the information necessary for the psychological counseling process. - Students are introduced to effective classroom learning with its characteristics, characteristics and principles. - Introducing students to a historical overview of the emergence of mental health. - Recognizes the meaning of mental health, its goals, levels, and obstacles. - Identifying the target groups covered by mental health science.	Course Objectives

- Identifying mental health standards and criteria for good and bad. - Explains the characteristics of normal behavior and ways to determine normal and abnormal behavior. -Learn about mental health curricula. -Recognizes the stages and theories explaining mental health. - Explains parental rights.					
9. Teaching and Learning Strategies					
<i>1-Learn about the concept of guidance and counselling.</i> <i>2- Identify the goals of psychological counselling.</i> <i>3- Identify the areas of psychological counseling, its goals, services, and the problems it addresses.</i> <i>4- Understanding how to use the counseling process and apply it to the counselors.</i> <i>5- Understanding how to apply counseling methods in the field of psychological counselling.</i> <i>6- Know effective classroom learning strategies and how to deal with them.</i> <i>7- Identify the meaning of mental health, its goals, levels, and obstacles.</i> <i>8-Understanding the characteristics of a normal and abnormal person.</i> <i>9-Understanding the rights of parents and being kind to them.</i>				Strategy	
<i>1- Being able to conduct a guidance interview and apply a case study.</i> <i>2- Acquiring counseling process skills.</i> <i>3- Learn how to diagnose the problem in terms of its type, depth, duration, and severity.</i> <i>4-Learn how to collect information, have self-confidence, and the ability to solve problems for the guide.</i> <i>5- Being able to know the appropriate solutions to the problem.</i>					
<i>1-Planning</i> <i>2- Organization</i> <i>3-Monitoring</i> <i>4-Calendar</i>					
<i>D1- Encouraging providing assistance and knowing the causes of common problems.</i> <i>D2- Developing skills for preparing applied studies in mental health.</i> <i>D3- Developing skills in making appropriate decisions in the counseling process.</i>					
<i>- Daily oral tests.</i> <i>- Writing reports on counseling and mental health topics</i> <i>- Short written tests</i> <i>- Semester and final written exams</i>					
<i>-The method of lecture, interrogation and discussion</i> <i>- Carrying out classroom and extracurricular duties and activities.</i>					
10. Course Structure					
Evaluation method	Learning method	Unit or subject name	Required Learning Outcomes	Hours	Week
=	=	The origins and development of	=		21

		(interview and observation)			21
		Case study and CV	=		
		Introduction to Effective Classroom Teaching		2	22
		Characteristics, specifications and principles of an effective teaching environment	=	2	23
		Introduction to mental health	=		
		A historical overview of the emergence of mental health	=	2	24
		Meaning of mental health	=		
		Goals, degrees, and obstacles to mental health		2	25
		Target groups covered by mental health science	=	2	26
		Mental health standards and standards of goodness and badness.	=		
		Characteristics of normal behavior and methods for determining normal and abnormal behavior.	=	2	27
		Mental health curricula.	=		
		Explanatory theories of mental health.		2	28
		Parental rights in Islam	=		
					29
					30

11. Course Evaluation

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

12. Learning and Teaching Resources

	Required textbooks (curricular books, any)	if
The book "Principles of Psychological Guidance and Counseling" / authored by Dr. Kamila Al-Farkh and Dr. Abdel-Jabartim, 1999	Main references (sources)	
Book of principles of mental health / author Saleh Hassan Ahmed Al-Dahri, 2010 Book of mental health and psychotherapy / Hamed Zahran for the year 2005	Recommended books and references (scientific journals, reports...)	
The book on the family in Islam (Grand Ayatollah the martyr Muhammad Muhammad Sadiq al-Sadr) www.jam3aama.com	Electronic References, Websites	
The psychology of classroom learning / Diao Owa Al-Arnous and the book Effective Teaching Strategies Afaf Othman	Electronic References, Websites	

Course Description Form

1. Course Name:					
Environment and pollution					
2. Course Code:					
303 E P					
3. Semester / Year:					
2024-2025					
4. Description Preparation Date:					
1/9/2024					
5. Available Attendance Forms:					
Mandatory					
6. Number of Credit Hours (Total) / Number of Units (Total)					
2 Hours					
7. Course administrator's name (mention all, if more than one name)					
Name: Assistant Lecturer. Mohammed Obaid Enad Email: mohammed-obaid@qu.edu.iq					
8. Course Objectives					
• Preparing the student scientifically to know the science of the environment and its relationship with humans and living organisms, measuring some physical and chemical properties such as oxygen, temperature, humidity, salinity, acidity, heavy metals and their effect on living things, using algae as an indicator of organic pollution, measuring air pollutants such as dust and sulfur oxides, as well as estimating water basicity, total hardness, magnesium and calcium.					Course Objectives
9. Teaching and Learning Strategies					
<i>Using lectures and textbooks, using some scientific research and reports, as well as using pictures and illustrations via the Internet, and training students on practical experience and scientific discussion in the lecture.</i>					Strategy
10. Course Structure					
Evaluation method	Learning method	Unit or subject name	Required Learning Outcomes	Hours	Week
Exams, practical performance, oral	lecture	Ecology	Introduction to ecology and ecosystem Biotic and abiotic	2	1

questions, and writing reports			components		
Exams, practical performance, oral questions, and writing reports	Practical experiment	Physical factors (temperature)	Methods of measuring temperature in air, water and temperature	2	2
Exams, practical performance, oral questions, and writing reports	Practical experiment	Physical factors	Methods of measuring humidity, atmospheric pressure, wind, evaporation, precipitation and light	2	3
Exams, practical performance, oral questions, and writing reports	Practical experiment	Chemical factors	Methods for measuring pH and electrical conductivity	2	4
Exams, practical performance, oral questions, and writing reports	Practical experiment	Biological components	How to use the environmental square and how to collect water and biological samples	2	5
Exams, practical performance, oral questions, and writing reports	Practical experiment	soil environment	soil and soil components, how to determine soil texture using the soil texture triangle, and how to measure relative humidity in the soil	2	6
Exams, practical performance, oral questions, and writing reports	lecture	Solutions	Methods of preparing chemical solutions and performing chemical calculations	2	7
Exams, practical performance, oral questions, and writing reports	lecture	Molarity	Explaining molarity with examples and solving problems	2	8
Exams, practical performance, oral questions, and writing reports	lecture	Normal	Explaining normality with examples and solving problems	2	9
Exams, practical performance, oral questions, and writing reports	Practical experiment	Aquatic environment - dissolved oxygen in water	Methods for measuring dissolved oxygen in water	2	10
Exams, practical performance, oral questions, and writing reports	Practical experiment	Alkalinity in water	Methods for measuring basicity and how to extract the type of basicity	2	11
Exams, practical performance, oral questions, and writing reports	Practical experiment	acidity in water	Methods for measuring mineral acidity and carbonic acidity in water	2	12
Exams, practical performance, oral questions, and writing reports	Practical experiment	Salinity in water	Methods of measuring salinity in water	2	13
Exams, practical performance, oral questions, and writing reports	Practical experiment	Total hardness in water	Method for measuring total hardness in water	2	14
Exams, practical performance, oral questions, and writing reports	Practical experiment	Environmental pollution - biological oxygen requirement (BOD).	Sources of pollution - the benefit and method of measuring BOD	2	15

Exams, practical performance, oral questions, and writing reports	Practical experiment	Algae as an indicator of organic pollution	Study of algae as an indicator of organic pollution	2	16
Exams, practical performance, oral questions, and writing reports	Practical experiment	Air pollutants	Measuring the concentration of some air pollutants	2	17
Exams, practical performance, oral questions, and writing reports	Practical experiment	Dust pollution	Examining and estimating the percentage of dust in the air in terms of plant pollution	2	18
Exams, practical performance, oral questions, and writing reports	Practical experiment	Soil contamination with chemical pesticides	The effect of soil contamination with chemical pesticides on seed germination	2	19
Exams, practical performance, oral questions, and writing reports	Practical experiment	Water Pollution	Measurement of polluted and unpolluted water samples	2	20
Exams, practical performance, oral questions, and writing reports	Practical experiment	Fish biology	The effect of pesticides on fish biology	2	21
Exams, practical performance, oral questions, and writing reports	Practical experiment	Fish biology	The effect of heavy metals on fish biology	2	22
Exams, practical performance, oral questions, and writing reports	lecture	Renewable energy	Introduction, characteristics and advantages of renewable energy	2	23
Exams, practical performance, oral questions, and writing reports	lecture	solar energy	Working principle and uses of solar energy	2	24
Exams, practical performance, oral questions, and writing reports	lecture	Wind Energy	Working principle and uses of solar energy	2	25
Exams, practical performance, oral questions, and writing reports	lecture	Water energy	The working principle and uses of water energy	2	26
Exams, practical performance, oral questions, and writing reports	lecture	Water energy	The working principle and uses of water energy	2	27
Exams, practical performance, oral questions, and writing reports	lecture	Biomass energy	Working principle and uses of biomass energy	2	28

11. Course Evaluation

The final grade is 100 out of 100 divided as:

40 GD for annual rate + 60 GD for final exam

the annual rate divided as

-18 GD for the monthly exam + 4 GD for short exams and essays+ 5 GD for a class attendance

-13 GD for practical as (8 GD for the monthly exam + 2 GD for student participation + 3 GD for class attendance)

12. Learning and Teaching Resources

البيئة والتلوث العملي	Required textbooks (curricular books, if any)
<i>Practical Ecology</i>	Main references (sources)
<i>Practical Ecology</i> <i>Ecology Laboratory Manual</i>	Recommended books and references (scientific journals, reports...)
Google scholar https://jes.journals.ekb.eg/?lang=ar https://journals.asmarya.edu.ly/jmset/index.php/JMSET	Electronic References, Websites

Course Description Form

1. Course Name:	
Comparative anatomy of practical chordates	
2. Course Code:	
3. Semester / Year:	
2025-2024	
4. Description Preparation Date:	
1-9-2025	
5. Available Attendance Forms	
: Compulsory	
6. Number of Credit Hours (Total) / Number of Units (Total)	
2 practical	
7. Course administrator's name (mention all, if more than one name)	
Name: wisam abdan wawi Email: wisam.wawa@qu.edu.iq	
8. Course Objectives	
1- Describe the group of vertebrate animals, classify them, and clarify the evolutionary relationships between the group of vertebrate animals and the group of protochordates 2- Explaining the developmental stages of the notochord and its transformation into the column Vertebral bodies differ in different types of animals 3- Explaining the precise description of the body systems of chordate and vertebral animals 4- Study and compare body systems and organs between animal species Vertebral 5- Study and compare the external anatomy of the body of animal species Vertebral	Course Objectives
9. Teaching and Learning Strategies	
1- Explaining to the student the purpose and importance of studying the comparative anatomy of chordates 2- Explaining the comparative taxonomic foundations of vertebrate animals 3- The student's knowledge of the characteristics and evolutionary relationships between groups of vertebrate animals and groups	Strategy A- Knowledge and understanding

Protochordates 4- The student's definition of the similarities and differences in the body systems and organs of vertebrate animals 5- Explaining the stages of development from the notochord to the spine	
<i>1- Identify the evolutionary relationships of protochordates and vertebrate animals</i> <i>2- Knowing the basics of animal classification</i> <i>3- Identify the structural differences and similarities and the development occurring in the systems and organs of the body of vertebrate animals</i>	B- Subject-specific skills
<i>1- Induction and deduction</i> <i>2- Comparison and analysis</i> <i>3- Conclusion by conducting some anatomical experiments</i> <i>4- Calendar</i>	C- Thinking skills
<i>1- Using external sources for scientific and cultural enlightenment.</i> <i>2- Transferring the impact of learning to the emotional aspects of students</i> <i>3 - Cultivate self-confidence and self-esteem by finding appropriate solutions</i> <i>4 - Community spirit through discussions and explanation of the causes</i> <i>5- Realizing the importance of science and development in discovering treatment and the ability of the Almighty Creator to do so..</i> <i>6- Encouraging students on how to prepare and deliver lectures</i>	E- General and transferable skills (other skills related to employability and personal development).
<i>1- Lecture or discussion using modern devices such as data shows, video clips, and animated charts</i> <i>2- The practical part involves viewing ready-made slides of the aforementioned tissue or preparing temporary slides from pathological models or specimens and examining them using a dissecting microscope or an optical microscope.</i> <i>3- Divide the students into groups and discuss the lecture among the student groups</i> <i>4- Presenting the lecture in PowerPoint format using Datashow</i> <i>5- Display the lecture in the form of video clips</i> <i>6- Preparing and writing reports by students during the practical lecture after conducting laboratory experiments</i>	Teaching and learning method

10. Course Structure					
Evaluation method	Learning method	Unit or subject name	Required Learning Outcomes	Hours	Week
Exams (quiz) + reports	Discussion (student groups) + PowerPoint +chordates video	Comparative anatomy of chordates	Evolutionary relationships of vertebrates	8	1
			Introduction to chordates	8	2
			Characteristics of chordates	8	3
			General principles for the study of practical comparative anatomy in the laboratory	8	4
			Classification of chordates	8	5
			Prepare some samples for chordates	8	6
			Protochordates and their classification	8	7
			Comparative anatomy of protochordates	8	8
			Subphylum: Urochordata	8	9
			Subphylum : Hemichordata	8	10
			Subphylum : Cephalochordata	8	11
			External anatomy of Amphioxus	8	12
			Internal anatomy of Amphioxus	8	13
			External comparative anatomy of Class: cyclostomata <i>Petromyzon</i>	8	14
			Internal comparative anatomy of Class: cyclostomata <i>Petromyzon</i>	8	15
			External comparative anatomy of Class: Chondrichthyes (dogfish)	8	16
			Internal comparative anatomy of Class: Chondrichthyes (dogfish)	8	17
			External comparative anatomy of Class : Osteichthyes (<i>Barbus grypus</i>)	8	18
			Internal comparative anatomy of Class : Osteichthyes (<i>Barbus grypus</i>)	8	19
			External comparative anatomy of amphibians (frog)	8	20
			Internal comparative anatomy of amphibians (frog)	8	21
			External comparative anatomy of	8	22

			reptiles (lizards)		
			Internal comparative anatomy of reptiles (lizards)	8	23
			External comparative anatomy of birds (pigeons)	8	24
			External comparative anatomy of birds (pigeons)	8	25
			External comparative anatomy of the rabbit	8	26
			Internal comparative anatomy of the rabbit	8	27
			Comparative anatomy of the stages of development of the notochord into a spine	8	28

11. Course Evaluation

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

12. Learning and Teaching Resources

1-The practical guide to the anatomy of spearfish and fish, written by Dr. Jabbar Khattar, visitors, Magda Ismail Abdel Majeed 2- Basics of comparative anatomy of chordates, written by Dr. Shukri Habib Khalil Dr. Abdul Zahra Kazem Muhammad	Required textbooks (curricular books, if any)
1-The practical guide to the anatomy of spearfish and fish, written by Dr. Jabbar Khattar, visitors, Magda Ismail Abdel Majeed 2- Basics of comparative anatomy of chordates, written by Dr. Shukri Habib Khalil Dr. Abdul Zahra Kazem Muhammad	Main references (sources)
	Recommended books and references (scientific journals, reports...)
	Electronic References, Websites

Dr. Wisam Abdan Wawi



Course Description Form

1. Course Name:					
Practical Entomology					
2. Course Code:					
301					
3. Semester / Year:					
2025-2024 annual					
4. Description Preparation Date:					
1-9-2024					
5. Available Attendance Forms:					
mandatory					
6. Number of Credit Hours (Total) / Number of Units (Total)					
2 hours					
7. Course administrator's name (mention all, if more than one name)					
Name: Dr. Mohammed Saleh Mahdi Email: Mohammed.Mahdi@qu.edu.iq					
8. Course Objectives					
- Introducing entomology and its relationship to the rest of the ranks of the arthropod phylum, insect characteristics, body regions and appendages. - Introducing insect techniques in detail and explaining the characteristics of insects and the factors for success and spread. - Studying the body's appendages and their modifications in detail and studying them practically through slides and models, showing the body's systems and examining them microscopically through dissecting the models with the participation of students.			Course Objectives		
9. Teaching and Learning Strategies					
Reading of lecture and direct questions and correction					Strategy
10. Course Structure					
Evaluation	Learning	Unit or subject	Required	Hour	Wee

method	method	name	Learning Outcomes	s	k
Daily quick tests, questions, class activities, quarterly reports, and monthly exams	<i>Reading & Discussion</i>	<i>Insects and relationship with Arthropods</i>	<i>Having sufficient information To learn the characteristics of arthropods and their different types</i>	2	1
		Class of insects / insect success and its factors		2	2
		External factors of success		2	3
		Insect collecting places		2	4
		Insect technique/collection, killing		2	5
		Insect technique/mounting		2	6
		Insect technique/Storage		2	7
		Preparing microscopic slides of insects		2	8
		Insect appearance/general characteristics		2	9
		Body regions of the insect / 1. The head and its appendages		2	10
		Internal anatomy of the American cockroach		2	11
		<i>Digestive system</i>		2	12
		<i>Circulatory system</i>		2	13
		<i>Respiratory system</i>		2	14
		Reproductive excretory system	and	2	15
		Second: The antennae (tentacles) and their installation		2	16
		Types of antennae and their modifications		2	17
		2. The thorax and its appendages / First: the legs		2	18
		<i>Modification of legs in insects</i>		2	19

		Second: The wings / the venation system in the wings		2	20
		Wing mutations in insects		2	21
		Wing-flapping machines in insects		2	22
		3. Abdomen		2	23
		The abdomen in the American cockroach		2	24
		Abdominal attachments		2	25
		Types of head in insects		2	26
		First: Mutations of the mouthparts in complete stages		2	27
		= = = = = = =	=	2	28

11. Course Evaluation

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

Monthly exams out of 10 and quiz so class activities out of 3 // Quarterly quest out of 13 .

12. Learning and Teaching Resources

<i>Practical Entomology / Dr. Hussein Abbas Al-Ali & Nidhal Al-Sandooq 1985</i>	Required textbooks (curricular books, if any)
Orchard insects // Ayad Yosouf Alhaj Ismail 2010	Main references (sources)
<i>Not found</i>	Recommended books and references (scientific journals, reports...)
<i>Wikipedia</i>	Electronic References, Websites

Course Description Form

1. Course Name:	
Algal	
2. Course Code:	
302 Alg.1	
3. Semester / Year:	
2025 - 2024	
4. Description Preparation Date:	
1/10/2024	
5. Available Attendance Forms:	
<i>Is mandatory</i>	
6. Number of Credit Hours (Total) / Number of Units (Total)	
<i>4 hours per week (2 theoretical + 2 practical) / 30 units</i>	
7. Course administrator's name (mention all, if more than one name)	
<i>Name: Ali O. Shaawiat</i> <i>Email: Ali.Shaawiat@qu.edu.iq</i>	
8. Course Objectives	
- Introducing the student to the science of algae, their species, how their species reproduce and the most important phyla - Algal phyla, the characteristics of these phyla, their life cycles, and diagnosis - Identify some of its types, their different life cycles, and how they exist - Study examples and prepare slides for examination - Prepare the student scientifically to understand the similarities and differences between algae groups and some types of algae	Course Objectives
9. Teaching and Learning Strategies	
	Strategy
	A- Knowledge and understanding
the student knows algae	1
Compares the different phyla of algae	2
Knows multiple examples of each of the algal phyla (algae groups)	3
To learn how they live, reproduce and exist	4
To know their classification and distinguish their forms.	5
	B-Subject-specific skills

The student should be able to diagnose and distinguish between species of algae.	1
To distinguish, using slides and drawing, the types of algae	2
To explain the reasons for the livelihood, reproduction and existence of algae species	3
	C- Thinking skills
Comparison, classification and diagnosis of some species of algae	1
Conclusion on how some algae are used in important studies	2
Calendar	3
Induction and deduction	4
	E-General and transferable skills (other skills related to employability and personal development).
Using external sources for scientific and cultural enlightenment	1
Transferring the impact of learning to the emotional and collective aspects of students	2
Individual and group discovery	3
	Teaching and learning method
Discussion	1
The lecture is supported by a presentation using Data show	2
slides	3
Solve direct questions	4

10. Course Structure

Evaluation method	Learning method	Unit or subject name	Required Learning Outcomes	Hours	Week
Daily tests and monthly exams	Lecture, discussion, and slide show	Introduction to algae	The student knows an introduction to algae, its existence, its distribution, and its population	2	1
Daily tests and monthly exams	Lecture, discussion, and slide show	Introduction to algae	The student knows the basics of classification of algae	2	2
Daily tests and monthly exams	Lecture, discussion, and slide show	Introduction to algae	ntroduce the student to unicellular algae and multicellular algae and prokaryotic and eukaryotic algae	2	3
Daily tests and monthly exams	Lecture, discussion, and slide show	Division of blue-green algae	The student is knows to the Division of blue-green algae, the classification and methods of reproduction, and the morphological form of some of its species, so that he can distinguish algae from their shapes and compare	2	4

			in terms of the shape between some species of this Division		
Daily tests and monthly exams	Lecture, discussion, and slide show	Division of blue-green algae	The student is knows to the Division of blue-green algae, the classification and methods of reproduction, and the morphological form of some of its species, so that he can distinguish algae from their shapes and compare in terms of the shape between some species of this Division	2	5
Daily tests and monthly exams	Lecture, discussion, and slide show	Division of blue-green algae	The student is knows to the Division of blue-green algae, the classification and methods of reproduction, and the morphological form of some of its species, so that he can distinguish algae from their shapes and compare in terms of the shape between some species of this Division	2	6
Daily tests and monthly exams	Lecture, discussion, and slide show	Division of blue-green algae	The student is knows to the Division of blue-green algae, the classification and methods of reproduction, and the morphological form of some of its species, so that he can distinguish algae from their shapes and compare in terms of the shape between some species of this Division	2	7
Daily tests and monthly exams	Lecture, discussion, and slide show	Division of Chlorophyta	The student is knows to the Division of Chlorophyta algae, the classification and methods of reproduction, and the morphological form of some of its species, so that he can distinguish algae from their shapes and compare in terms of the shape between of some species of this Division	2	8
Daily tests and monthly exams	Lecture, discussion, and slide show	Division of Chlorophyta	The student is knows to the Division of Chlorophyta algae, the classification and methods of reproduction, and the morphological	2	9

			form of some of its species, so that he can distinguish algae from their shapes and compare in terms of the shape between of some species of this Division		
Daily tests and monthly exams	Lecture, discussion, and slide show	Division of Chlorophyta	The student is knows to the Division of Chlorophyta algae, the classification and methods of reproduction, and the morphological form of some of its species, so that he can distinguish algae from their shapes and compare in terms of the shape between of some species of this Division	2	10
Daily tests and monthly exams	Lecture, discussion, and slide show	Division of Chlorophyta	The student is knows to the Division of Chlorophyta algae, the classification and methods of reproduction, and the morphological form of some of its species, so that he can distinguish algae from their shapes and compare in terms of the shape between of some species of this Division	2	11
Daily tests and monthly exams	Lecture, discussion, and slide show	Division of Charophyta	The student is knows to the Division of Charophyta algae, the classification and methods of reproduction, and the morphological form of some of its species, so that he can distinguish algae from their shapes and compare in terms of the shape between of some species of this Division	2	12
Daily tests and monthly exams	Lecture, discussion, and slide show	Division of chrysophyta	The student is knows to the Division of chrysophyta algae, the classification and methods of reproduction, and the morphological form of some of its species, so that he can distinguish algae from their shapes and compare in terms of the shape between of some species of this Division	2	13
Daily tests and monthly exams	Lecture, discussion, and	Division of chrysophyta	The student is knows to the Division of	2	14

	slide show		chrysophyta algae, the classification and methods of reproduction, and the morphological form of some of its species, so that he can distinguish algae from their shapes and compare in terms of the shape between of some species of this Division		
Daily tests and monthly exams	Lecture, discussion, and slide show	Division of pyrophyta	The student is knows to the Division of pyrophyta algae, the classification and methods of reproduction, and the morphological form of some of its species, so that he can distinguish algae from their shapes and compare in terms of the shape between of some species of this Division	2	15
Daily tests and monthly exams	Lecture, discussion, and slide show	Division of Euglenophyta	The student is knows to the Division of Euglenophyta algae, the classification and methods of reproduction, and the morphological form of some of its species, so that he can distinguish algae from their shapes and compare in terms of the shape between of some species of this Division	2	16
Daily tests and monthly exams	Lecture, discussion, and slide show	Division of Rhodophyta	The student is knows to the Division of Rhodophyta algae, the classification and methods of reproduction, and the morphological form of some of its species, so that he can distinguish algae from their shapes and compare in terms of the shape between of some species of this Division	2	17
Daily tests and monthly exams	Lecture, discussion, and slide show	Division of Rhodophyta	The student is knows to the Division of Rhodophyta algae, the classification and methods of reproduction, and the morphological form of some of its species, so that he can distinguish algae from their shapes and compare in terms of the shape	2	18

			between of some species of this Division		
Daily tests and monthly exams	Lecture, discussion, and slide show	Division of pheaophyta	The student is knows to the Division of pheaophyta algae, the classification and methods of reproduction, and the morphological form of some of its species, so that he can distinguish algae from their shapes and compare in terms of the shape between of some species of this Division	2	19
Daily tests and monthly exams	Lecture, discussion, and slide show	Important of Bryophyta	The student knows an introduction to Bryophyta, its existence, its distribution, and its population	2	20
Daily tests and monthly exams	Lecture, discussion, and slide show	Important of Bryophyta	The student knows the basics of classification of Bryophyta	2	21
Daily tests and monthly exams	Lecture, discussion, and slide show	Important of Bryophyta	The student knows the basics of classification of Bryophyta	2	22
Daily tests and monthly exams	Lecture, discussion, and slide show	Class of Hepaticopsida	The student is knows to the Class of Hepaticopsida, the classification and methods of reproduction, and the morphological form of some of its species, so that he can distinguish it of their shapes and compare in terms of the shape between of some species of this Class	2	23
Daily tests and monthly exams	Lecture, discussion, and slide show	Class of Hepaticopsida	The student is knows to the Class of Hepaticopsida, the classification and methods of reproduction, and the morphological form of some of its species, so that he can distinguish it of their shapes and compare in terms of the shape between of some species of this Class	2	24
Daily tests and monthly exams	Lecture, discussion, and slide show	Class of Anthocerotopsida	The student is knows to the Class of Anthocerotopsida, the classification and methods of reproduction, and the morphological form of some of its	2	25

			species, so that he can distinguish it of their shapes and compare in terms of the shape between of some species of this Class		
Daily tests and monthly exams	Lecture, discussion, and slide show	Class of Anthocerotopsida	The student is knows to the Class of Anthocerotopsida, the classification and methods of reproduction, and the morphological form of some of its species, so that he can distinguish it of their shapes and compare in terms of the shape between of some species of this Class	2	26
Daily tests and monthly exams	Lecture, discussion, and slide show	Class of Bryopsida	The student is knows to the Class of Bryopsida, the classification and methods of reproduction, and the morphological form of some of its species, so that he can distinguish it of their shapes and compare in terms of the shape between of some species of this Class	2	27
Daily tests and monthly exams	Lecture, discussion, and slide show	Class of Bryopsida	The student is knows to the Class of Bryopsida, the classification and methods of reproduction, and the morphological form of some of its species, so that he can distinguish it of their shapes and compare in terms of the shape between of some species of this Class	2	28

11. Course Evaluation

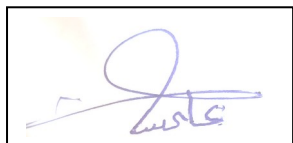
Grade distribution for the practical algae subject, with the pursuit being 13 (8 monthly + 2 activities + 3 attendance)

12. Learning and Teaching Resources

Ministerial decisions (vocabularies for the methodological book), the name of book: Practical algae 1990 Author's name: Bahram Khader Mouloud, Nidal Idris, Ibrahim Tawfiq	Required textbooks (curricular books, if any)
Book name: Practical Algae 2019 Author's name: Professor Ahmed Mohsen Athbi	Main references (sources)
Reports about algae, Lectures, seminars and field studies	Recommended books and references (scientific journals, reports...)
Website, slides and YouTube videos about algae	Electronic References, Websites

Name: Ali O. Shaawiat

the signature :

A handwritten signature in blue ink, enclosed in a black rectangular box. The signature is stylized, starting with a horizontal line, followed by a large loop, and ending with a horizontal line and a small flourish.

Course Description Form

1. Course Name:	
Fungi/practical	
2. Course Code:	
306 ف	
3. Semester / Year:	
2025-2024	
4. Description Preparation Date:	
2024-9-1	
5. Available Attendance Forms:	
Is mandatory	
6. Number of Credit Hours (Total) / Number of Units (Total)	
10 hours per week	
7. Course administrator's name (mention all, if more than one name)	
Name: Abeer Sami Kadhim Email: abeer.sami@qu.edu.iq Name: Marwa Rahi Abd alumni Email: edu-teacher19@qu.edu.iq	
8. Course Objectives	
1- Introducing students to practical mycology by learning about practical mycology 2- How to prepare the culture media through which the fungi are isolated by growing them on liquid and solid media 3- Identifying fungal colonies through tests through diagnosis using an optical microscope, in addition to an electron microscope if needed, in order to diagnose them	Course Objectives

accurately.

4- An important goal is also to identify the most important families and pathogenic fungal strains, such as:

The fungus ***Alternaria*** sp., ***penicillium*** sp. Detected in water, soil and air

9. Teaching and Learning Strategies

1- Knowledge and understanding

Knows practical mycology, and the student should know the factors affecting the growth of fungi, so that the student can prepare important cultural media for isolating and diagnosing fungi

The medical importance of fungi.

2- Subject-specific skills

Developing skills in preparing fungal dyes and Conducting tests to diagnose fungi and Sample collection methods.

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

Using external sources for scientific and cultural enlightenment and transferring the impact of learning to others Emotional aspects of students.

Strategy

10. Course Structure					
Evaluation method	Learning method	Unit or subject name	Required Learning Outcomes	Hours	Week
Exams	Discuss	Laboratory equipment and materials in the practical mycology laboratory	The student should know the form of devices and tools, how to use them, and the purpose of their use	2	1
Exams	Discuss	Isolation of fungi from different sources	The student should know the source he is using for the purpose of isolating fungi from it	2	2
Exams	Discuss	General appearance characteristics And microscopic fungi	The student learns about the appearance of the fungal colony on the plate and looks at the	2	3

			<i>fungi under the microscope to learn about their microscopic characteristics</i>		
<i>Exams</i>	<i>Discuss</i>	<i>Factors affecting growth Fungi</i>	<i>The student will be familiar with the environmental and laboratory factors that affect the growth of mushrooms in terms of positive or negative impact on growth</i>	<i>2</i>	<i>4</i>
<i>Exams</i>	<i>Discuss</i>	<i>Category For fungi (jelly fungi)</i>	<i>The student will know how to classify gelatinous</i>	<i>2</i>	<i>5</i>

			<i>fungi based on their phenotypic and microscopic characteristics</i>		
<i>Exams</i>	<i>Discuss</i>	<i>Category For fungi (true fungi)</i>	<i>The student will know how to classify true fungi based on their phenotypic and microscopic characteristics</i>	<i>2</i>	<i>6</i>
<i>Exams</i>	<i>Discuss</i>	<i>Classification of chytrid fungi</i>	<i>The student will know how to classify gelatinous fungi based on their phenotypic and microscopic characteristics</i>	<i>2</i>	<i>7</i>

<i>Exams</i>	<i>Discuss</i>	<i>Oomycetes</i>	<i>tics</i> <i>The student will know how to classify oomycetes fungi based on their phenotypic and microscopic characteristics</i>	<i>2</i>	<i>8</i>
<i>Exams</i>	<i>Discuss</i>	<i>Diseases caused by oomycetes</i>	<i>The student should know what the pathogen looks like and how to classify it</i>	<i>2</i>	<i>9</i>
<i>Exams</i>	<i>Discuss</i>	<i>zygotic fungi</i>	<i>The student will know how to classify pollinating fungi based on their</i>	<i>2</i>	<i>10</i>

<i>Exams</i>	<i>Discuss</i>	<i>zygotic fungi (continuation)</i>	<i>phenotypic and microscopic characteristics</i> <i>The student will know how to classify this group of fungi based on their phenotypic and microscopic characteristics</i>	<i>2</i>	<i>11</i>
<i>Exams</i>	<i>Discuss</i>	<i>Basidiomycetes</i>	<i>The student will know how to classify this group of fungi based on their phenotypic and microscopic characteristics</i>	<i>2</i>	<i>12</i>

<i>Exams</i>	<i>Discuss</i>	<i>Basidiomycetes (continuation)</i>	<i>The student will know how to classify this group of fungi based on their phenotypic and microscopic characteristics</i>	<i>2</i>	<i>13</i>
<i>Exams</i>	<i>Discuss</i>	<i>Imperfect fungi</i>	<i>The student will know how to classify this group of fungi based on their phenotypic and microscopic characteristics</i>	<i>2</i>	<i>14</i>
			<i>The student will know cyst fungi based on their</i>		

<i>Exams</i>	<i>Discuss</i>	<i>cyst fungi</i>	<i>phenotypic and microscopic characteristics</i>	<i>2</i>	<i>15</i>
<i>Exams</i>	<i>Discuss</i>	<i>Classification of cyst fungi</i>	<i>The student will know classify of cyst fungi based on their phenotypic and microscopic characteristics</i>	<i>2</i>	<i>16</i>
<i>Exams</i>	<i>Discuss</i>	<i>Classification of cyst fungi (continuation)</i>	<i>The student will know classify of cyst fungi based on their phenotypic and microscopic characteristics</i>	<i>2</i>	<i>17</i>
			<i>The student</i>		

<i>Exams</i>	<i>Discuss</i>	<i>Diseases caused by Pathway of cyst fungi</i>	<i>knows what the pathogen looks like and how to classify it based on its phenotypic and microscopic characteristics</i>	<i>2</i>	<i>18</i>
<i>Exams</i>	<i>Discuss</i>	<i>Practical experience (insulation direct to fungi from soil)</i>	<i>The student should know the nutrient medium for the isolation method, how to prepare it, and what fungi can be isolated in this way</i>	<i>2</i>	<i>19</i>
<i>Exams</i>	<i>Discuss</i>	<i>Indirect isolation of fungi from</i>	<i>The student should know the nutrient medium for the isolation method, how to</i>	<i>2</i>	<i>20</i>

		<i>soil (dilution method)</i>	<i>prepare it, and what fungi can be isolated in this way</i>		
<i>Exams</i>	<i>Discuss</i>	<i>Isolation of fungi from stool</i>	<i>The student should know the nutrient medium for the isolation method, how to prepare it, and what fungi can be isolated in this way</i>	<i>2</i>	<i>21</i>
<i>Exams</i>	<i>Discuss</i>	<i>Isolation of fungi from urine</i>	<i>The student should know the nutrient medium for the isolation method, how to prepare it, and what fungi can</i>	<i>2</i>	<i>22</i>

<i>Exams</i>	<i>Discuss</i>	<i>Isolating fungi from water In the direct way</i>	<i>be isolated in this way</i> <i>The student should know the nutrient medium for the isolation method, how to prepare it, and what fungi can be isolated in this way</i>	<i>2</i>	<i>23</i>
<i>Exams</i>	<i>Discuss</i>	<i>Isolating fungi from water In the indirect Way</i>	<i>The student should know the nutrient medium for the isolation method, how to prepare it, and what fungi can be isolated in this way</i>	<i>2</i>	<i>24</i>

<i>Exams</i>	<i>Discuss</i>	<i>Isolating fungi from air</i>	<i>The student should know the nutrient medium for the isolation method, how to prepare it, and what fungi can be isolated in this way</i>	<i>2</i>	<i>25</i>
<i>Exams</i>	<i>Discuss</i>	<i>Isolation of fungi from seed coats</i>	<i>The student should know the nutrient medium for the isolation method, how to prepare it, and what fungi can be isolated in this way</i>	<i>2</i>	<i>26</i>
			<i>The student should know the nutrient medium for the</i>		

<i>Exams</i>	<i>Discuss</i>	<i>Isolation of fungi from inside seed</i>	<i>isolation method, how to prepare it, and what fungi can be isolated in this way</i>	<i>2</i>	<i>27</i>
<i>Exams</i>	<i>Discuss</i>	<i>Isolation of fungi from surfaces Some fruits</i>	<i>The student should know the nutrient medium for the isolation method, how to prepare it, and what fungi can be isolated in this way</i>	<i>2</i>	<i>28</i>

11. Course Evaluation

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

The practical grade is 13 and is divided as follows: (10 monthly - activity 2 - attendance 1)

12. Learning and Teaching Resources

<i>Mycology / Abdul Aziz Majeed Nakhilan</i>	Required textbooks (curricular books, if any)
<i>Mycology / Abdul Aziz Majeed Nakhilan</i>	Main references (sources)
- <i>A Guide to the Study of Basic Medical Mycology</i> - <i>Manual of Medical Mycology</i>	Recommended books and references (scientific journals, reports...)
https://microbiologysociety.org/why-microbiology-matters/what-is-microbiology/fungi.html https://en.wikipedia.org/wiki/Fungus	Electronic References, Websites

Course Description Form

1. Course Name: <i>Practical genetics</i>	
2. Course Code:	
3. Semester / Year: <i>2025-2024</i>	
4. Description Preparation Date: <i>1/9/2024</i>	
5. Available Attendance Forms: <i>Mandatory</i>	
6. Number of Credit Hours (Total) / Number of Units (Total)	
<i>8 hours</i>	
7. Course administrator's name (mention all, if more than one name)	
<i>Name: Dr. Aseel Raheem Mardan</i> <i>Email: aseel.alaamiri@qu.edu.iq</i>	
8. Course Objectives	
1-Preparing the student to understand genetics and its development 2- Explaining the importance of studying genetics as well as understanding the differences between living organisms depending on the difference in genetic material 3- Study how to extract and isolate genetic material from some living organisms and study congenital malformations and chromosomal changes by conducting some experiments to study.	Course Objectives
9. Teaching and Learning Strategies	
	Strategy

10. Course Structure					
Evaluation method	Learning method	Unit or subject name	Required Learning Outcomes	Hours	Week
Daily testing	Discussion and questioning	Introduction to genetics	Definition of genetics, its branches, and its importance	4	1-2
Daily testing	Discussion and questioning	Introduction to genetics	Study of types of nucleic acids	4	3-4
Daily testing	Discussion and questioning	Nucleic acid extraction experiment	Identify the characteristics of genetic material	4	5-6
Daily testing	Discussion and questioning	Chromosomes and their types	Study of chromosomes	4	7-8
Daily testing	Discussion and questioning	Experience studying congenital malformations and chromosomal changes	Identify the causes of genetic diseases	4	9-10
Daily testing	Discussion and questioning	PCR technology	Study of polymerase chain reaction technology	4	11-12
Daily testing	Discussion and questioning	Cell division experiment	Identify the types of cell division	4	13-14
Daily testing	Discussion and questioning	Drosophila development experiment	Study of giant chromosomes	4	15-16
Daily testing	Discussion and questioning	Conducting genetic testing	Study of Mendel's laws	4	17-18
	Discussion and questioning	Conducting genetic testing	Mendelian exceptions	4	19-20
	Discussion and questioning	Conducting genetic testing	Multiple alleles	4	21-22
	Discussion and questioning	Conducting genetic testing	family tree	4	23-24
		Analyzing the lineage record and drawing a family tree	Study of population genetics	4	25-26
			Cytoplasmic genetics	4	27-28
11. Course Evaluation					
Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports etc					
12. Learning and Teaching Resources					

	Required textbooks (curricular books, if any)
<i>Practical genetics</i>	Main references (sources)
<i>Manual of practical exercises in genetics</i> Author name: Dr. Sumaya Mohammed Ahmed	Recommended books and references (scientific journals, reports...)
	Electronic References, Websites

Course Description Form

1. Course Name: Animal Physiology					
2. Course Code: 401 A P					
3. Semester / Year: Year 2025 - 2026					
4. Description Preparation Date: 1-9-2025					
5. Available Attendance Forms: Mandatory					
6. Number of Credit Hours (Total) / Number of Units (Total)					
4 (2 theoretical + 2 practical) / 6 Units					
7. Course administrator's name (mention all, if more than one name)					
Name: dr. Ahmed jassem		Email: <i>ahmed.jassem@qu.edu.iq</i>			
Name: dr. Jameel kareem		Email : <i>Jamel.wale@qu.edu.iq</i>			
8. Course Objectives					
1-The student knows the functions of cells, tissues, organs, and body systems. 2- Knowing the relationship of the organ's function to its structure 3- The relationship of function to various diseases, health, nutrition, and some pathological analyses					Course Objectives
9. Teaching and Learning Strategies					
Lecture or discussion, direct questions and assignments in the classroom, use of data shows, videos, drawings and models.					Strategy
10. Course Structure					
Evaluation method	Learning method	Unit or subject name	Required Learning Outcomes	Hours	Week
Monthly exams -homework - quizzes	Lecture -discussion	Physiology of the nervous system	Identify parts and function of the nervous system	2	1
Monthly exams -homework - quizzes	Lecture -discussion	Nerve cell	Knowing and understanding the components and types of the cell and how it performs its function	2	2
Monthly exams -homework - quizzes	Lecture -discussion	Autonomic nervous system	Identify the types of autonomic nervous system and their functions	2	3
Monthly exams -homework - quizzes	Lecture -discussion	Muscular system physiology	Identify the components of the device and muscle contraction	2	4
Monthly exams -homework - quizzes	Lecture -discussion	Sliding filament theory	Identify the mechanism of thread sliding	2	5
Monthly exams -homework - quizzes	Lecture -discussion	Heat production in the muscle	Knowing the types of heat produced by muscles	2	6
Monthly exams -homework - quizzes	Lecture -discussion	Physiology of the circulatory system	Know the components of the circulatory system	2	7
Monthly exams -homework - quizzes	Lecture -discussion	blood pressure	Identify what blood pressure is and the factors that affect it	2	8
Monthly exams -homework - quizzes	Lecture -discussion	Blood group – rhesus factor	Knowing blood types	2	9

Monthly exams -homework - quizzes	Lecture- discussion	Lymphatic system	Identify the components of the lymphatic system	2	10
Monthly exams -homework - quizzes	Lecture -discussion	Digestive system physiology	Identify the components of the digestive system	2	11
Monthly exams -homework - quizzes	Lecture -discussion	digestion	Identify how the digestion process Takes place	2	12
Monthly exams -homework - quizzes	Lecture -discussion	Absorption	Identify how nutrients are absorbed	2	13
Monthly exams -homework - quizzes	Lecture -discussion	Accessory glands	Identify the functions of the accessory glands	2	14
Monthly exams -homework - quizzes	Lecture -discussion	Respiratory system physiology	Identify the parts of the respiratory system and their functions	2	15
Monthly exams -homework - quizzes	Lecture -discussion	Transport of gases and their laws	Knowledge of the mechanism of transporting gases	2	16
Monthly exams -homework - quizzes	Lecture -discussion	Gas exchange	Knowledge how gases are exchanged between blood and tissues	2	17
Monthly exams -homework - quizzes	Lecture -discussion	For the kidneys and regulation of bodily fluids	Identify of kidney function and urine composition	2	18
Monthly exams -homework - quizzes	Lecture -discussion	Regulation movement of water and ions	Identify of the process of absorption, secretion and reabsorption	2	19
Monthly exams -homework - quizzes	Lecture -discussion	Metabolic disorders	Knowing metabolism and its relationship to breathing	2	20
Monthly exams -homework - quizzes	Lecture -discussion	Endocrine	Identify what glands are	2	21
Monthly exams -homework - quizzes	Lecture -discussion	Chemical classes of hormones	Knowing the basics of classification of glands, their different types, and the function of each	2	22
Monthly exams -homework - quizzes	Lecture -discussion	Female reproductive system	Knowledge of the components of the device and its hormones	2	23
Monthly exams -homework - quizzes	Lecture -discussion	Male reproductive system	Knowledge of the components of the device and its hormones	2	24

11.Course Evaluation

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

12.Learning and Teaching Resources

Animal Physiology written by Youssef Muhammad Arab	Required textbooks (curricular books, if any)
Physiology, written by Abdullah Shteivi	Main references (sources)
	Recommended books and references (scientific journals, reports...)
	Electronic References, Websites

Course Description Form

1. Course Name: plant physiology theorretic					
2. Course Code: 402 F N					
3. Semester / Year: 2025 - 2026					
4. Description Preparation Date: 1 / 9 / 2025					
5. Available Attendance Forms: compulsory					
6. Number of Credit Hours (Total) / Number of Units (Total)					
(4 theoretical hours + 2 practical hours) Number of units: 6					
7. Course administrator's name (mention all, if more than one name)					
Name: Dr. Dhafir Abdel Kadhim Jameel Email: dhafir.altaweel@qu.edu.iq					
8. Course Objectives					
1- The student's knowledge of what plant physiology is, its branches, and its relationship to other sciences 2- The student's knowledge of solutions, their types, and how to prepare them 3- The student's knowledge of how plants perform vital activities such as respiration and photosynthesis					
9. Teaching and Learning Strategies					
Lecture or discussion, direct questions, and assignments in the classroom and use Data shows, videos, drawings and models.					Strategy
10. Course Structure					
Evaluation method	Learning method	Unit or subject name	Required Learning Outcomes	Hours	Week
Lecture - discussion	monthly exams - meal daily questions	General introduction	Introduction to physiology the plant	2	1
Lecture - discussion	monthly exams - meal daily questions	Plant chemistry	Thermodynamics	2	2
Lecture - discussion	monthly exams - meal daily questions	Plant chemistry	Enthalpy of reaction	2	3
Lecture - discussion	monthly exams - meal daily questions	Anatomy of plant organs	plants parts	2	4
Lecture - discussion	monthly exams - meal	Food making jobs	Photosynthesis	2	5

	daily questions				
Lecture - discussion	monthly exams - meal	Food making jobs	Light interactions	2	6
Lecture - discussion	monthly exams - meal	Food making jobs	Light interactions	2	7
Lecture - discussion	monthly exams - meal	Food making jobs	Dark interactions	2	8
Lecture - discussion	monthly exams - meal	Cellular respiration	Glycolysis	2	9
Lecture - discussion	monthly exams - meal	Cellular respiration	Krebs cycle	2	10
Lecture - discussion	monthly exams - meal	Cellular respiration	Cyclophosphorylation and phosphorylation Non-circularity	2	11
Lecture - discussion	monthly exams - meal	Root functions	Transfer of water from soil to the plant	2	12
Lecture - discussion	monthly exams - meal	Root functions	Types of water transmission	2	13
Lecture - discussion	monthly exams - meal	Water properties	Water properties	2	14
Lecture - discussion	monthly exams - meal	Characteristics of plant tissues	The paths taken by water	2	15
Lecture - discussion	monthly exams - meal	Properties of wood texture	Rising sap	2	16
Lecture - discussion	monthly exams - meal	Properties of wood texture	Theories that explain The rise of water in wood	2	17
Lecture - discussion	monthly exams - meal	Characteristics of bark	Descending sap	2	18
Lecture - discussion	monthly exams - meal	Characteristics of bark	Theories that explain Transport of materials in the phloem	2	19
Lecture - discussion	monthly exams - meal	Stomata characteristics	Transpiration process	2	20
Lecture - discussion	monthly exams - meal	Stomata characteristics	Factors affecting transpiration	2	21
Lecture - discussion	monthly exams - meal	Plant hormones	Plant growth regulators	2	22
Lecture - discussion	monthly exams - meal	Plant chemistry	Plant enzymes		23
Lecture - discussion	monthly exams - meal	Plant chemistry	Classification of enzymes		24

11. Course Evaluation

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

12. Learning and Teaching Resources

<i>Plant physiology , three parts, author: Dr. Abdel Azim Kazem Muhammad</i>	Required textbooks (curricular books, if any)
<i>Basics of botany, author Dr. Abdel</i>	Main references (sources)

<i>Azim Kazem Muhammad</i>	
	Recommended books and references (scientific journals, reports...)
	Electronic References, Websites

Course Description Form

1. Course Name:					
Parasitology					
2. Course Code:					
404 P					
3. Semester / Year:					
2025-2026					
4. Description Preparation Date:					
1/9/2025					
5. Available Attendance Forms:					
Obligative					
6. Number of Credit Hours (Total) / Number of Units (Total)					
4 hours / 6 unites					
7. Course administrator's name (mention all, if more than one name)					
Name: Hadi M .Hamza Almayali Email:hadi.hamza@ qu.edu.iq					
8. Course Objectives					
Course Objectives					
9. Definition the Parasitology, kinds of parasitism, parasitesphyla , the most important of parasites, causative agentes, life cycle, diagnosis, identify the phases of their different life, how to diagnosis, study models of them, and prepare slides for practical examination.Teaching and Learning Strategies					
Lecture, discussion and direct questions.					Strategy
10. Course Structure					
Evaluation method	Learning method	Unit or subject name	Required Learning Outcomes	Hours	Week
Quize-and oral questions Reports Monthly exams	Lecture. Discussion. Short questions. Reports. Activities. Teaching aids. Monthly exams.	Having knowledge, skills, and experience for parasites ,diagnosis and treatment	Having knowled ge, skills and experienc e for parasites	2	1
Quize and oral	Lecture. Discussion.	Concept of parasitology, symbiosis,sccintific		2	2

questions Reports Monthly exams	Short questions. Reports. Activities. Teaching aids. Monthly exams.	naming			
Quiz and oral questions Reports Monthly exams	Lecture. Discussion. Short questions. Reports. Activities. Teaching aids. Monthly exams.	Effect factors on parasites .phases of parasites		2	3
		Protozoa phylum		2	4
Quiz and oral questions Reports Monthly exams	Lecture. Discussion. Short questions. Reports. Activities. Teaching aids. Monthly exams.	Sarcodina: -Entameoba -E histolytica . - E.coli class: -Endolimax nana- -Iodamoeba butschlii- -Dientamoeba fragilis -Entamoeba gingivalis		2	5
Quiz and oral questions Reports Monthly exams	Lecture. Discussion. Short questions. Reports. Activities. Teaching aids. Monthly exams.	Class: Mastigophora Giardia intestinalis- Trichomonas vaginalis T.tenax - T. hominisChiomastixmesni li		2	6
Quiz and oral questions Reports Monthly exams	Lecture. Discussion. Short questions. Reports. Activities. Teaching aids. Monthly exams.	LeishmaniatropicalaL.don ovani		2	7
Quiz and	Lecture.	Trypanosoma		2	8

oral questions Reports Monthly exams	Discussion. Short questions. Reports. Activities. Teaching aids. Monthly exams.	gambianse T. rhodesense T. cruzi.		
Quiz and oral questions Reports Monthly exams	Lecture. Discussion. Short questions. Reports. Activities. Teaching aids. Monthly exams.	Class: sporozoa Plasmodium vivax , P. ovale, P. falciparum, P. malarae	2	9
Quiz and oral questions Reports Monthly exams	Lecture. Discussion. Short questions. Reports. Activities. Teaching aids. Monthly exams.	Toxoplasma gondii	2	10
Quiz and oral questions Reports Monthly exams	Lecture. Discussion. Short questions. Reports. Activities. Teaching aids. Monthly exams.	Class: Ciliophora - Balantidium coli	2	11
		Phylum: platyhelminthes	2	12
Quiz and oral questions Reports Monthly exams	Lecture. Discussion. Short questions. Reports. Activities. Teaching aids. Monthly exams.	1- Class: Cestoda Pseudophyllidae Diphyllobothrium latum	2	13
Quiz and	Lecture.	Cyclophyllidae	2	14

oral questions Reports Monthly exams	Discussion. Short questions. Reports. Activities. Teaching aids. Monthly exams.	Taeniasaginata 2- T. solium 3- Echinococcusgranulosius 4- Dipylidiumcaninum			
Quiz and oral questions Reports Monthly exams	Lecture. Discussion. Short questions. Reports. Activities. Teaching aids. Monthly exams.	Hymenolepis sp.nanaHymenolepis - dimeniutaHymenolepis		2	15
Quiz and oral questions Reports Monthly exams	Lecture. Discussion. Short questions. Reports. Activities. Teaching aids. Monthly exams.	Class;Trematoda 1-Liver flukes 2-Fasciola hepatica 3-Clonorchis sinensis		2	16
Quiz and oral questions Reports Monthly exams	Lecture. Discussion. Short questions. Reports. Activities. Teaching aids. Monthly exams.	Intestinal flukes 1- Fasciolopsisbuski 2- Heterophyesheterophyes		2	17
Quiz and oral questions Reports Monthly exams	Lecture. Discussion. Short questions. Reports. Activities. Teaching aids. Monthly exams.	Blood flukesSchistosomatidae Scistosomahaematobium S.mansoni. Japanicum		2	18
Quiz and oral	Lecture. Discussion.	Lung flukesParagonimuswest		2	19

questions Reports Monthly exams		Short questions. Reports. Activities. Teaching aids. Monthly exams.	ermai			
Quiz and oral questions Reports Monthly exams		Lecture. Discussion. Short questions. Reports. Activities. Teaching aids. Monthly exams.	Phylum : Nematoda- Trichinella spiralis		2	20
Quiz and oral questions Reports Monthly exams		Lecture. Discussion. Short questions. Reports. Activities. Teaching aids. Monthly exams.	- Ascarislumbricoides - Enterobiusvermicularis		2	21
Quiz and oral questions Reports Monthly exams		Lecture. Discussion. Short questions. Reports. Activities. Teaching aids. Monthly exams.	- Trichuristrichura - Strongyloidesstercoralis		2	22
Quiz and oral questions Reports Monthly exams		Lecture. Discussion. Short questions. Reports. Activities. Teaching aids. Monthly exams.	- Ancylostomaduodenale - Necatoramaricane		2	23
Quiz and oral questions		Lecture. Discussion. Short	-Wuchereriabancrofti - Loa loa		2	24

Reports Monthly exams	questions. Reports. Activities. Teaching aids. Monthly exams.				
Quiz and oral questions Reports Monthly exams	Lecture. Discussion. Short questions. Reports. Activities. Teaching aids. Monthly exams.	-Mansonelaozardi -Dranculusmedinensis		2	25
		Phylum : Arthropda		2	26
Quiz and oral questions Reports Monthly exams	Lecture. Discussion. Short questions. Reports. Activities. Teaching aids. Monthly exams.	1 -Musca domestica - Stomoxyscalcitrans - Phlebotomuspapatasi- GlossinaSarchophagidae - Myiasis 2- Mosquitoes		2	27
Quiz and oral questions Reports Monthly exams	Lecture. Discussion. Short questions. Reports. Activities. Teaching aids. Monthly exams.	3- Lice Menopongallinae - Menacanthustramineus -Fleas - Pulexirritanus-- Ctenocephalides		2	28

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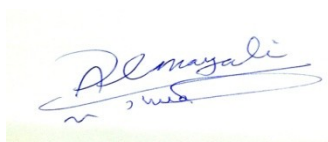
11. Course Evaluation

Distribution of the grade out of 100 according to the tasks assigned to the student, such as daily preparation, quizzes , monthly and written exams, and reports, as follows: Endeavor (40) + Final Exam (60)

monthly exam 18 + short exams and reports 4 + attendance 5 + practical 13 (8 monthly + 2 activities + 3 attendance)

12. Learning and Teaching Resources

General parasitology 1984, Ismael Alhadidi and Habash	Required textbooks (curricular books, if any)
Human parasitology Hadi M. Almayali , 2020	Main references (sources)
Parasitology , Ibrahim sh. And Bander m.	Recommended books and references (scientific journals, reports...)
Wekebedia, CDC	Electronic References, Websites



Prof. Dr. Hadi M. Almayali

Course Description Form

Evaluation method	Learning method	Unit or subject name	Evaluation method	Learning method	Unit or subject name	Required Learning Outcomes

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Course Description Form

1. Course Name:	
public health	
2. Course Code:	
3. Semester / Year:	
2025-2026	
4. Description Preparation Date:	
1-9-2025	
5. Available Attendance Forms:	
<i>Mandatory attendance</i>	
6. Number of Credit Hours (Total) / Number of Units (Total)	
<i>2 hours theoretical</i>	
7. Course administrator's name (mention all, if more than one name)	
<i>Name: rana salha jadar</i> <i>Email: rana .salh@qu.edu.iq</i>	
8. Course Objectives	
• Recognizing the importance of the health of community members ● Develop and apply knowledge that limits the spread of disease ● Building a healthy society free of epidemics • •	Course Objectives
9. Teaching and Learning Strategies	
The method of presenting lectures, discussions, and the method of interrogation by asking questions and answering them	Strategy

10. Course Structure					
Evaluation method	Learning method	Unit or subject name	Required Learning Outcomes	Hours	Week
Daily test	Lecture	Introduction	Public health	2	1
=		Unit one	Laboratory safety	2	2
=	=	Unit two	Pollution air and water	2	3
=	=	=	Nutrition		4
=	=	Pathology	Infectious diseases	2	5
==	Discussion	Pharmacology	Zoonotic diseases		6
=	and	=	Drugs	2	7
=	questioning	=	Antibiotic	2	8
=	g	Pathology	Anaesthesia	=	9
=		Immunity	Causes of diseases	=	10
=		=	Immunity	=	11
=		=	Prevention of diseases	=	12
=	Lecture	WHO	Immune diseases	=	13
=	=	Immunity	Malnutrition	=	14
=	=	=	Test of laboratory	=	15
=	=	Biotechnology	Sterilization	=	16
=	=	Immunity	Type of sterilization	=	17
=	Discussion	Pathology	Community health		18
=	and	Who	Health care		19
=	questioning	WHO	Vaccine		20
=		Public health	Type of vaccine		21
=		principles	Vitamin		22
=	=	=	Vitamin		23
=	=	=	Prevention of diseases		24
=	=	=	Entertainment means		25
=	=	=	Child care		26
=	=	=	Old care		27
=	=	=	Mineral		28
					29
					30

11. Course Evaluation

12.

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

13. Learning and Teaching Resources

	Required textbooks (curricular books, any)
Biology immunity WHO pathology	Main references (sources)

<i>Intrrnet</i>	Recommended books and references (scientific journals, reports...)
	Electronic References, Websites

Course Description Form

<i>1. Name of the course</i>	
Molecular biology	
<i>2. Course Code</i>	
<i>3. Semester/year</i>	
Annual 2025-2026	
<i>4. The date this description was prepared</i>	
1-9-2025	
<i>5. Available forms of attendance</i>	
<i>In-Person</i>	
<i>6. Number of study hours (total)/number of units (total)</i>	
<i>2 hr</i>	
<i>7. Name of the course administrator (if more than one name is mentioned)</i>	
<i>Name: Prof. Dr. Azhar Nouri Hussein</i> <i>Email: azhar.almousawi@qu.edu.iq</i>	
<i>8. Course objectives</i>	
1- Identification of the molecules that contribute mainly to the process of inheritance 2-The flow of genetic knowledge from one generation to the other and the status of the living organism 3- Narration in terms of hereditary physical and chemical material 4-What is the gene and its dissection	Objectives of the course :
1-The applicant is exposed to the synthesis and characterization of genetic material 2-The applicant is exposed to the principle and basis of genetic expression 3-The applicant shall be exposed to the basic requirements for the growth and development of all living organisms	<i>Knowledge and understanding</i>
1- The genetic material of DNA is characterized in primitive and true organisms of the nucleus . 2-Writing reports on genetic material in research format	<i>B. Skills Theme specific</i>
1. <i>Induction and Elicitation</i> 2. <i>Comparison and analysis</i>	<i>-Thinking Skills</i>

3-Conclusion through the facts of some phenomena					
4.Calendar					
1-The use of external sources in scientific and cultural enlightenment.				(e) General and transferred skills (other skills related to employability and personal development).	
2. Moving the impact of learning to the emotional aspects of students.					
1. TEACHING AND LEARNING STRATEGIES					
Course				Strategy	
2- Include teaching methods using educational technology (Data Show).					
3. Some photos and documentaries of some environmental phenomena in the form of a presentation					
2. 10. Course Structure					
Valuation Method	Learning method	Unit or Topic Name	Learning outcomes required for the program*	Hours	Week
Live Questions/Daily Quiz	Lecture / Discussion	Characteristics of the physical and chemical genetic material of the different forms of DNA	Distinguishing between forms of DNA	2	1
Live Questions/Daily Quiz	Lecture / Discussion	Nucleic acid hybridization by basal mating	Determining the genetic relationship of living organisms	2	2
Live Questions/Daily Quiz	Lecture / Discussion	DNA mobilization in eukaryotic cells	High Regulation of DNA Tribute	2	3
Live Questions/Daily Quiz	Lecture / Discussion	DNA mobilization in eukaryotic cells	High Regulation of DNA Tribute	2	4
Live Questions/Daily Quiz	Lecture / Discussion	Multiplication is a semi-conservative process in primitive and eukaryotic	Comparison of multiplication theories	2	5
Live Questions/Daily Quiz	Lecture / Discussion	Polymerase enzymes in prokaryotic and eukaryotic	comparing	2	6

		organisms.			
Live Questions/Daily Quiz	Lecture / Discussion	stencilx RNA	Reproduction Concepts and Importance	2	7
			Monthly Examination	2	8
Live Questions/Daily Quiz	Lecture / Discussion	Translation, ribosomal protein building and genetic code	Distinguishing the sizes of the organism's genetic material	2	9
Live Questions/Daily Quiz	Lecture / Discussion	Primary Stage Elongation Stage Completion Stage	Completion of the concept of gene expression	2	10
Live Questions/Daily Quiz	Lecture / Discussion	The genomic	Completion of the concept of gene expression	2	11
Live Questions/Daily Quiz	Lecture / Discussion	geno-	Completion of the concept of gene expression	2	12
Live Questions/Daily Quiz	Lecture / Discussion	Cloning enzymes	Completion of the concept of gene expression	2	13
Live Questions/Daily Quiz	Lecture / Discussion	Post-cloning mutations	Mutations Affecting Expression	2	14
Live Questions/Daily Quiz	Lecture / Discussion	d) Protein synthesis System	The extent of the impact of the boom	2	15
			/// UNTRANSLATED_CONTENT_START/// الامتحان الفصلي/// UNTRANSLATED_CONTENT_END///	2	16
Live Questions/Daily Quiz	Lecture / Discussion	Classification of genetic mutations	Mutations Affecting Expression	2	17
Live Questions/Daily Quiz	Lecture / Discussion	DNA Repair Systems	The extent of the impact of the boom	2	18
Live Questions/Daily Quiz	Lecture / Discussion	Repair systems in DNA in Prokaryotes	Expression-affecting mutation	2	19

Live Questions/Daily Quiz	Lecture / Discussion	Repair systems in DNA in Prokaryotes	Expression-affecting mutation	2	20
Live Questions/Daily Quiz	Lecture / Discussion	Factors affecting the occurrence of the mutation	The extent of the impact of the boom	2	21
			Monthly Examination	2	22
Live Questions/Daily Quiz	Lecture / Discussion	Coupling, metamorphosis and transfer by phage	Means of transferring genetic material between living organisms	2	23
Live Questions/Daily Quiz	Lecture / Discussion	Plasmids and Transposons	Extra-chromosomal genetic elements	2	24
Live Questions/Daily Quiz	Lecture / Discussion	Initial Steps of Genetic Engineering	Genetic engineering	2	25
Live Questions/Daily Quiz	Lecture / Discussion	PCR	Modern Genetic Techniques	2	26
Live Questions/Daily Quiz	Lecture / Discussion	Regulation of genes and their products	The relationship of genes to the surrounding environment	2	27
			/// UNTRANSLATED_CONTENT_START/// الامتحان الفصلي UNTRANSLATED_CONTENT_END///	2	28

3. Course Evaluation

Distribution of the score of 100 according to the tasks assigned to the student such as daily preparation, daily, oral, monthly and written examinations and reports etc.

4. Learning and Teaching Resources

<i>Methodical Writing</i> <i>/byandforand for Jay Zayati/</i> <i>Copyright © 2012 A.D.All Rights</i> <i>Reserved.</i>	Required textbooks (methodology if any)
	Key References (Sources)
1-Advanced Molecular Biology A Concise Reference To download the link: http://www.mediafire.com/.../Advanced+Molecular+Biology+A... 2-AnalyticalMolecular Biology To download the link: http://www.mediafire.com/.../Analytical_Molecular_Biology...	Recommended supporting books and references (scientific journals, reports...)
	E-References , Websites

Teacher's Name: Prof. Dr. Azhar Nouri Hussein

Signature:

Course Description Form

1. Course Name:					
Sustainable Development					
2. Course Code:					
3. Semester / Year:					
Yearly 2025 - 2026					
4. Description Preparation Date:					
1/9 /2025					
5. Available Attendance Forms:					
Mandatory					
6. Number of Credit Hours (Total) / Number of Units (Total)					
2 hours					
7. Course administrator's name (mention all, if more than one name)					
Name: : M.M. ayad Kazem Hassan Email: ayad.kazem@qu.ed.iq					
8. Course Objectives					
Make the student that: 1- Aware and applies the idea of investing natural and human resources to meet the requirements of the daily life of society without harming the right and requirements of life for future generations in the future. 2- The importance of rationalizing energy and water consumption. 3- Use clean and environmentally friendly energy.earth science.			Course Objectives		
9. Teaching and Learning Strategies					
1- Giving the lecture and explaining it in detail. 2- Discussion.					Strategy
10. Course Structure					
Evaluation method	Learning method	Unit or subject name	Required Learning Outcomes	Hours	Week
Preparation and attendees	Lecture + Discussion	General introduction to development	Explain and clarify a general introduction to	2	11

and muzzles & Reports And the exam is the month		The concept of development Stages of development Development theories Development Goals The importance of development Spheres of application Development Dimensions Development principles Human Resource Development Successful practices in human resource development The role of sustainable development in achieving goals and facing problems Total Quality Management Total Quality Management Objectives Principles of Total Quality Management The need for total quality Advantages of Total Quality Management Key Elements of Total Quality	sustainable development Explaining the concept of development, its characteristics and dimensions Determine the stages of development work Knowledge of sustainable development theories Setting sustainable development goals Know the importance of sustainable development Identify the areas of application of sustainable development Know the dimensions of sustainable development Defining the principles of sustainable development Explanation of human resources development Knowledge of successful practices in human resources development Knowing the role of sustainable development in achieving goals		
--	--	--	---	--	--

		Management Application of Total Quality Management Water Resources Development Wind Energy Development Solar Energy Development Fossil Fuel Energy The role of sustainable development in preserving the environment The role of sustainable development in biodiversity conservation The role of development in protecting global climate The role of sustainable development in protecting soils from desertification The role of sustainable development in agricultural reality and food security	and confronting problems Total quality management training Know the objectives of total quality management Defining the principles of total quality management Knowing the importance of the need for comprehensive quality Determine the features of total quality management Identify the main elements of total quality management Training on applying total quality management Know the importance of developing water resources Learn about wind energy development Learn about solar energy development Learn about fossil fuel energy Determine the role	
--	--	---	--	--

			<i>of sustainable development in preserving the environment</i> <i>Defining the role of sustainable development in preserving biodiversity</i> <i>Defining the role of development in protecting the global climate</i> <i>Determine the role of sustainable development in protecting soil from desertification</i> <i>Determine the role of sustainable development in agricultural reality and food security</i>		
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11. Course Evaluation

Grade distribution out of 100 = quest (40) + final exam (60)

Pursuit = (monthly exam 30 + short exams (cuzzes and reports) = (5) + attendance (5)) = 40

12. Learning and Teaching Resources

Dr.. Medhat Abu Al-Nasr and Dr. Yasmine Medhat Mohamed, Principles of Development Sustainability (its concept - dimensions - indicators), 2017

Required textbooks (curricular books, if any)

Nizar Aouni Al-Labadi, sustainable development and resource exploitation

Main references (sources)

Humanity and Renewable Energy, 1st edition, Dar Degla for Publishing and Distribution , 2015	
Dr.. Falah Jaber Marouf Al-Azzawi, sustainable development and planning Makani, 2016	Recommended books and references (scientific journals, reports...)
United Nations Development Programme https://www.undp.org > iraq > أهداف التنمية-المستدامة	Electronic References, Websites

نموذج وصف المقرر

1.	اسم المقرر	القياس والتقويم
2.	رمز المقرر	
3.	الفصل / السنة	العام الدراسي (2024 – 2025)
4.	تاريخ إعداد هذا الوصف	2024 / 1/9
5.	أشكال الحضور المتاحة / حضور للطلبة	
6.	عدد الساعات الدراسية (الكلية) / عدد الوحدات (الكلية) : 60 ساعة	
7.	اسم مسؤول المقرر الدراسي (إذا اكثر من اسم يذكر)	الاسم: مازن ثامر شنيف
	البريد الإلكتروني: mazin.shanef@qu.edu.iq	
8.	اهداف المقرر	
	اهداف المادة الدراسية	أولاً: الأهداف المعرفية
	التعرف على المفاهيم الأساسية في القياس والتقويم واغراضه وادواته وخصائصه	1. ان يعرف الطالب بأهمية القياس والتقويم في العملية التربوية.
	واهميته ووظائفه وانواعه وخطواته والطرق الإحصائية اللازمة لتحديد الخصائص وكيفية بناء الاختبارات التحصيلية وتطويرها في ضوء تحليل نتائجها	2. ان يعرف الطالب العلاقة بين مفاهيم القياس والتقويم
		3. ان يلم الطالب بأهمية الاختبارات التحصيلية في العملية التربوية.
		4. ان يفهم الطالب كيفية تحقيق الاهداف التربوية العامة .
		5. ان يطلع الطالب بشكل مفصل على أنواع الاختبارات التحريرية والشفوية والعملية
		6. ان يعرف الطالب كيفية فائدة تصميم جدول المواصفات .
		7. ان يعرف الطالب مواصفات الاختبارات الجيدة (الصدق / الثبات / الموضوعية / الشمولية / سهولة التطبيق)
		8. ان يلم الطالب بالخصائص السايكومترية للاختبارات التحصيلية

9- ان يستنتج الطالب اهمية الاسئلة المقالية. 10- ان يحلل الطالب انواع الاسئلة الموضوعية. 11- ان يدرك الطالب العلاقة بين القياس والتقويم 12- ان يبدي الطالب رأيه عن دور في ادوات القياس الاختبارية. ثانيا // الأهداف المهارية الخاصة بالمقرر. 1 -ان يرسم الطالب مخططا مبينا اهم انواع التقويم 2- ان يصمم الطالب أنواع الاختبارات التحصيلية 3- ان يصمم الطالب مصورا على السبورة موضحا فيه مكونات الخريطة الاختبارية ثالثا // الأهداف الوجدانية 1- ان يقدر الطالب أهمية اراء علماء القياس والتقويم في قياس بعض مخرجات العملية التربوية 2- ان يرغب الطالب بالتعرف على احدث تصنيفات عملية التقويم 3- ان يتحمس الطالب على أدوات التقويم الحديثة	
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9. استراتيجيات التعليم والتعلم

الاستراتيجية	المحاضرة واللقاء والمناقشة والاستجواب.
أ- المعرفة والفهم	1- يحدد مفاهيم المصطلحات الأساسية التالية: القياس، التقويم، التحصيل، الاختبار 2- يحدد مجالات التقويم التربوي [وعناصر كل منها] المعلم، الطالب، المنهاج، المدرسة. 3- تحديد فوائد أغراض التقويم التربوي لكل من الطالب، المعلم، الأسرة، الإدارة التربوية أو المدرسية 4- معرفة أدوات التقويم المدرسية [الاختبارات، الاستبانة، الملاحظة 5- بيان علاقة الاختبارات التحصيلية بالأهداف التربوية
طرائق التعليم والتعلم	- استخدام المناقشة والاستجواب - استخدام التقنيات العلمية الحديثة - المذكرة الجماعية لأشراك جميع الطلبة في النشاط الصفّي. - تدريبات صفية للمشاركة في إيجاد الحلول المناسبة لبعض جوانب التقويم.
طرائق التقييم	• الاعتماد على الواجب العلمي والذي يهدف إلى تجميع المفاهيم النظرية للموضوع وإمكانية تطبيقها في الصف. • حلقات نقاشية حول مشكلات التقويم

	• تدريبات ميدانية تربوية. • امتحانات دورية.	
ب-المهارات الخاصة بالموضوع	• بناء جدول المواصفات (الخارطة الاختبارية) • بناء فقرات اختبار تحصيلي. • ممارسة التقويم الصفّي (المقابلة ، الملاحظة).	
ج- مهارات التفكير	- مهارات التفكير الناقد - مهارات التفكير الإبداعي - عمليات العلم الأساسية والمتكاملة	
طريقة التعليم والتعلم	• استخدام المناقشة والحوار . • المذكرة الجماعية لأشراك جميع الطلبة في النشاط الصفّي. • تدريبات صفية للمشاركة في أيجاد الحلول المناسبة لبعض جوانب التقويم.	
طرائق التقييم	• الاعتماد على الواجب التعليمي والذي يهدف إلى تجميع المفاهيم النظرية للموضوع وإمكانية تطبيقها في الصف. • حلقات نقاشية حول مشكلات التقويم • تدريبات ميدانية تربوية. • امتحانات دورية.	
د- المهارات العامة والمنقولة (المهارات الأخرى المتعلقة بقبالية التوظيف والتطور الشخصي).	1- مهارة ادارة الصف وضبطه 2- مهارة الاستماع 3- مهارة طرح الأسئلة وانتظار الإجابات 4- مهارة التقويم 5- مهارة ربط المادة بالواقع المعاش الامثلة التعزيزية من الحياة اليومية.	
طريقة التعليم والتعلم	• استخدام المناقشة والحوار . • المذكرة الجماعية لأشراك جميع الطلبة في النشاط الصفّي. • تدريبات صفية للمشاركة في أيجاد الحلول المناسبة لبعض جوانب التقويم.	
طرائق التقييم	• الاعتماد على الواجب التعليمي والذي يهدف إلى تجميع المفاهيم النظرية للموضوع وإمكانية تطبيقها في الصف. • حلقات نقاشية حول مشكلات التقويم • تدريبات ميدانية تربوية. • امتحانات دورية.	

10. بنية المقرر

الأسبوع	الساعات	مخرجات التعلم المطلوبة	اسم الوحدة او الموضوع	طريقة التعلم	طريقة التقييم
الاول	2	تقديم معلومات عامة عن مادة القياس مفاهيم أساسية في القياس والتقويم، متضمنة نبذة تاريخية ومفاهيم التقويم (القياس ، العد ، التقدير ، الاختبار والقياس والتقويم وأهميتها في التقويم ، التقويم)	المحاضرة والمناقشة والاستجواب	الاختبارات التحصيلية /التحريرية والشفهية	

			العملية التعليمية		
الثاني	2	التعريف بعملية القياس وتقديم أنواع القياس المباشر وغير المباشر ومستويات القياس	إعدادا نقيس تعريف - القياس ،أنواع القياس/مستويات القياس	=	=
الثالث	2	التعرف على خصائص القياس النفسي والتربوي	خصائص القياس النفسي والتربوي (الاستمرارية / التعاونية / التكاملية)	=	=
الرابع	2	الالمام بأهمية القياس والتقويم	أهمية القياس والتقويم بالنسبة (المعلم / المتعلم / المدير/ صانع القرار/ أولياء الأمور)	=	=
الخامس	2	العلاقة بين مفاهيم عملية القياس والتقويم	علاقة القياس بالتقويم والاختبار ووظائف الاختبار	=	=
السادس	2	تصنيف أنواع التقويم	أنواع التقويم ،بناء الاختبارات التحصيلية	=	=
السابع	2	امتحان فصلي	امتحان فصلي	امتحان تحريري	
الثامن	2	تصنيف الاختبارات التحصيلية	أنواع الاختبارات التحصيلية : المقالية / أولا	=	=
التاسع	2	التعرف على أنواع الاختبارات الموضوعية	ثانيا / الاختبارات الموضوعية (التكميل / الصواب والخطأ / الاختيار من متعدد / المزوجة / الترتيب	=	=
العاشر	2	خطوات اعداد الاختبار التحصيلي	التخطيط للاختبار التحصيلي (تحديد المادة / كتابة الأهداف / تصميم جدول المواصفات)	=	=
الحادي عشر	2	شروط تطبيق الاختبار	شروط تطبيق الاختبار	=	=
الثاني عشر	2	التعرف الى طرق استخراج خصائص فقرات الاختبار التحصيلي	استخراج الخصائص الاحصائية لفقرات الاختبارات التحصيلية(صعوبة وسهولة الفقرات/ تمييز فقرات الاختبار التحصيلي تقدير فاعلية البدائل الخاطئة /	=	=
الثالث عشر	2	أدوات التقويم للاختبارية	الوسائل للاختبارية (المقابلة / الملاحظة)	=	=
الرابع عشر	2	مقاييس التقدير / الشطب/أدوات التقدير	مقاييس التقدير وقوائم التقدير مصادر الخطأ في التقدير	=	=
الخامس عشر	2	شروط الاختبار الجيد	شروط الاختبار الجيد أولا : الصدق (مفهومه / بعض انواعه / العوامل المؤثرة فيه)	=	=
السادس عشر	2	=	ثانيا/ الثبات (مفهومه ،كيفية استخراج صورته المختلفة مثل الطريقة المتكافئة وإعادة الاختبار والتجزئة النصفية	=	=
السابع عشر	2	=	العوامل المؤثرة في الثبات والعلاقة بين مفهومي الصدق والثبات	=	=
الثامن عشر	2	=	ثالثا : الموضوعية رابعا / الشمولية خامسا / سهولة التطبيق	=	=
التاسع عشر	2	كيفية اجراء التجربة الاستطلاعية والاساسية	التجربة الاستطلاعية والاساسية	تطبيق عملي	تطبيق عملي

العشرون	2	التعلم الوجداني	تقويم التعلم الوجداني قياس الاتجاهات	=	=
الواحد والعشرون	2	الاختبارات العملية	اختبارات الأداء / أنواعها / كيفية تقويمها	=	=
الثاني والعشرون	2	مقارنة بين نظرية القياس	نظرية القياس التقليدية ونظرية القياس الحديثة (نظرة مقارنة)	=	=
الثالث والعشرون	2	اتجاهات حديثة في التقويم التربوي	العوامل المؤثرة في الاتجاهات الحديثة في التقويم التربوي	=	=
الرابع والعشرون	2	=	التقويم البديل	=	=
الخامس والعشرون	2	=	بنوك الأسئلة	=	=
السادس والعشرون	2	=	:التقويم متعدد القياسات	=	=
السابع والعشرون	2	=	حقائب التقويم	=	=
الثامن والعشرون	2	=	السجل القصصي والبطاقة المدرسية	=	=
التاسع والعشرون	2	=	الاختبارات الالكترونية(مفهوما / وظائفها/ مزاياها / عيوبها)	=	=
الثلاثون	2	=	نماذج مختارة عن الاختبارات classroom الالكترونية(منصة Google	=	=

11.تقييم المقرر

توزيع الدرجة من 100 على وفق المهام المكلف بها الطالب مثل التحضير اليومي والامتحانات اليومية والشفوية والشهرية والتحريرية والتقارير الخ

12.مصادر التعلم والتدريس

الكتب المقررة المطلوبة (المنهجية أن وجدت 1-الامام ،مصطفى وآخرون (1990): التقويم والقياس

المراجع الرئيسة (المصادر)

- 1-ثورندايك وهيجن(1986): القياس والتقويم
- 2-ملحم، سامي(2006) : القياس والتقويم في التربية وعلم النفس
- 3- الظاهر، زكريا وآخرون(2002) مبادئ القياس والتقويم في التربية، دار العلمية الدولية للنشر والتوزيع،
- 4-علام، صلاح الدين محمود (1999) القياس والتقويم التربوي والنفسي أساسيته وتطبيقاته وتوجهاته المعاصرة، دار الفكر العربي القاهرة

الكتب والمراجع الساندة التي يوصى بها (المجلات العلمية، التقارير....)
المجلات العلمية والدوريات والبحوث والدراسات في

مجال الاختصاص.	
مواقع الاتصال المختلفة (الكوكل واليوتيوب) ...الخ	المراجع الإلكترونية ، مواقع الانترنت

اسم التدريسي: د.مازن ثامر شنيف

التوقيع:

Course Description Form

1. Course Name:					
English language					
2. Course Code:					
410					
3. Semester / Year:					
First / 2025-2026					
4. Description Preparation Date:					
2025-9-1					
5. Available Attendance Forms:					
Full Time – Daily					
6. Number of Credit Hours (Total) / Number of Units (Total)					
7. Course administrator's name (mention all, if more than one name)					
Name: Asst.lect. Nourah Ali Hussain.					
Email:					
8. Course Objectives					
-Help the students to communicate with English and developed Their linguistic proficiency -Make the students able to read and write In English Make the students to pronounce the English words Correctly			Course Objectives In		
9. Teaching and Learning Strategies					
					Strategy
10. Course Structure					
Evaluation method	Learning method	Unit or subject name	Required Learning Outcomes	Hours	Week
Daily and month exams	Lectures and tutorials	Unit1 -the tenses system Simple, continuous, Perfect,	English		1-2

		<i>-Active and passive</i> <i>-spoken English</i>			
		<i>Unite 2</i> <i>- Present perfect</i> <i>-simple and continuous</i>			<i>3-4</i>
		<i>Unite 3</i> <i>-narrative tenses</i> <i>- past simple, past Continuous, past perfect</i>			<i>5-6</i>
		<i>Unite 4</i> <i>- question and negative</i> <i>-who gave you that</i> <i>-who with?</i> <i>-The question how come?</i>			<i>7-8</i>
		<i>Unite 5</i> <i>- Future form</i> <i>-Will, going to, shall</i>			<i>9-10</i>
		<i>Unite 6</i> <i>- Expressions of quantity</i> <i>-a few, a little, plenty of, Hardily any</i>			<i>11-12</i>
		<i>Unite 7</i> <i>- Modals and related verbs</i> <i>-declarative questions</i> <i>-questions expressions</i> <i>Surprise</i>			<i>13-14</i>
		<i>Mid-term Exam</i>			

					15-16
		<i>Unite 8</i> - Relative clauses - participles Adding comment with which			17-18
		<i>Unite 9</i> - Expressing habit - be used to doing - intensifying compounds			19-20
		<i>Unite 10</i> - Modal auxiliary verbs ² - expressions with modal			21-22
		<i>Unite 11</i> - hypothesizing I wish I know the answer I'd rather they hadn't Come - expressions with if			23-24
		<i>Unite 12</i> Articles a/an, the, one, zero articles - Determiners - each, every, no, none, both, either			25-26
		<i>Unite 13</i> - Narrative writing - linking words and expressions Review			27-28
					29-30

11. Course Evaluation

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

12. Learning and Teaching Resources

<i>Upper -Intermediate Book: Headway plus by Liz and Soars</i>	Required textbooks (curricular books, if any)
	Main references (sources)
	Recommended books and references (scientific journals, reports...)
	Electronic References, Websites

Course Description Form

1. Course Name:	
Practical microbiology	
2. Course Code:	
404 M B	
3. Semester / Year:	
2025/2024	
4. Description Preparation Date:	
mandatory	
5. Available Attendance Forms:	
4 hours (2 hours theoretical + 2 hours practical)	
6. Number of Credit Hours (Total) / Number of Units (Total)	
7. Course administrator's name (mention all, if more than one name)	
Name: Dr. Barakat Abdul Razzaq Email: Barakat.abdulrazzaq@qu.edu.iq Name: Dr. Mithal Kareem Email: mithal.al-hassani@qu.edu.iq	
8. Course Objectives	
+Given the great importance that microorganisms pose to the life of humans, animals, and plants alike, it was necessary to identify these microorganisms through their effects on the life of living organisms present on the surface of the Earth. * Studies of their direct and indirect effects through pathogens, where some of them had a satisfactory effect and others had a beneficial (positive) effect. * It became necessary to know their characteristics, general characteristics, and way of living, which facilitates the process of diagnosing these organisms, so that it is possible to distinguish between the dependent groups, whether they are Bacteria, fungi, viruses, or algae, as well as identifying the diseases caused by these organisms, how to isolate them, and methods of diagnosing them. *The student must be able to isolate and diagnose microorganisms. *To distinguish bacterial species using slides and drawings. * To be able to perform diagnostic tests. - The student should be able to isolate and diagnose microorganisms. - To distinguish bacterial species using slides and drawings.	Course Objectives <i>A- Knowledge understanding and</i> <i>B-Skills related to the topic</i>

- To be able to perform diagnostic tests. -The student should be able to develop personal skills in the bacterial culture and isolation process - The student used more than one method for isolation and diagnosis and compared the results between the methods used -The accuracy and observation that the student must possess in order to develop in his field of laboratory work. - Using external sources. - Transferring the impact of learning to the emotional and collective aspects of students. - Individual and group discovery.	<i>C- Thinking skills</i> <i>E- General and transferable skills (other skills related to employability and personal development).</i>
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9. Teaching and Learning Strategies

* The student gets to know the nature of these organisms and how isolate and diagnose these organisms. * The student should understand the positive and negative role of these microorganisms through their pathogens and benefits. * The student will recognize the type of organisms that are positive or negative for the Gram stain through the mechanism of staining these organisms. * The student will be familiar with the methods of distinguishing between these microscopic organisms.	Strategy
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10. Course Structure

Evaluation method	Learning method	Unit or subject name	Required Learning Outcomes	Hours	Week
oral questions	discussion, Conducting experiments and videos	Electron.microscopes lecture	How to use microscopes according to the type of microbiology and the components of the microscope	2	the first
discussion		adopted microbiology	for To write the classification that	2X2	the second
COZ		sterilization	To learn about sterilization devices and how to use them	2	the third
prepare report		Definition of the tools used		2	the fourth

Attendance and participation		in agricultural media and how to use them in practice	Definition of the tools used in agricultural media and how to use them in practice		Fifth VI Seventh VIII Ninth The tenth eleventh Chorus2 week (1) the second the third the fourth Fifth VI
		agricultural media.	To know the methods of cultivation and the use of some types of media in the process of bacterial cultivation and cultivation of microorganisms in		

11. Course Evaluation

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

12. Learning and Teaching Resources

	Required textbooks (curricular books, if any)
Manual Perkins	Main references (sources)
	Recommended books and references (scientific journals, reports...)
Google Scholar Hub - website for Clivert and Scoops magazines	Electronic References, Websites

Instructor name: Dr. Mithal kareem

Instructor name: Dr. Barakat Abdul Razzaq :

Course Description Form

1. Course Name:	
Practical parasitology	
2. Course Code:	
403	
3. Semester / Year:	
2025-2024 quarterly	
4. Description Preparation Date:	
1-9-2024	
5. Available Attendance Forms:	
Mandatory	
6. Number of Credit Hours (Total) / Number of Units (Total)	
4 hours (2 theoretical+ 2 practical)	
7. Course administrator's name (mention all, if more than one name)	
Name: Lubna Abdel Qader Khanyab Asifa.Matrood al-maeahi Email: lubna.abdalqader@qu.edu.iq Email: Asifa.almaeahi@qu.edu.iq	
8. Course Objectives	
● The student gets to know the parasite ● The student should compare the phenomenon of parasitism and symbiosis ● Mention the characteristics of each section	Course Objectives
9. Teaching and Learning Strategies	
Note Comparison Selection The student should notice the differences between parasites To compare pathogenic species To distinguish between the virulence factors of each parasite Use observation to distinguish between worms Using classification, determine what the main divisions have in common Using analogy to compare the lengths of worms Developing team spirit using cooperative education Enhancing self-confidence through discussion and dialogue	Strategy

Developing the spirit of criticism and self-criticism through self-evaluation					
10. Course Structure					
Evaluation method	Learning method	Unit or subject name	Required Learning Outcomes	Hours	Week
daily exams and asking questions	discussion and lecture,	Laboratory safety	<i>Understand procedures Laboratory safety</i>	2	1
daily exams and asking questions	discussion and lecture,	Microscopic examination methods	<i>Learn about methods Microscopic examination</i>	2	2
daily exams and asking questions	discussion and lecture,	parasitism and types of relationships	<i>compare parasitism And competition</i>	2	3
daily exams and asking questions	discussion and lecture,	Protozoa	<i>Enumerates the types Protozoa</i>	2	4
daily exams and asking questions	discussion and lecture,	Protozoa	<i>compare between Types of protozoa</i>	2	5
daily exams and asking questions	discussion and lecture,	sarcomodina	<i>compare sarcomodina And mastigophora</i>	2	6
daily exams and asking questions	discussion and lecture,	ciliata	<i>Drawing ciliates</i>	2	7
daily exams and asking questions	discussion and lecture,	ciliata	<i>Enumerates the ways of transmission of infection In ciliata</i>	2	8
daily exams and asking questions	discussion and lecture,	sporozoa	<i>Knows sporozoa</i>	2	9
daily exams and asking questions	discussion and lecture,	movement In protozoa	<i>Compares the means of movement In protozoa</i>	2	10
daily exams and asking questions	discussion and lecture,	platyhelminths	<i>Number of adjective</i>	2	11

and asking questions	lecture,		Division of platyhelminths		
daily exams and asking questions	discussion and lecture,	platyhelminths	Compare the tapeworms And flukes	2	12
daily exams and asking questions	discussion and lecture,	cestoda	Draw a life cycle Echinococcus	2	13
daily exams and asking questions	discussion and lecture,	cestoda	Illustrate with a life cycle diagram Fish tapeworm	2	14
daily exams and asking questions	discussion and lecture,	cestoda	Illustrate this with a life cycle diagram Tainia saginata	2	15
daily exams and asking questions	discussion and lecture,	Types of tapeworms	explain the differences with the tainia saginata Pig tapeworm	2	16
daily exams and asking questions	discussion and lecture,	Types of tapeworms	know about tapeworms	2	17
, daily exams and asking questions	discussion and lecture,	trematoda	enumerate characteristics of flukes	2	18
, daily exams and asking questions	discussion and lecture,	Types of trematoda	Draw the life cycle Sheep liver worm	2	19
, daily exams and asking questions	discussion and lecture,	Types of trematoda	Draw a life cycle diagram Chinese worm	2	20
daily exams and asking questions	discussion and lecture,	schistosoma	Number of intermediate types in schistosomiasis	2	21
daily exams and asking questions	discussion and lecture,	Schistosoma.sp	Number of types of schistosomiasis	2	22
daily exams and asking questions	discussion and lecture,	nematoda	Known as nematodes	2	23

and asking questions	lecture,				
daily exam and questions	discussion and asking lecture,	nematoda	Compare worms Plathelminthis and nematoda	2 and	24
daily exam and questions	discussion and asking lecture,	phasmida	Understands what phasmida	2	25
daily exam and questions	discussion and asking lecture,	Aphasmida	Compares the class of phasmida and Aphasmida	2	26
daily exam and questions	discussion and asking lecture,	Ascaris.sp	Understands the differences between pinworms and ascaris	2	27
daily exam and questions	discussion and asking lecture,	Enterobius.vermicularis	Explain with a diagram the methods of transmission of infection in nematodes	2	28

11. Course Evaluation

Distribution of the grade out of 100 according to the tasks assigned to the student, (13) grades

The monthly written exam is 8 marks, the daily exam is 2 marks, and attendance is 3 marks....

12. Learning and Teaching Resources

Parasitology	Required textbooks (curricular books, if any)
Medical parasitology	Main references (sources)
Basics of human parasitology	Recommended books and references (scientific journals, reports...)
<i>w.w.w parasite life.com ,Asturi</i>	Electronic References, Websites

Asifa.Matrood al-maeahi

Lubna Abdel Qader Khanyab

Course Description Form

1. Course Name: Animal Physiology (Practical)					
2. Course Code:					
3. Semester / Year:2025-2024					
4. Description Preparation Date:1-9-2024					
5. Available Attendance Forms: Obligate attendance					
6. Number of Credit Hours (Total) / Number of Units (Total) 4h (2 theoretic +2 Laboratory)					
7. Course administrator's name (mention all, if more than one name)					
Name: A.L. Mohammed Abdul Ameer Haraj Email: mohammed.abdulameer@qu.edu.iq					
L.D . Ali Abdulameer Mathloom Email: edu-teacher16@qu.edu.iq					
8. Course Objectives					
Teach students the practical side of body systems functions and its' relation with different body diseases and the rate of it's relation with the public health and nutrition and some pathological analyses.			Course Objectives		
9. Teaching and Learning Strategies					
- Teach the practical side of the blood - Compare among the different organ's functions practically. - Teach some principles of practical physiology. - Teach some of the blood tests practically. - Teach the mechanism of how the body systems do their functions.					Strategy
10. Course Structure					
Evaluation	Learning	Unit or subject	Required	Hour	Wee

method	method	name	Learning Outcomes	s	k
<i>Exam Practical Performance and extra activity</i>	<i>Discussion</i>	<i>Laboratory Safety guidelines and conditions</i>	<i>Teach students the Labs guidelines and All safety conditions.</i>	<i>2</i>	<i>1</i>
		<i>Electric microscope</i>	<i>Teach students the Importance of Microscope and its' Components and Uses .</i>	<i>2</i>	<i>2</i>
		<i>Blood Components</i>	<i>Teach students the Classification of Blood as a tissue and Its' components and Functions of each Component.</i>	<i>2</i>	<i>3</i>
		<i>Plasma and serum</i>	<i>Recognizing the Difference between Plasma and serum And how to isolate Them form blood Cells.</i>	<i>2</i>	<i>4</i>
		<i>RBCs count test</i>	<i>Teach students the RBCs count test and Its' functions and the Test importance</i>	<i>2</i>	<i>5</i>
		<i>WBCs count test</i>	<i>Teach students the WBCs count test and Its' functions and the Test importance</i>	<i>2</i>	<i>6</i>
		<i>Differential count of WBCs</i>	<i>Recognizing the WBCs types and the Shape and function Of each type.</i>	<i>2</i>	<i>7</i>
		<i>Blood Pigments</i>	<i>Recognizing the Blood proteins like Hemoglobin and Other pigments.</i>	<i>2</i>	<i>8</i>
		<i>Estimation of HB in blood</i>	<i>Teach students the Importance of Hemoglobin and how To estimate it in Blood and its' importance</i>	<i>2</i>	<i>9</i>
		<i>Sahli's system</i>	<i>Teach students the Components and Method of Sahli's system</i>	<i>2</i>	<i>10</i>
		<i>PCV Test</i>	<i>Teach students how To measure the Rate of blood cells To the rate of Plasma And the medical</i>	<i>2</i>	<i>11</i>

			<i>Importance of this Test.</i>		
		<i>Types of centrifuges</i>	<i>Teach students the Types of centrifuges And the uses of each type</i>	<i>2</i>	<i>12</i>
		<i>ESR test</i>	<i>Teach students the Importance of ESR Test in diagnosis of Some inflammatory Diseases.</i>	<i>2</i>	<i>13</i>
		<i>Blood viscosity</i>	<i>Teach students the Importance of blood Viscosity and how It is affected by blood Proteins and its' Concentrations in Blood during Inflammation</i>	<i>2</i>	<i>14</i>
		<i>Blood groups</i>	<i>Teach students how To recognize blood Groups through the Test and what is the Rh factor.</i>	<i>2</i>	<i>15</i>
		<i>Blood transportation</i>	<i>Teach students the Importance of blood Transportation and What are the blood Types that allowed In this process.</i>	<i>2</i>	<i>16</i>
		<i>Clot time test</i>	<i>Teach students the Physiology of blood Clotting and its' Importance before Surgeries and Diagnose of some Blood diseases.</i>	<i>2</i>	<i>17</i>
		<i>Bleeding time test</i>	<i>Teach students the Importance of Bleeding time before Surgeries and the Efficiency of blood Platelets .</i>	<i>2</i>	<i>18</i>
		<i>Blood smear test</i>	<i>Teach students how To prepare the BST And its' importance In recognize the Shapes of blood Cells and if there are Parasites in the blood</i>	<i>2</i>	<i>19</i>
		<i>Digestion physiology1</i>	<i>Teach students the Organs of the</i>	<i>2</i>	<i>20</i>

			<i>Digestive system And functions of each Organ and the Physiology of Digestion</i>		
		<i>Digestion physiology2</i>	<i>Teach students the Organs of the Digestive system And functions of each Organ and the Physiology of Digestion</i>	2	21
		<i>Digestion physiology3</i>	<i>Teach students the Organs of the Digestive system And functions of each Organ and the Physiology of Digestion</i>	2	22
		<i>Nervoussystem physiology</i>	<i>Teach students the Organs of nervous System and the Physiology of Conducting the nerve Pulse</i>	2	23
		<i>Nervoussystem physiology</i>	<i>Teach students the Organs of nervous System and the Physiology of Conducting the nerve Pulse</i>	2	24
		<i>Respiration Physiology1</i>	<i>Teach students the Organs of respiratory System and functions Of each organ and Physiology of exchange in lungs.</i>	2	25
		<i>Respiration Physiology2</i>	<i>Teach students the Organs of respiratory System and functions Of each organ and Physiology of exchange in lungs.</i>	2	26

11. Course Evaluation

Distributing the score out of 100 = 40 Yearly average + 60 Final Exam.

Yearly Average = (multi quiz = 18 + reports = 4 + attendance = 5 + practical = 13) = 40.

Practical = (monthly exam =8 + student activity = 2 + attendance = 3) = 13

12. Learning and Teaching Resources

<i>Practical Physiology: Dr.Jabbar Abbas, Dr. Shallal Hussein</i>	Required textbooks (curricular books, any)
<i>Animal Physiology :Dr. Youssef Mohammed Arab</i>	Main references (sources)
	Recommended books and references

	(scientific journals, reports...)
	Electronic References, Websites

Course Description Form

1. Course Name: <i>Plant physiology - practical</i>	
2. Course Code: <i>Plant physiology - practical</i>	
3. Semester / Year: <i>Semester/2025-2024</i>	
4. Description Preparation Date:	
5. Available Attendance Forms: <i>Compulsory</i>	
6. Number of Credit Hours (Total) / Number of Units (Total) <i>4 hours (2 theoretical + 2 practical)</i>	
7. Course administrator's name (mention all, if more than one name)	
<i>Name:</i> Assistant Lecturer : Safa Iyad Jassim Zainab Latif Khudair <i>Email:</i> Safa.ayad@qu.edu.iq zainab.latif@qu.edu.iq	
8. Course Objectives	
- The main goal of studying practical plant physiology is for the purpose of discovering the processes that take place during a plant's life, their importance, and studying the conditions affecting them. - He does not limit himself to studying the phenomena of plant life on a descriptive basis only, but also goes beyond knowing the causes and finding analyzes for them. - When the nature of physiological processes, their importance and their impact on the plant is known, it becomes easier to control them and thus easier to control the plant's growth. Course Objectives	
9. Teaching and Learning Strategies	
<i>1-The student should know the science of plant physiology, its importance and its branches</i>	Strategy

2-The student should know how the plant performs its various functions
 3-The student should know how plants respond to external conditions and influences
 -4 The student performs practical experiments on plant functions, which helps the student to raise the required scientific level

10. Course Structure

Evaluation method	Learning method	Unit or subject name	Required Learning Outcomes	Hours	Week
test	lecture	definition of plant physiology Its importance	Introduction to plant physiology	2	1
report	lecture experiment	types of solutions	Solutions	2	2
test	lecture	How to calculate and prepare different types of solutions	Solutions	2	3
test	lecture	How to calculate the relationship between molarity and percentage solutions	Solutions	2	4
report	lecture experiment	Importance and components of buffer solutions for plants	Buffer solutions	2	5
report	lecture experiment	pH and its effect on plants - How to measure pH,	pH scale	2	6
test	lecture	components and importance of the cell membrane in plants	Cell membranes	2	7
test	lecture	importance of diffusion in plants	diffusion	2	8
report	lecture experiment	Types of membranes according to their permeability - Factors affecting permeability	Permeability	2	9
report	lecture experiment	Definition of osmosis Osmosis in plant cells The osmotic system	Osmosis	2	10
report	lecture experiment	Definition of imbibition	Imbibition	2	11

test	lecture	Guttation Transpiration - Types of transpiration - Benefits of transpiration - Methods of measuring transpiration	Water loss in plants	2	12
test	lecture	Definition of plant nutrition Nutrients Dividing nutrients according to their quantity within the plant	Plant Nutrition	2	13
test	lecture	The importance of macroelements and the symptoms of their deficiency in plants	Macroelements	2	14
test	lecture	The importance of microelements and symptoms of their deficiency in plants	Microelements	2	15
test	lecture	Photosynthesis Stages of photosynthesis Photosynthetic pigments	Definition of the construction process Optical	2	16
report	lecture and experiment	Methods of measuring photosynthesis And the factors affecting it	Learn about measurement methods Photosynthesis	2	17
report	lecture and experiment	Estimating the content of papers from Tinctures Extraction of chlorophyll AB And kidney by immersion method	Identify the content of the papers Of dyes	2	18
test	lecture	- Breathing Methods of measuring speed Breathing Respiratory factor	Definition of the breathing process the plant	2	19
test	lecture	Cellular respiration Benefits of cellular respiration Stages of cellular respiration	Definition of cellular respiration And its importance	2	20

test	lecture	Enzymes and their functions Factors affecting activity Enzyme	Definition of enzymes and their importance	2	21
test	lecture	Hydrolysis enzymes Oxidative enzymes Transport enzymes	Naming enzymes and their divisions	2	22
test	lecture	Growth and unfolding Oxygen and its distribution in... the plant	Definition of growth and unfolding	2	23
report	lecture and experiment	Trends An experiment on terrestrial tropism And supreme sovereignty	Definition of tropisms	2	24
test	lecture	Gibberellins and their effects Physiological	Definition of gibberellins and their importance	2	25
test	lecture	Cytokinins and their effects Physiological	Definition of cytokinins	2	26

12. Course Evaluation

- Short daily exams (coz)	2
- Monthly examination and reporting	8
- the audience	3

11.

14. Learning and Teaching Resources

Practical plant physiology for students in agricultural colleges Dr. Muwaffaq Mazban Musalat Dr. Hammoud Gharbi Khalifa	Required textbooks (curricular books, any)
Plant physiology Dr. Muhammad Hamid Idris	Main references (sources)
	Recommended books and references (scientific journals, reports...)
	Electronic References, Websites

13.

if

Course administrator's name:

Assistant Lecturer : Safa Iyad Jassim

Zainab Latif Khudair

Signature