Academic Program Description

University Name: University Of Anbar

Faculty/Institute: Education College for Women

Scientific Department: ... Department of Biology

Academic or Professional Program Name: .... Bachelor of Biology

Final Certificate Name: Bachelor of Biology

Academic System: ... Semester

Description Preparation Date: 31-3-2024

File Completion Date: 31-3-2024

Signature:

Head of Department Name:
Dr. Nedhal Ibrahim Lateff

Date: 31/3/2024

Signature:

Scientific Associate Name:
Firas Fadhel Ali

Date: 31/3/2024

The file is checked by:

Department of Quality Assurance and University Performance

Director of the Quality Assurance and University Performance Department:

Date:

Signature:

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

Approval of the Dean

أ.د. نصرة أحميد جدوع
العميد

Academic Program Description

1. Program Vision

Program vision is written here as stated in the university's catalogue and website:

The Education College for Women seeks to prepare graduates in the field of education to work in government institutions and benefit from specialization in the scientific and applied field.

2. Program Mission

Program Mission is written here as stated in the university's catalogue and website:

Working to prepare leading scientific and leadership competencies in the field of education and to develop the balance of knowledge in the field of scientific research in various disciplines in order to serve the local, regional and international community, as well as training the minds of female students and refining them scientifically and cognitively, and emphasizing social and cultural values and responding to the requirements of the local market through the following: -

1- Community service: by consolidating relations with state institutions that benefit from the scientific specializations of our department by providing applied research and holding scientific seminars and workshops inside and outside the department.

2- Scientific research: Scientific research is active in the department through the participation of faculty members and students of primary and postgraduate studies in conducting research in various specializations and publishing the research output to contribute to the development of society in the scientific fields and raise the global classification of our college in particular and our university in general.

3- The educational process: Providing a good educational and pedagogical environment for students, supporting and supporting them in their field of study, arming them with science and knowledge, raising their intellectual level and scientific abilities, and assuming responsibility.

3. Program Objectives

General statements describing what the program or institution intends to achieve.

1- Preparing graduates with high theoretical and practical skills in the field of life sciences for the purpose of keeping pace with scientific development in the

service of society
2- Providing graduates with applied and practical scientific skills and using modern methods in teaching
3- Preparing female graduates with a high level of competence in the life sciences specialty for the purpose of meeting the needs of society and contributing to preparing a distinguished generation

4. Program Accreditation

Does the program have program Accreditation? And from which agency?

Nothing

5. Other external influences

Is there sponsor for the program? **Nothing**

6. Program Structure

Program Structure	Number of Courses	Credit hours	Percentage	Reviews*
Institution Requirements	59	154	38.3%	
College Requirements	7	14		
Department Requirements	43	118		Optional one
Summer Training				
Other				

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

7. Program Description

Year/Level	Course Code	Course Name	Credit Hours	
			theoretical	practical
2023-2024/first	EWb3103	Basics of zoology	٢	٢
2023-2024/first	EWb3101	Cell biology 1	٢	٢
2023-2024/first	EWb3105	Analytical chemistry	٢	٢
2023-2024/first	Ewb 1102	Arabic Language	٢	٠

2023-2024/first	EWb3106	Earth science	٢	٠
2023-2024/first	Ewb1101	Human rights and democracy	٢	٠
2023-2024/first	Ewb 2101	Educational psychology	٢	٠
2023-2024/first	EWb3104	Basics of botany	٢	٢
2023-2024/first	EWb3102	Cell biology 2	٢	٢
2023-2024/first	EWb3107	organic chemistry	٢	٢
2023-2024/first	EWb1104	English	٢	٠
2023-2024/first	EWb2103	Computers	٢	٢
2023-2024/first	EWb	Biological security and safety	١	٠
2023-2024/first	EWb2102	Foundations of education	٢	٠
2023-2024/second	EWb3201	Invertebrates 1	٢	٢
2023-2024/second	EWb3205	Histology	٢	٢
2023-2024/second	EWb3203	Comparative plant anatomy	٢	٢
2023-2024/second	EWb3204	Algae science	٢	٢
2023-2024/second	EWb2201	Scientific research method	٢	٠
2023-2024/second	EWb	English	٢	٠
2023-2024/second	EWb	Crimes of the defunct Baath Party	٢	٠
2023-2024/second	EWb2202	Developmental psychology	٢	٠
2023-2024/second	EWb3202	Invertebrates 2	٢	٢
2023-2024/second	EWB3209	Embryology	٢	٢
2023-2024/second	EWB3207	Biochemistry	٢	٢
2023-2024/second	EWB32O6	Archicons	٢	٢
2023-2024/second	EWB3208	Life statistics	٢	٢
2023-2024/second	EWb2203	educational administration	٢	٠
2023-2024/ third	EWB3302	General insects	٢	٢
2023-2024/ third	EWB3301	Chordates and comparative anatomy	٢	٢
2023-2024/ third	EWB3303	Genetics 1	٢	٢
2023-2024/ third	EWB3305	Microbiology	٢	٢
2023-2024/ third	EWB3306	Plant morphology	٢	٢

2023-2024/ third	**EWB3307**	**Microscopic preparations**	١	٢
2023-2024/ third	**EWB2301**	**Counseling and mental health**	٢	٠
2023-2024/ third	**EWB3308**	**Applied insects**	٢	٢
2023-2024/ third	**EWB3309**	Fungi	٢	٢
2023-2024/ third	**EWB3310**	Plant classification	٢	٢
2023-2024/ third	**EWB3311**	Biotechnology	٢	٢
2023-2024/ third	**WEB3312**	Animal physiology	٢	٢
2023-2024/ third	**EWB3304**	**Genetics 2**	٢	٢
2023-2024/ third		**English**	٢	٠
2023-2024/ third	**EWB2302**	**Teaching methods**	**2**	**0**
2023-2024/4th	**EWB3401**	**Parasites 1**	٢	٢
2023-2024/4th	**EWB3403**	**Applied bacteriology**	٢	٢
2023-2024/4th	**EWB3408**	**Ecology**	٢	٢
2023-2024/4th	**EWB3405**	**Plant physiology**	٢	٢
2023-2024/4th	**EWB3406**	**Molecular biology**	٢	٢
2023-2024/4th	**EWB3407**	**Cellular metabolism**	٢	٢
2023-2024/4th	**EWB2401**	**School applications**	٠	٤
2023-2024/4th	**EWB3402**	**Parasites 2**	٢	٢
2023-2024/4th	**EWB3408**	**Environmental pollution**	٢	٢
2023-2024/4th	**EWB3409**	**Immunology**	٢	٢
2023-2024/4th	**EWB3410**	**Public Health**	٢	٠
2023-2024/4th	**EWB2402**	**Measurement and evaluation**	٢	٠
2023-2024/4th	**EWB3411**	**Optional**	٢	٠
2023-2024/4th		**English**	٢	٠

8. Expected learning outcomes of the program

Knowledge	
Learning outcomes 1 To possess broad, detailed, and accurate information about the medical, health, agricultural, food industries, and the environmental and natural systems. To have extensive knowledge of biological, genetic, and life concepts and laws in general. To be able to analyze, distinguish and accurately diagnose in vital laboratory fields	
Skills	
The ability to understand life sciences and apply them practically.	

- Dealing with crises and problems and developing solutions to them - Building scientific foundations in the life sciences specialty	
Ethics	
Developing students' abilities to share scientific and practical ideas and skills	

9. Teaching and Learning Strategies

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

1- Explaining the scientific material in detail.

2- Gaining the ability to benefit from the Internet in searching for some vocabulary that appears within the scientific material.

3-Use some educational videos, illustrations, and digital files instead of paper books.

10. Evaluation methods

Implemented at all stages of the program in general.

- Daily quizzes
- Miscellaneous duties
- Semester exams
- Questions and discussions

11. Faculty

Faculty Members

Academic Rank	Specialization		Special Requirements/Skills (if applicable)		Number of the teaching staff	
	General	Special			Staff	Lecturer
professor	Biology				2	
Assistant Professor	Biology				11	

Teacher	**Biology**				**10**	
assistant teacher	**Biology**				**17**	
Researcher	**Biology**				**2**	

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

12. Acceptance Criterion

(setting regulations related to enrollment in the college or institute, whether central admission or others)

The admission system in the department is (**central**, **parallel**, **evening**) admission.

13. The most important sources of information about the program

State briefly the source of information about the program.

14. Program Development Plan

Using new concepts in the field of life sciences and using electronic devices and the Internet for the purpose of developing and delivering scientific material to the student.

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
	EWb3103	Basics of zoology	Basic	/				/				/			
	EWb3101	Cell biology 1	Basic	/				/				/			
	EWb3105	Analytical chemistry	Basic	/				/				/			
	Ewb 1102	Arabic Language	Basic	/				/				/			
	EWb3106	Earth science	Basic	/				/				/			
	Ewb1101	Human rights and democracy	Basic	/				/				/			
	Ewb 2101	Educational psychology	Basic	/				/				/			
	EWb3104	Basics of botany	Basic	/				/				/			
	EWb3102	Cell biology 2	Basic	/				/				/			

	EWb3107	**Basic**	**organic chemistry**	**/**				**/**				**/**				
	EWb1104	**Basic**	**English**	**/**				**/**				**/**				
	EWb2103	**Basic**	**Calculators**	**/**				**/**				**/**				
		Basic	**Biosecurity and safety**	**/**				**/**				**/**				
	EWb2102	**Basic**	**Foundations of education**	**/**				**/**				**/**				
				/				**/**				**/**				
	EWb3201	**Basic**	**Invertebrates 1**	**/**				**/**				**/**				
	EWb3205	**Basic**	**Histology**	**/**				**/**				**/**				
	EWb3203	**Basic**	**Comparative plant anatomy**	**/**				**/**				**/**				
	EWb3204	**Basic**	**Algae science**	**/**				**/**				**/**				
	EWb2201	**Basic**	**Scientific research method**	**/**				**/**				**/**				

	EWb	**Basic**	**English**	**/**				**/**				**/**			
	EWb	**Basic**	**Crimes of the defunct Baath Party**	**/**				**/**				**/**			
	EWb2202	**Basic**	**Developmental psychology**	**/**				**/**				**/**			
	EWb3202	**Basic**	**Invertebrates 2**	**/**				**/**				**/**			
	EWB3209	**Basic**	**Embryology**	**/**				**/**				**/**			
	EWB3207	**Basic**	**Biochemistry**	**/**				**/**				**/**			
	EWB32O6	**Basic**	**Archicons**	**/**				**/**				**/**			
	EWB3208	**Basic**	**Life statistics**	**/**				**/**				**/**			
	EWb2203	**Basic**	**educational administration**	**/**				**/**				**/**			
	EWB3302	**Basic**	**General insects**	**/**				**/**				**/**			
	EWB3301	**Basic**	**Chordates and comparative anatomy**	**/**				**/**				**/**			

	EWB3303	**Basic**	**Genetics 1**	**/**				**/**				**/**			
	EWB3305	**Basic**	**Microbiology**	**/**				**/**				**/**			
	EWB3306	**Basic**	**Plant morphology**	**/**				**/**				**/**			
	EWB3307	**Basic**	**Microscopic preparations**	**/**				**/**				**/**			
	EWB2301	**Basic**	**Counseling and mental health**	**/**				**/**				**/**			
	EWB3308	**Basic**	**Applied insects**	**/**				**/**				**/**			
	EWB3309	**Basic**	**Fungi**	**/**				**/**				**/**			
	EWB3310	**Basic**	**Plant classification**	**/**				**/**				**/**			
	EWB3311	**Basic**	**Biotechnology**	**/**				**/**				**/**			
	WEB3312	**Basic**	**Animal physiology**	**/**				**/**				**/**			
	EWB3304	**Basic**	**Genetics 2**	**/**				**/**				**/**			
		Basic	**English**	**/**				**/**				**/**			
	EWB2302	**Basic**	**Teaching methods**	**/**				**/**				**/**			

	EWB3401	**Basic**	**Parasites 1**	**/**				**/**				**/**			
	EWB3403	**Basic**	**Applied bacteriology**	**/**				**/**				**/**			
	EWB3408	**Basic**	**Ecology**	**/**				**/**				**/**			
	EWB3405	**Basic**	**Plant physiology**	**/**				**/**				**/**			
	EWB3406	**Basic**	**Molecular biology**	**/**				**/**				**/**			
	EWB3407	**Basic**	**Cellular metabolism**	**/**				**/**				**/**			
	EWB2401	**Basic**	**School applications**	**/**				**/**				**/**			
		Basic	**Graduation research**	**/**				**/**				**/**			
	EWB3402	**Basic**	**Parasites 2**	**/**				**/**				**/**			
	EWB3408	**Basic**	**Environmental pollution**	**/**				**/**				**/**			
	EWB3409	**Basic**	**Immunology**	**/**				**/**				**/**			
	EWB3410	**Basic**	**Public Health**	**/**				**/**				**/**			

	EWB2402	**Basic**	**Measurement and evaluation**	/				/				/			
	EWB3411	**Optional**	**Pathogenic bacteria**	/				/				/			
		Basic	**English**	/				/				/			
		Basic	**School applications**	/				/				/			

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

Course Description

1. Course Name:
Zoology
2. Course Code:
EWb3103
3. Semester / Year:
Semester
4. Description Preparation Date:
31−3−2024
5. Available Attendance Forms:
weekly
6. Number of Credit Hours (Total) / Number of Units (Total)
2 theoretical hours + 2 practical hours = (4 hours) per week Number of units (3)
7. Course administrator's name (mention all, if more than one name)
Name: Shaimaa Mohe Dawd & Ateka Qahtan Qaddory Email: edw.sh-m-bio.2009@uoanbar.edu.iq ateka.kahtan@uoanbar.edu.iq
8. Course Objectives

Course Objectives	• Developing female students' knowledge about everything related to Zoology and its various branches • Introducing students to the systems found in the animal's body, what they consist of, and their importance • In addition to studying the types of animal cells and their components • Study different animal tissues, their locations and functions • Introducing students to the importance of animals and ways to classify them

9. Teaching and Learning Strategies

Strategy	1- Explanation and clarification, 2- Lecture method, 3- Student groups, 4- Practical lessons in the laboratory and scientific trips, 5- Brainstorming

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	4	Zoology - branches of zoology	Zoology	Explanation an presentation of slide model an	Theoretical tes Practical test Reports

				lecture	
2	**4**	Classificatio	Zoology	Explanation ar presentation of t slide model an lecture	Theoretical tes Practical test Reports
3	**4**	Structure of animal c	Zoology	Explanation ar presentation of t slide model an lecture	Theoretical tes Practical test Reports
4	**4**	**animal tissues**	Zoology	Explanation ar presentation of t slide model an lecture	Theoretical tes Practical test Reports
5	**4**	Embryonic developm in animalia	Zoology	Explanation ar presentation of t slide model an lecture	Theoretical tes Practical test Reports
6	**4**	Animal classificatio	Zoology	Explanation ar presentation of t slide model an lecture	Theoretical tes Practical test Reports
7	**4**	Integumentary syste	Zoology	Explanation ar presentation of t slide model an lecture	Theoretical tes Practical test Reports
8	**4**	Digestive system	Zoology	Explanation ar presentation of t slide model an lecture	Theoretical tes Practical test Reports
9	**4**	first month Exam	Zoology		Theoretical tes Practical test Reports
10	**4**	Respiratory system	Zoology	Explanation ar presentation of t slide model an lecture	Theoretical tes Practical test Reports
11	**4**	Genital (reproductiv system	Zoology	Explanation ar presentation of t slide model an lecture	Theoretical tes Practical test Reports
12	**4**	Circulatory system	Zoology	Explanat and presentat of the sli model a lecture	Theoretical tes Practical test Reports
13	**4**	Excretory Systems	Zoology	Explanation ar presentation of t slide model an lecture	Theoretical tes Practical test Reports

14	**4**	**Nervous system**	Zoology	Explanation an presentation of t slide model an lecture	Theoretical tes Practical test Reports
15	**4**	**second month Exar**	Zoology		Theoretical tes Practical test Reports

11. Course Evaluation

Distributing the score out if 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports,…etc.
Monthly exams 25 marks
Daily preparation, daily exams and reports 5 marks
Practical exam: 10 marks
Strive 40 degrees
Final exam (45 marks for theoretical exam + 15 marks for practical exam) = 60 marks

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Zoology Morad Baba Morad
Main references (source)	Zoology Morad Baba Morad Zoology Mohameed Esmail Mohameed
Recommended books and references (scientific journals, reports…)	Obscure Practical Zoology, Animal physiology
Electronic references, websites.	Use electronic references and websites

Course Description

1. Course Name:
Analytical chemistry
2. Course Code:
EWb3105
3. Semester / Year:
First course ٢٠٢٤/٢٠٢٣
4. Description Preparation Date:
2024/3/29
5. Available Attendance Forms:
weekly
6. Number of Credit Hours (Total) / Number of Units (Total)
3/ 4
7. Course administrator's name (mention all, if more than one name)
Name: Atheer obaid talak Email: atheer_obaid@uoanbar.edu.iq
8. Course Objectives

Course Objectives	• **Knowing the types of analys and the methods used for ea type and calculating the proportions of the analyzed materials** • **Knowledge of chemical equilibrium and its relationsl to chemical analysis** • **Knowing the types of precipitates and precipitates chemical analysis**

9. Teaching and Learning Strategies	
Strategy	The lecture is explained and clarified by presenting it to the students on the screen and re-clarifying it practicall after which the student is tested through daily exams.

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
First	4	Definition of analyt chemistry, its types and the tools used i the analysis proces	Analytical chemistry	A theoretical and practical lecture	Daily exams and daily assignments
Second	٤	Types of precipitate and precipitants, th quantity of obtainir them, and preparin these precipitants	=	=	=
Third	٤	Molarity, standard, normality, and methods for prepar liquid and solid compounds from it	=	=	=
Fourth	٤	How to calculate percentages in sediments	=	=	=
Fifth	٤	Characteristics of sediments and precipitates	=	=	=
Sixth	٤	Chemical equilibriu	=	=	=
Seventh	٤	Acids and bases	=	Practical and theoretical exam	=
Eighth	٢	First month exam	=		
Ninth	٤	Ionization of strong acids and strong ba	=	=	=
Tenth	٤	Ionization of weak bases and weak aci	=		
Eleventh	٤	Ionization of strong salts and weak salts	=	=	=
Twelveth	٤	Ionization of water	=	=	=
Thirteenth	٤	Structured solution	=	=	=
		Ionization of a buffe solution of a weak base	=	=	=

Fourteenth Fifteenth	٤ ٢	Second month exam	=	= Practica and theoretical exam	= =

11. Course Evaluation

The grade is distributed out of 100 according to the theoretical exams: 20 marks, the practical exams: 10 marks, the daily exams: 5 marks, and the daily assignments: 5 marks. The final exam is 60 marks, divided into 15 practical marks and 40 theoretical marks.

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	
Main references (source)	General analytical chemistry bo
Recommended books and references (scientific journals, reports…)	
Electronic references, websites.	

Course Description

1. Course Name:
organic chemistry
2. Course Code:
EWb3107
3. Semester / Year:
Second course ٢٠٢٤/٢٠٢٣
4. Description Preparation Date:
2024/3/29
5. Available Attendance Forms:
weekly
6. Number of Credit Hours (Total) / Number of Units (Total)
3/ 4
7. Course administrator's name (mention all, if more than one name)
Name: Atheer obaid talak Email: atheer_obaid@uoanbar.edu.iq
8. Course Objectives

Course Objectives	• **Knowing the types of organ compounds resulting from natural sources** • **Knowing the organic nomenclature of hydrocarbo compounds and their types** • **Know the difference betwee alkanes, alkenes, and alkyn**
9. Teaching and Learning Strategies	
Strategy	The lecture is explained and clarified by presenting it to the students on the screen and re-clarifying it practicall after which the student is tested through daily exams

10. Course Structure

Week	Hours	Required Learning	Unit or subject name	Learning method	Evaluation method

		Outcomes			
First	4	Definition of organ chemistry	organic chemistry	A theoretical and practical lecture	Daily exams and daily assignments
Second	٤	Old nomenclature fo hydrocarbon chains	=	=	=
Third	٤	Alkanes	=	=	=
Fourth	٤	Naming alka according to mod nomenclature	=	=	=
Fifth	٤				=
Sixth	٤	Hydrogenation halogenation reacti of alkanes	=	=	
Seventh	٤	Physical and chemical properties of alkanes	=	=	=
Eighth	٢	Sources and methods of preparing alkanes	=	=	=
Ninth	٤				
		First month exam	=	Practical and theoretical exam	=
Tenth	٤	Ring nomenclature	=		
Eleventh	٤	Naming alkenes		=	=
Twelveth	٤	Mechanics of alcohol withdrawal	=	=	=
Thirteenth	٤	Reduction reactions of alkenes	=	=	=
Fourteenth	٤		=	=	=
Fifteenth	٢	Alkenes preparation reactions	=	=	=
		Naming alkynes	=	Practica and theoretical exam	=
		Second month exam	=		

11. Course Evaluation

The grade is distributed out of 100 according to the theoretical exams: 20 marks, the practical exams: 10 marks, the daily exams: 5 marks, and the daily assignments: 5 marks.

The final exam is 60 marks, divided into 15 practical marks and 40 theoretical marks.	
12. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	
Main references (source)	General basics of organic chemistry book
Recommended books and references (scientific journals, reports…)	
Electronic references, websites.	

Course description

1. Course Name
Cell2
2. Course Code
EWb3102
3. : Year / Semester
quarterly
4. : Date this description was prepared
2024-30-3
5. : Available attendance forms
weekly
6. (total) number of units \(total) Number of study hours
theoretical hours + 2 practical hours = (4 hours) per week 2 (Number of units (3
7. (if more than one name is mentioned) Name of the course administrator
M.M. Kawthar Muhammad Nasser & Latif A.M.D. Nidal Ibrahim : Name : Email Kawther naser@uoanbar.edu.iq:

8. Course objectives	
• And develop emergence on Students identification The cell and its importance • Cell components, whether To study In addition animal, plant, or microscopic cells • cells for every Featured adjectives on And get to know the Some models to And touch Classification with in detail mission • Studying With importance Students identification cells as they are the basis for the formation of the body of living organisms and the tissues and organs they consist of, and thus the formation of the body's systems and knowing the functions of each cell and the .factors that affect them •	Objectives of the study subject

9. Teaching and learning strategies	
-1 -2 , Explanation and clarification -3 , Lecture method Student groups -4 Practical lessons in the laboratory and scientific Brainstorming -5 , trips	**The strategy**

10. **Course structure**

Evaluation method	Learning method	Name of the unit or topic	Required learning outcomes	hours	the week
Theoretical tests And practical tests reports And	Explanation and presentation slide of the and model lecture	**Cell2**	Some of the most important polysaccharides	4	1
Theoretical tests And practical tests And reports	Explanation and presentation slide of the and model lecture	**Cell2**	Cell division	4	2
Theoretical tests And practical tests reports And		**Cell2**	First month exam	4	3
Theoretical tests And practical tests reports And	Explanation and presentation slide of the and model lecture	**Cell2**	Ribosomes	4	4
Theoretical	Explanation and display	**Cell2**	Stages of meiosis	4	5

tests And practical tests reports And	of the model and Slides lecture				
Theoretical tests And practical tests		**Cell2**	Second month exam	4	6
					7
					8
					9
					10
					11
					12
					13
					14
					15

11. Course evaluation

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

Monthly exams 25 marks
Daily preparation, daily exams and reports 5 marks
Practical exam: 10 marks
Strive 40 degrees
Final exam (45 marks for theoretical exam + 15 marks for practical exam) = marks 60

12. Learning and teaching resources

Abdul Hussein Faisal - Cell science Gabriel Aziz - Cell Science My cell is practical book	**Methodology, if) Required prescribed books (any**
Abdul Hussein Faisal - Cell science Gabriel Aziz - Cell Science	**(sources) Main references**

My cell is practical book The cell: microstructure and functions / Abdul-Hussein Al-Faisal, 2000	
,Histology, Zoology Cell Biology / Abbas Hussein Mugheer Al- Rubaie , 2013	**and books Recommended supporting (... scientific journals, reports) references**
electronic references and Use of websites	**Electronic references, websites**

Course Description

1. Course Name: Basic of plant science

2. Course Code: EWb3104

3. Semester / Year: Semester

4. Description Preparation Date: 28/3/2024

5. Available Attendance Forms: Presence

6. Number of Credit Hours (Total) / Number of Units (Total): 30

7. Course administrator's name (mention all, if more than one name)

Name: Prof. Dr. Ali Hussein Ibraheem Al-Bayati Email: ag.ali Hussein@uoanbar.edu.iq
Lecture Dr. Asmaa Abdulameer Bedn asmaa.abdulameer@uoanbar.edu.iq

8. Course Objectives

Course Objectives	This course aims to enable the biologist sciences student to master the general basics of botany, and includes a historical introduction. The branches of science, its scope, and its importance. It also mainly deals with the study of the apparent appearance and internal structure of the plant, the most important biological processes that occur in the plant, and the plant's relationship with humans and the environment.

9. Teaching and Learning Strategies

Strategy	Through theoretical lectures and the laboratory aspect of training in the field of botany and determining the characteristics of its parts morphologically and anatomically using clarification methods and daily examinations, as well as discussing quarterly reports.

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
First	5	Introduction, and getting acquainted with the basic terms in the field of botany.	Basic of plant Science	Giving the lecture	Weekly exam
Second	5	Learn about the history of the development of botany and the contribution of Arab	Basic of plant Science	Giving the lecture	Weekly exam

Third	5	and Muslim scientists in the progress of science, its fields and branches and its importance. Plant tissue Meristem tic plant tissue. Permanent plant tissues. Basic plant tissues. Plant connective tissue. Vascular plant tissue. Secretory plant tissue.	Basic of plant Science	Giving the lecture	Weekly exam
Fourth	5	Learn about the composition of the plant cell and interpretation of basic biological processes in plants and linking basic concepts in botany and plant chemistry.	Basic of plant Science	Giving the lecture	Weekly exam
Fifth	5	Root phenotypic structure. Types of roots - and the anatomical structure of the roots - natural secondary growth and types of modifications in the apparent and anatomical structure of the roots to adapt to the environment.	Basic of plant Science	Giving the lecture	Weekly exam
Sixth	5	Semester exam	Basic of plant Science	-	-
Seventh	5	Phenotypic structure of the leg. Types of stems - and the anatomical structure of the stem - natural secondary growth and types of modifications in the apparent and anatomical structure of the stems to adapt to the environment.	Basic of plant Science	Giving the lecture	Weekly exam
Eight					

	5	Phenotypic structure of leaves. Types of leaves according to function - and the anatomical structure of the leaf -and types of modifications in the apparent and anatomical structure of leaves to adapt to the environment.	Basic of plant Science	Giving the lecture	Weekly exam
Ninth	5	Flower structure - types of inflorescences - and different types of fruits.	Basic of plant Science	Giving the lecture	Weekly exam
Tenth	5	Root anatomy	Basic of plant Science	Giving the lecture	Weekly exam
Eleventh		Semester exam	Basic of plant Science	–	–
Twelfth	5	Stem anatomy	Basic of plant Science	Giving the lecture	Weekly exam
Thirteenth	5	Anatomy of leaves	Basic of plant Science	Giving the lecture	Weekly exam
Fourteenth	5	The basic biological processes in plants (photosynthesis and respiration) and their relationship to the environment.	Basic of plant Science	Giving the lecture	Weekly exam
Fifteenth	5	The relationship between plants, humans, medicinal and economic plants	Basic of plant Science	Giving the lecture	Weekly exam

11.Course Evaluation

30% for each semester exam - 20% for weekly exams and 20% for the semesterly report.

12.Learning and Teaching Resources

Required textbooks (curricular books, if any)	Basic of plant science
Main references (source)	Basics of Botany - Ruqaya Hussein Jassim - 2013 - Dar That Al Salasil for Printing and Publishing.
Recommended books and references (scientific journals, reports…)	Principles of Plant Science: Environmental factors and technology in growing plants. by Dennis R. Decoteau (Author)2005.
Electronic references, websites.	https://www.agro-lib.site/2019/01/blog-post_66.html https://academic.oup.com/journals/

	pages/plant-science-hub?campaignid=21060394715&adgroupid=160285785780&adid=692152224375&gad_source=1&gclid=Cj0KCQjwzZmwBhD8ARIsAH4v1gWSCnLo

Course Description

1. Course Name: Computer basics and office applications

2. Course Code: EWB2103

3. Semester / Year: Second semester 2023−2024

4. Description Preparation Date:29/3/2024

5. Available Attendance Forms: Attendance in classrooms and laboratories

6. Number of Credit Hours (Total) / Number of Units (Total) 60hoers

45 forty-five hours,

7. Course administrator's name (mention all, if more than one name)

Name: Nazhon Ismail Khaleel
Email: edw.nazhon.khaleel @uoanbar.edu.iq

8. Course Objectives

Course Objectives	**1- Teaching the basics of computers and the Office prograr** **2- Developing students' ability to understand computer bas and techniques used in computer programs and connecting the Internet** **3-Learn to administer operating systems for various progra** **4-Learning about electronic communication programs and ethics of the electronic world.**

9. Teaching and Learning Strategies

Strategy	1- Blackboard 2- Data Show 3- Computer 4- Scientific research 5- Theoretical lectures 6- Scientific Laboratories 7- Discussion and dialogue

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	3	As in paragraph 8	Computer basics	Blackboard data show	Question and discussion+ Daily and monthly exams
2	3	As in paragraph 8	Computer basics	Blackboard data show	Questions and discussion+ Daily and monthly exams
3	3	As in paragraph 8	Computer's components	Blackboard data show	Questions and discussion+ Daily and monthly exams
4	3	As in paragraph 8	Computer's components	Blackboard data show	Questions and discussion+ Daily and monthly exams
5	3	As in paragraph 8	Computer security& software licenses	Blackboard data show	Questions and discussion+ Daily and monthly exams
6	3	As in paragraph 8	Computer security& software licenses	Blackboard data show	Questions and discussion+ Daily and monthly exams
7		As in paragraph 8	**First month exam**	Blackboard data show	Questions and discussion+ Daily and monthly exams
8	3	As in paragraph 8	Internet ethics	Blackboard data show	Questions and discussion+ Daily and monthly exams
9	3	As in paragraph 8	Internet ethics	Blackboard data show	Questions and discussion+ Daily and monthly exams
10	3	As in paragraph 8	Operating Systems	Blackboard data show	Questions and discussion+ Daily and monthly exams
11	3	As in paragraph 8	Operating Systems	Blackboard data show	Questions and discussion+ Daily and monthly exams
12		As in paragraph 8	**second month exam**	Blackboard data show	Questions and discussion+ Daily and monthly exams
13	3	As in paragraph 8	Operating Systems	Blackboard data show	Questions and discussion+ Daily and monthly exams
14	3	As in paragraph 8	Operating Systems	Blackboard data show	Questions and discussion+ Daily and monthly exams
15			**Third month exam**	Blackboard data show	Questions and discussion+ Daily and monthly exams

11. Course Evaluation

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, practical exam... etc.

Annual pursuit 40% Final 60%

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Computer basics and office applications book (Pa One)
Main references (source)	"Computer Basics and its Office Applicatio Part One," Dr. Ziad Muhammad Abboud; D Ghassan Hamid Abdel Majeed; Dr.. Amir Hussein Murad; M. Bilal Kan Ahmed, Dar Al-Kutub and Documen Baghdad, 2014.

Recommended books and references (scientific journals, reports…)	
Electronic references, websites.	websites.

Course Description

1. Course Name:Human freedoms and rights

2. Course Code: EWB3209

3. Semester / Year: Semester

4. Description Preparation Date:13/4/2024

5. Available Attendance Forms:

6. Number of Credit Hours (Total) / Number of Units (Total) 60hoers

7. Course administrator's name (mention all, if more than one name)

Name: sumaya foaad majeed
Email: sumaya.majeed@uoanbar.edu.iq

8. Course Objectives

Course Objectives	**• Coverage of human rights material.** **• Identify the classification of freedoms and rights.** **• The emergence and development of freedom**

9. Teaching and Learning Strategies

Strategy	

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2	**Introduchng rights**			
2	2	**The Islamic concept of hur rights**			
3	2	**Basic freedoms**			
4	2	**The relationship of hur rights to public freedoms**			

5	2	**Classification of pu freedoms**			
6	2	**Human rights classification**			
7	2	**First month exam**			
8	2	**The emergence development of rights freedoms**			
9	2	**Human rights and freedom heavenly religions**			
10	2	**Principles of human rights Islamic law**			
11	2	**Rights and freedoms contemporary doctrines**			
12	2	**International systems protecting human rights freedoms**			
13	2	**International legitimacy in field of human rights**			
14	2	**Human rights and freedom Morocco**			
15	2	**Second month exam**			

11. Course Evaluation

Distributing the score out if 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)	
Main references (source)	Books on rights and freedoms
Recommended books and references (scientific journals, reports…)	Scientific journals
Electronic references, websites.	Internet

Course Description

1. Course Name: geology
2. Course Code: EWb3106
3. Semester / Year: Semester
4. Description Preparation Date:29/3/2024
5. Available Attendance Forms:
6. Number of Credit Hours (Total) / Number of Units (Total)
7. Course administrator's name (mention all, if more than one name)
Name: Asmaa Wajeeh jumaa Email: edw.ah2010n@uoanbar.edu.iq
8. Course Objectives

Course Objectives	• ..... • ..... • .....

9. Teaching and Learning Strategies

Strategy	

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2	**Introduction and Definition of geology**			
2	2	**Examples**			
3	2	**Ligneous rocks**			
4	2	**Characteristic of Igneous rocks**			
5	2	**Types of Igneous rocks**			
6	2	**Sedimentary rocks**			
7	2	**Types of Sedimentary rocks**			
8	2	**Example**			
9	2	**First month exam**			
10	2	**Metals**			
11	2	**Types and uses metals**			
12	2	**Examples of metals**			
13	2	**Metamorphic rocks**			
14	2	**Types Metamorphic rocks**			
15	2	**Second month exam**			

11. Course Evaluation

Distributing the score out if 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)	Geology
Main references (source)	
Recommended books and references (scientific journals, reports…)	
Electronic references, websites.	

Course description

1. Course Name
Cell 1
2. Course Code
EWb3101
3. : Year / Semester
quarterly
4. : Date this description was prepared
2024-30-3
5. : Available attendance forms
weekly
6. (total) number of units \(total) Number of study hours
theoretical hours + 2 practical hours = (4 hours) per week 2 **(Number of units (3**
7. (if more than one name is mentioned) Name of the course administrator
M.M. Kawthar Muhammad Nasser & **Latif A.M.D. Nidal Ibrahim** : Name : Email Kawther naser@uoanbar.edu.iq:
8. Course objectives

• And develop emergence on Students identification The cell and its importance • Cell components, whether To study In addition animal, plant, or microscopic cells • cells for every Featured adjectives on And get to know the Some models to And touch Classification with in detail mission • Studying With importance Students identification cells as they are the basis for the formation of the body of living organisms and the tissues and organs they consist of, and thus the formation of the body's systems and knowing the functions of each cell and the .factors that affect them	Objectives of the study subject

•	

9. Teaching and learning strategies

-1 -2 , Explanation and clarification -3 , Lecture method Student groups -4 Practical lessons in the laboratory and scientific Brainstorming -5 , trips	**The strategy**

10. Course structure

Evaluation method	Learning method	Name of the unit or topic	Required learning outcomes	hours	the week
Theoretical tests And practical tests reports And	Explanation and presentation slide of the and model lecture	**Cell 1**	History of the development of cell science	4	1
Theoretical tests And practical tests And reports	Explanation and presentation slide of the and model lecture	**1 Cell**	Cytoplasm	4	2
Theoretical tests And practical tests reports And	Explanation and presentation slide of the and model lecture	**1 Cell**	Cellular communication	4	3
Theoretical tests And practical	Explanation and presentation slide of the	**1 Cell**	Types of cellular communication	4	4

tests reports And	and model lecture				
Theoretical tests And practical tests reports And		**1 Cell**	**First month exam**	4	5
Theoretical tests And practical tests	Explanation and display of the model and Slides lecture	**1 Cell**	Lysosomes	4	6
Theoretical tests And practical tests reports And	Explanation and presentation slide of the and model lecture	**1 Cell**	Cell organelles	4	7
Theoretical tests And practical tests reports And	Explanation and presentation slide of the and model lecture	**1 Cell**	Cytoplasm functions	4	8
Theoretical tests And practical tests reports And		**1 Cell**	Second month exam	4	9
					10
					11
					12
					13
					14
					15

11. Course evaluation
according to the tasks assigned to the student, such as 100 **Distribution of the grade out of .etc , daily preparation, daily, oral, monthly, written exams, reports** **Monthly exams 25 marks** **Daily preparation, daily exams and reports 5 marks** **Practical exam: 10 marks** **Strive 40 degrees** **Final exam (45 marks for theoretical exam + 15 marks for practical exam) = marks** 60

12. Learning and teaching resources	
Abdul Hussein Faisal - Cell science **Gabriel Aziz - Cell Science** **My cell is practical book**	**Methodology, if) Required prescribed books (any**
Abdul Hussein Faisal - Cell science **Gabriel Aziz - Cell Science** **My cell is practical book** The cell: microstructure and functions / Abdul-Hussein Al-Faisal, 2000	**(sources) Main references**
,Histology, Zoology Cell Biology / Abbas Hussein Mugheer Al- Rubaie , 2013	**and books Recommended supporting (... scientific journals, reports) references**
electronic references and Use of websites	**Electronic references, websites**

Course Description

1. Course Name:
Headway Beginner
2. Course Code:
3. Semester / Year:
Semester
4. Description Preparation Date:
28/2/2024
5. Available Attendance Forms:
6. Number of Credit Hours (Total) / Number of Units (Total)
30 hours / 15 units
7. Course administrator's name (mention all, if more than one name)
Name: Prof.Dr. Ali Sabah Jameel Email: alisabah40@uoanbar.edu.iq
8. Course Objectives

Course Objectives	• Training students in creative reading. • Mastering language skills, mastering writing, and developing a cognitive vocabulary store. • The ability to use multiple types of reading, understand written materials. • Ability to distinguish between concepts, and analyze text to divide information into parts. • Forming a coherent cognitive text that expresses information in a specific field.

9. Teaching and Learning Strategies

Strategy	Modern lecture, group work, and using technology tool.

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or Subject Name	Learning Method	Evaluation Method
1	2	**To be able to welcome people**	**Hello.**		
2	2	**To be able to ask about people**	**Your World.**		
3	2	**To be able to introduce oneself.**	**All About You.**		
4	2	**To be able to introduce family and friends and ask**	**Family and Friend**		

		questions about friends.			
5	2	**To identify vocabulary about our life.**	**The Way Live**		
6	2	**To identify daily vocabulary.**	**Every Day.**		
7	2		**Mid-Term Exam**		
8	2	**To speak about Favourites**	**My Favourites.**		
9	2	**To ask personal information.**	**Where I live.**		
10	2	**To form past tense sentences.**	**Times Past.**		
11	2	**To speak about our daily time.**	**We had Great tim**		
12	2	**To express our abilities and the verbs related to them.**	**I can Do It!**		
13	2	**To use language functions.**	**Please and Thank**		
14	2	**To use daily expressions.**	**Here and Now**		
15	2	**To express about future plans.**	**It's Time to Go!**		

11. Course Evaluation

The evaluation process consisted of 2 mid-term exams allotted 40 marks, and summative exam allotted 60 marks.

12.Learning and Teaching Resources

Required textbooks (curricular books, if any)	Headway Beginner
Main references (source)	
Recommended books and references (scientific journals, reports…)	
Electronic references, websites.	

Course Description

1. Course Name:
Invertebrates 2
2. Course Code:
EWb3202
3. Semester / Year:
Semester
4. Description Preparation Date:
30−3−2024
5. Available Attendance Forms:
weekly
6. Number of Credit Hours (Total) / Number of Units (Total)
2 theoretical hours + 2 practical hours = (4 hours) per week Number of units (3)
7. Course administrator's name (mention all, if more than one name)
Name: Assist.Prof. Dr. Nagam Khudhair Mahdi & Iman Fouad Mouloud Email: edw.nagam1980_2005@uoanbar.edu.iq
8. Course Objectives

Course Objectives	**• Introducing students to the origin and development of invertebrate animals and their importance** **• In addition to studying all invertebrate anima phyla** **• Identify the distinctive characteristics of eacl division, classify them, and discuss some of them • Important models in detail and for eacl division.** **• Introducing students to the importance of invertebrates, their harms, and their related species**

9. Teaching and Learning Strategies

Strategy	1- Explanation and clarification, 2- Lecture method, 3- Student groups, 4- Practical lessons in the laboratory and scientific trips, 5- Brainstorming

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	4	The phylum bagworms, importance classification	Invertebrates 2	Explanation presentation of slide model lecture	Theoretical test Practical tests Reports
2	4	The most important genera of bagworms Ascaris - Trichinella	Invertebrates 2	Explanation presentation of slide model lecture	Theoretical test Practical tests Reports
3	4	Pinworms and their lif cycle New Guinea worm	Invertebrates 2	Explanation presentation of slide model lecture	Theoretical test Practical tests Reports
4	4	Classification nematodes	Invertebrates 2	Explanation presentation of slide model lecture	Theoretical test Practical tests Reports
5	4	Division of annelids Its importance classification	Invertebrates 2	Explanation presentation of slide model lecture	Theoretical test Practical tests Reports
6	4	First month exam	Invertebrates 2		Theoretical test Practical tests Reports
7	4	Examples Genera of earthwo medical leech, sandworm	Invertebrates 2	Explanation presentation of slide model lecture	Theoretical test Practical tests Reports
8	4	The arthropod phylum its general characterist and importance	Invertebrates 2	Explanation presentation of slide model lecture	Theoretical test Practical tests Reports
9	4	The most important ty of arthropods Some of its species, s as water fleas, scorpic and spiders...	Invertebrates 2	Explanation presentation of slide model lecture	Theoretical test Practical tests Reports
10	4	Phylum Mollusca, their general characteristics a classification	Invertebrates 2	Explanation presentation of slide model lecture	Theoretical test Practical tests Reports
11	4	Snails - oysters - octop The most important cycles	Invertebrates 2	Explanation presentation of slide model lecture	Theoretical test Practical tests Reports

12	4	Second month exam	Invertebrates 2		Theoretical test Practical tests Reports
13	4	Thephylum Echinodermata and general characteristi	Invertebrates 2	Explanation a presentation of slide model a lecture	Theoretical test Practical tests Reports
14	4	Echinodermata gene Starfish and cucumber	Invertebrates 2	Explanation a presentation of slide model a lecture	Theoretical test Practical tests Reports
15	4	Division Hemichordata	Invertebrates 2	Explanation a presentation of slide model a lecture	Theoretical test Practical tests Reports

11. Course Evaluation

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

Monthly exams 25 marks
Daily preparation, daily exams and reports 5 marks
Practical exam: 10 marks
Strive 40 degrees
Final exam (45 marks for theoretical exam + 15 marks for practical exam) = 60 marks

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Invertebrate science - Murad Baba Mur Invertebrates - Sharuk Practical invertebrates book Invertebrate Zoology- E,L,GORDAN P,S,VERMA
Main references (source)	Invertebrate science - Murad Baba Mur Invertebrates - Sharuk Practical invertebrates book Invertebrate Zoology- E,L,GORDAN P,S,VERMA
Recommended books and references (scientific journals, reports…)	Obscure Practical Parasitology, Obscure Practical Invertebrates, General Entomological Book Invertebrate Biology\Dr. Muhamm Hassan Al-Hamoud
Electronic references, websites.	Use electronic references and websites

Course Description

1. Course Name:
Crimes of the defunct Baath Party
2. Course Code:
3. Semester / Year:
Semester
4. Description Preparation Date:
31−3−2024
5. Available Attendance Forms:
weekly
6. Number of Credit Hours (Total) / Number of Units (Total)
2 theoretical hours = (2 hours) per week Number of units (2)
7. Course administrator's name (mention all, if more than one name)
Name Muhammad Abd allah & marih Qahtan Qaddory Email: edw.mohammedagk@uoanbar.edu.iq maria qahtan@uoanbar.edu.iq
8. Course Objectives

Course Objectives	• Introducing students to the crimes of the Baath Party • In addition to knowing the violations committed by the former regime agains civil and political rights • Explaining the effects resulting from the wars on Iraqi soil during the period the former regime's rule
9. Teaching and Learning Strategies	
Strategy	1- Explanation and clarification, 2- Lecture method, 3- Student groups, Practical lessons in the laboratory and scientific trips, 5- Brainstorming

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	**2**	Violations of rights and freedoms	Crimes of the defunct Baath Party	theoretical	Theoretical questions and discussions + or exams
	2	Intellectual rig violations	Crimes of the defunct Baath Party	theoretical	Theoretical questions and

					discussions + or exams
3	**2**	Violation of the right party pluralism	Crimes of the defunct Baath Party	theoretical	Theoretical questions and discussions + or exams
4	**2**	Violation of freedom opinion	Crimes of the defunct Baath Party	theoretical	Theoretical questions and discussions + or exams
5	**2**	Violation of internatio law / the first and seco Gulf wars	Crimes of the defunct Baath Party	theoretical	Theoretical questions and discussions + or exams
6	**2**	The impact of the Baath regime's behavior or society and its dominar over the state	Crimes of the defunct Baath Party	theoretical	Theoretical questions and discussions + or exams
7	**2**	Limiting the three powe to the Baathist regime	Crimes of the defunct Baath Party	theoretical	Theoretical questions and discussions + or exams
8	**2**	Tyranny corrupts mora and fights scholars	Crimes of the defunct Baath Party	theoretical	Theoretical questions and discussions + or exams
9	**2**	first month Exam	Crimes of the defunct Baath Party		
10	**2**	The psychologi and social mechanism used by the previous regime	Crimes of the defunct Baath Party	theoretical	Theoretical questions and discussions + or exams
11	**2**	Culture, media, and th militarization of socie	Crimes of the defunct Baath Party	theoretical	Theoretical questions and discussions + or exams
12	**2**	scorched earth policy	Crimes of the defunct Baath Party	theoretic	Theoretical questions and discussions + or exams
13	**2**	Mass graves and bomb of places of worship	Crimes of the defunct Baath Party	theoretical	Theoretical questions and discussions + or exams
14	**2**	The effects of the wars Iraq	Crimes of the defunct Baath Party	theoretical	Theoretical questions and discussions + or

					exams
15	**2**	second month Exam	Crimes of the defunct Baath Party		

11. Course Evaluation

Do daily tests
Conduct monthly tests
Active daily participation during the lecture and opening the door to dialogue

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Platform for the crimes of the defunct Baath Party
Main references (source)	Encyclopedia of the Iraqi Environment/Salim Matar The effect of the use of radiological weapons on the air and soil / Master's thesis
Recommended books and references (scientific journals, reports…)	Crimes of forced population displacemen Adam Suleiman
Electronic references, websites.	Use electronic references and websites

Course Description

1. Course Name:
Biochemistry
2. Course Code:
EWB3207
3. Semester / Year:
Second course ٢٠٢٤/٢٠٢٣
4. Description Preparation Date:
2024/3/29
5. Available Attendance Forms:
weekly
6. Number of Credit Hours (Total) / Number of Units (Total)
3/ 4
7. Course administrator's name (mention all, if more than one name)
Name: Atheer obaid talak Email: atheer_obaid@uoanbar.edu.iq
8. Course Objectives

Course Objectives	• **Knowledge of fats and their chemical composition** • **Knowledge of amino acids a their role in the formation of important proteins in the organism of living organisms** • **Knowing the names and type of fatty compounds**
9. Teaching and Learning Strategies	
Strategy	The lecture is explained and clarified by presenting it to the students on the screen and re-clarifying it practicall after which the student is tested through daily exams.

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
First	4	Definition and natu of fats	Biochemistry	A theoretical and practical lecture	Daily exams and daily assignments
Second	٤	Fatty acids	=	=	=
Third	٤	Naming fatty acids	=	=	=
Fourth	٤	Polar and non-po amino acids	=	=	=
Fifth	٤	The cyclic struct of sugars	=	=	=
Sixth	٤	Disaccharides polysaccharides	=	=	=
Seventh	٤	Peptides and prote	=	=	=
Eighth	٢	First month exam	=	Practical and theoretical exam	=
Ninth	٤	Quaternary structure of protein	=	=	=
Tenth	٤	amino acids	=	=	=
Eleventh	٤	Enzymes	=	=	=
Twelveth	٤	Vitamins	=	=	=
Thirteenth	٤	Nucleic acids	=	=	=
Fourteenth	٤	DNA synthesis	=	Practical and theoretical exa	=
Fifteenth	٢	Second month exam	=		=

11. Course Evaluation
The grade is distributed out of 100 according to the theoretical exams: 20 marks, the practical exams: 10 marks, the daily exams: 5 marks, and the daily assignments: 5 marks. The final exam is 60 marks, divided into 15 practical marks and 40 theoretical marks.

12. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	
Main references (source)	General biochemistry book
Recommended books and references (scientific journals, reports…)	
Electronic references, websites.	

Course Description

1. Course Name:
2. Course Code:
3. Semester / Year:
4. Description Preparation Date:
5. Available Attendance Forms:
6. Number of Credit Hours (Total) / Number of Units (Total)
7. Course administrator's name (mention all, if more than one name)
Name: Email:
8. Course Objectives

Course Objectives	• ..... • ..... • .....

9. Teaching and Learning Strategies

Strategy	

10. Course Structure

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

11. Course Evaluation

Distributing the score out if 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)	
Main references (source)	
Recommended books and references (scientific journals, reports…)	
Electronic references, websites.	

Course Description

1. Course Name:
Animal Histology
2. Course Code:
EWb4305
3. Semester / Year:
Semester
4. Description Preparation Date:
1-4-2024
5. Available Attendance Forms:
Weekly
6. Number of Credit Hours (Total) / Number of Units (Total)
2 theoretical hours + 2 practical hours = (4 hours) per week Number of units (3)
7. Course administrator's name (mention all, if more than one name)
Name: Shymaa Hajlan Sayer & Nbaa Mutea Abid AL-Alh Email: Edw.Shmaah.s@uoanbar.edu.iq naba.mutia@uoanbar.edu.iq
8. Course Objectives • Knowing the types of animal tissues and the distinctive characteristics of each tissue • Identify the most important specializations of the cells of the human or animal body • Identify the most important functions of tissues and their locations
9. Teaching and Learning Strategies

Strategy	• Presenting the lecture through a meeting using the Whitboard or projector (data show)- dialogue - group discussion - investigation and exploration - problem

	solving - scientific research - practical application in the laboratory - brainstorming.

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	4	Typical explanation of slides and lecture	Histological section of simple & stratified epithelial tissues	Knowledge and understand Ability to analyze Developing teaching skill Practical application Skill	Theoretical tests Practical tests Reports
2	4	Typical explanation of slides and lecture	Histological section of glands	Knowledge and understand Ability to analyze Developing teaching skill Practical application Skill	Theoretical tests Practical tests Reports
3	4	Typical explanation of slides and lecture	Celle of connective tissues	Knowledge and understand Ability to analyze Developing teaching skill Practical application Skill	Theoretical tests Practical tests Reports
4	4	Typical explanation of slides and lecture	Histological section of Loose&dense connective tissues	Knowledge and understand Ability to analyze Developing teaching skill Practical application skill	Theoretical tests Practical tests Reports
5	4	Typical explanation of slides and lecture	Histological section of different types cartilage	Knowledge and understand Ability to analyze Developing teaching skill Practical application Skill	Theoretical tests Practical tests Reports
6	4	Typical explanation of slides and lecture , preparing reports, and discussing	Histological section of bone	Knowledge and understand Ability to analyze Developing teaching skill Practical application skill	Theoretical tests Practical tests Reports

7	4	Typical explanation of slides and lecture	Types of blood cells	Knowledge and understand Ability to analyze Developing teaching skill Practical application Skill	Theoretical tests Practical tests Reports
8	4		First month exam		Theoretical tests Practical tests Reports
9	4	Typical explanation of slides and lecture	Histological section of different type of muscles	Knowledge and understand Ability to analyze Developing teaching skill Practical application Skill	Theoretical tests Practical tests Reports
10	4	Typical explanation of slides and lecture	Types of nervous cells and nervous tissues	Knowledge and understand Ability to analyze Developing teaching skill solving problems Practical application skill	Theoretical tests Practical tests Reports
11	4	Explanation, lecture, and presentation of the mate using the blackboard and projector. Conducting laboratory experiments, preparing reports, and discussing	Histological section of Skin	Knowledge and understand Ability to analyze Developing teaching skill Practical application Skill	Theoretical tests Practical tests Reports
12	4	Typical explanation of slides and lecture	Histological section of esophagus, stomach & intestine	Knowledge and understand Ability to analyze Developing teaching skill Practical application Skill	Theoretical tests Practical tests Reports
13	4		second month exam		Theoretical tests Practical tests Reports
14	4	Typical explanation of slides and lecture	Histological section in trachea & alveoli	Knowledge and understand Ability to analyze Developing teaching skill Practical application skill	Theoretical tests Practical tests Reports

15	4	Typical explanation of slides and lecture	Histological section Kidney , glomerulus & tubule.	Knowledge and understand Ability to analyze Developing teaching skill Practical application skill	Theoretical tests Practical tests Reports

11. Course Evaluation

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

Monthly exams 25 marks
Daily preparation, daily exams and reports 5 marks
Practical exam: 10 marks
Strive 40 degrees
Final exam (45 marks for theoretical exam + 15 marks for practical exam) = 60 marks

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Educational histology - Abdul Hakim Ahmed Al-Rawi
Main references (source)	Lowe J,S,Anderson p and Anderson 2018 stevens and lowes Humon E-BOOK :Elservier H ealth Sciences
Recommended books and references (scientific journals, reports…)	Histology written by Dr. Ahmed Noman Nasr Practical animal tissue booklet
Electronic references, websites.	Use electronic references and websites

Course Description

1. Course Name: Plant Anatomy
2. Course Code: EWb3203
3. Semester / Year: Semester
4. Description Preparation Date:30/3/2024
5. Available Attendance Forms:
6. Number of Credit Hours (Total) / Number of Units (Total):48
7. Course administrator's name (mention all, if more than one name)
Name: khansaa khairi hamood Saja Yehia Azbdouljaleel Email:khansaakh@uoanbar.edu.iq edw.saja76bio@uoanbar.edu.iq
8. Course Objectives

Course Objectives	• Introduce the student in detail about the meaning of plant anatomy. • Introduce the student to the different parts of the plant anatomically. • Introduce the student to the types of plant tissues and the basis for classification • Introduce the student to how to distinguish between primary and secondary growth in plants

9. Teaching and Learning Strategies

Strategy	1- Explanation and clarification 2- The method of the lecture 3- Student groups 4- Practical lessons in the laboratory and scientific trips

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
١	٤	Define plant anatomy	Plant Anatomy	Explanation - model presentation slides - and lecture	Theoretical Tests Practical tests Reports
٢	٤	A comprehensive introduction to plant anatomy and its branches	Plant Anatomy	Explanation - model presentation slides - and lecture	Theoretical Tests Practical tests Reports
٣	٤	Study of the living components of a plant cell	Plant Anatomy	Explanation - model presentation slides - and lecture	Theoretical Tests Practical tests Reports
٤	٤	Study of the non-living components of plant parts	Plant Anatomy	Explanation - model presentation slides - and lecture	Theoretical Tests Practical tests Reports
٥	٤	plant cell wall	Plant Anatomy	Explanation - model presentation slides - and lecture	Theoretical Tests Practical tests Reports
٦	٤	Study of types of pits	Plant Anatomy	Explanation - model presentation slides - and lecture	Theoretical Tests Practical tests Reports
٧	٤	A study of the most important theories that explain the formation of the cell wall	Plant Anatomy	Explanation - model presentation slides - and lecture	Theoretical Tests Practical tests Reports
٨	٤	Study of the bases adopted in the classification of plant tissues	Plant Anatomy	Explanation - model presentation slides - and lecture	Theoretical Tests Practical tests Reports
٩	4	Study of the collenchyma tissue	Plant Anatomy	Explanation - model presentation slides - and lecture	Theoretical Tests Practical tests Reports
١٠	٤	Study of the parenchymal tissue	Plant Anatomy	Explanation - model presentation slides - and lecture	Theoretical Tests Practical tests Reports
١١	٤	Study of the sclerenchyma tissue	Plant Anatomy	Explanation - model presentation slides - and lecture	Theoretical Tests Practical tests Reports
١٢	٤	The study of xylem texture	Plant Anatomy	Explanation - model presentation slides - and lecture	Theoretical Tests Practical tests Reports
١٣	٤	study of phloem tissue	Plant Anatomy	Explanation - model presentation slides - and lecture	Theoretical Tests Practical tests Reports
١٤	٤	Study of the vascular cambium	Plant Anatomy	Explanation - model presentation slides -	Theoretical Tests Practical tests

				and lecture	Reports
١٥	٤	Study of the corck cambium	Plant Anatomy	Explanation - model presentation slides - and lecture	Theoretical Tests Practical tests Reports

11. Course Evaluation

Distributing the score out if 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)	
Main references (source)	Fundamentals of plant anatomy Dr. Badri Owaid Al-Ani - University of Baghdad
Recommended books and references (scientific journals, reports…)	Fundamentals of plant physiology Doctor Ahmed Mostafa Elhayani
Electronic references, websites.	Use of electronic references, websites

Course Description

1. Course Name:	
Scientific research method	
2. Course Code:	
EWB2201	
3. Semester / Year:	
The First / 2023-2024	
4. Description Preparation Date:	
31/3/2024	
5. Available Attendance Forms:	
weekly	
6. Number of Credit Hours (Total) / Number of Units (Total)	
30 hours / number of units 2	
7. Course administrator's name (mention all, if more than one name)	
Name: Marwa Ismail Habeeb Email: marwahab22@uoanbar.du.com	
8. Course Objectives	
Course Objectives	**Introducing students to the method of scient research and how to write scientific researc properly and correctly, and then qualifying students to write the research required of th in the future, especially graduation research**
9. Teaching and Learning Strategies	
Strategy	1- Explanation and clarification 2- Lecture method 3- Student group 4- Practical lessons in the laboratory and scientific trips. Brainstorming
10. Course Structure	

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
١	2	Introduction to scientific research methodology	Scientific research method	Lecture + questions and answers	Homework +daily exam
2	2	Definition of science, method of scientific thinking, samples, research sample		Lecture + questions and answers	Daily exam
3	2	Sampling methods and methods		Lecture + questions and answers	Daily exam
4	2	Non-probability sampling, i.e. purposive or non-random sampling		Lecture + questions and answers	homework
5	2	search tools		Lecture + questions and answers	homework
6	2	First month exam		Lecture + questions and answers	homework
7	2	The descriptive scientific research method and its steps, scientific research tools, types of descriptive research, evaluation of the descriptive method		Lecture + questions and answers	Daily exam
8	2	System analysis approach and its steps, elements of the system, concept of feedback, types of system, open and closed system.		Lecture + questions and answers	homework
9	2	Experimental method, experimentation, steps of experimental research		Lecture + questions and answers	homework

10	2	Variables, objectives of controlling variables		Lecture + questions and answers	Daily exam
11	2	Methods of controlling variables, experiment, experimental design, types of experimental designs		Lecture + questions and answers	homework
12	2	Methods for conducting equivalence, evaluating the experimental method and steps for conducting it		Lecture + questions and answers	homework
13	2	Second month exam			
14	2	Discussing student research			
15	2	Discussing student research			

11. Course Evaluation

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

Monthly exams are 30 marks
Daily preparation, daily exams and reports 10 marks
Strive 40 degrees
Final exam: 60 marks

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Fundamentals of research / Abdul Hadi Al-Fadhli
Main references (source)	Fundamentals of scientific research, Dr. Qub Abdel Fattah and others.
Recommended books and references (scientific journals, reports…)	Comprehensive library
Electronic references, websites.	

Course Description

1. Course Name:
Algae
2. Course Code:
EWb3204
3. Semester / Year:
First semester 2024
4. Description Preparation Date:
30/3/2024
5. Available Attendance Forms:
Classroom and Laboratory
6. Number of Credit Hours (Total) / Number of Units (Total)
Number of Credit Hours : 2 Number of Units : 2
7. Course administrator's name (mention all, if more than one name)
Name: Ass. Proff Abdul-Nasir Abdulla Mahdi Email: edw.nasir63abdulla@uoanbar.edu.iq
8. Course Objectives

Course Objectives	**Identify algae** **Its iocation in the plant kibgdom** **Its classification , presence , and methods reproduction** **Its benefits and harms .**
9. Teaching and Learning Strategies	
Strategy	1- Daily and monthly testes 2- Writing reports related to the material . 3- Ask questions and discuss them with students . 4- Assigning students to search for the late developments in the subject on websites 5- Use of electronic clarification means.

10. Course Structure					
Week	**Hours**	**Required Learning Outcomes**	**Unit or subject name**	**Learning method**	**Evaluation method**
Week 1	2	To prepare the student to be a successful biolo teacher or researcher	**Introduction**	Lecture , electron presentation and discussion	Theoretical question , discussions , a oral tests
Week 2	2	To prepare the student to be a successful biology teacher researcher	**The Basis of Classification o Algae**	Lecture , electron presentation and discussion	Theoretical question , discussions , a oral tests
Week 3	2	To prepare the student to be a successful biology teacher researcher	**General Classification o Algae**	Lecture , electron presentation and discussion	Theoretical question , discussions , a oral tests
Week 4	2	To prepare the student to be a successful biology teacher researcher	**Divition : Chlorophyta**	Lecture , electron presentation and discussion	Theoretical question , discussions , a oral tests
Week 5	2	To prepare the student to be a successful biology teacher researcher	**Order : Tetrasporales**	Lecture , electron presentation and discussion	Theoretical question , discussions , a oral tests
Week 6	2	To prepare the student to be a successful biology teacher researcher	**Order : Zygnematales**	Lecture , electron presentation and discussion	Theoretical question , discussions , a oral tests
Week 7	2	To prepare the student to be a successful biology teacher researcher	**Monthly Exam 1**	Lecture , electron presentation and discussion	Theoretical question , discussions , a oral tests
Week 8	2	To prepare the student to be a successful biology teacher researcher	**Divition : Chrysophyta (Golden Algae)**	Lecture , electron presentation and discussion	Theoretical question , discussions , a oral tests
Week 9	2	To prepare the student to be a successful biology teacher	**Class : Bacillariophyceae Diatoms)**	Lecture , electron presentation and discussion	Theoretical question , discussions , a oral tests

		researcher			
Week 10	2	To prepare the student to be a successful biology teacher researcher	**Divition : Pyrrophyta**	Lecture , electron presentation and discussion	Theoretical question , discussions , a oral tests
Week 11	2	To prepare the student to be a successful biology teacher researcher	**Class : Heterogenerate**	Lecture , electron presentation and discussion	Theoretical question , discussions , a oral tests
Week 12	2	To prepare the student to be a successful biology teacher researcher	**Monthly Exam.**	Lecture , electron presentation and discussion	Theoretical question , discussions , a oral tests
Week 13	2	To prepare the student to be a successful biology teacher researcher	**Division : Rhodophyta**	Lecture , electron presentation and discussion	Theoretical question , discussions , a oral tests
Week 14	2	To prepare the student to be a successful biolog teacher or researcher	**Ecological and Economic Importance of Alg**	Lecture , electron presentation and discussion	Theoretical question , discussions , a oral tests
Week 15	2	To prepare the student to be a successful biolog teacher or researcher	**Monthly Exam.**	Lecture , electroni presentation and discussion	Theoretical question , discussions , a oral tests

11. Course Evaluation

Monthly exam : 20% , Daily exam : 5% , Reports : 5% , Practical exam : 10% , Final exam : 60%

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	1- Algae and Archegoneates by Bahram K.M. and Dr. Ali H. Saadi 2- Website
Main references (source)	Lectures led by the subject professo
Recommended books and references (scientific journals, reports…)	
Electronic references, websites.	

Course Description

1. Course Name: embryology

2. Course Code: EWB3209

3. Semester / Year: Semester

4. Description Preparation Date:29/3/2024

5. Available Attendance Forms:

6. Number of Credit Hours (Total) / Number of Units (Total) 60hoers

7. Course administrator's name (mention all, if more than one name)

Name: Asmaa Wajeeh jumaa
Email: edw.ah2010n@uoanbar.edu.iq

8. Course Objectives

Course Objectives	• ….. • ….. • …..

9. Teaching and Learning Strategies

Strategy	

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2	**Introduction and Definition of embryology**			
2	2	**The Quran of embryology**			
3	2	**The importance of embryol**			
4	2	**Gamete formation**			
5	2	**Egg formation**			
6	2	**fertility**			
7	2	**First for exam**			
8	2	**cleavage**			

9	2	**Growth and differentiation**			
10	2	**Formation of sperm**			
11	2	**Embryonic formation of The frog**			
12	2	**Embryonic formation of fish**			
13	2	**Embryonic formation of chicken**			
14	2	**Embryonic formation of human**			
15	2	**Second month exam**			

11. Course Evaluation

Distributing the score out if 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)	Embryology
Main references (source)	
Recommended books and references (scientific journals, reports…)	
Electronic references, websites.	

Course Description

1. Course Name:
Archegoniates
2. Course Code:
EWB32O6
3. Semester / Year:
Second semester 2024
4. Description Preparation Date:
30/3/2024
5. Available Attendance Forms:
Classroom and Laboratory
6. Number of Credit Hours (Total) / Number of Units (Total)
Number of Credit Hours : 2 Number of Units : 2
7. Course administrator's name (mention all, if more than one name)
Name: Ass. Proff Abdul-Nasir Abdulla Mahdi Email: edw.nasir63abdulla@uoanbar.edu.iq
8. Course Objectives

Course Objectives	**Identify Archegoniates** **Its iocation in the plant kibgdom** **Its classification , presence , and methods reproduction** **Its benefits and harms .**
9. Teaching and Learning Strategies	
Strategy	1- Daily and monthly testes 2- Writing reports related to the material . 3- Ask questions and discuss them with students . 4- Assigning students to search for the late developments in the subject on websites 5- Use of electronic clarification means.

10. Course Structure					
Week	**Hours**	**Required Learning Outcomes**	**Unit or subject name**	**Learning method**	**Evaluation method**
Week 1	2	To prepare the student to be a successful biolo teacher or researcher	**Introduction**	Lecture , electron presentation and discussion	Theoretical question , discussions , a oral tests
Week 2	2	To prepare the student to be a successful biology teacher researcher	**Bryophytes Classification – Riccia**	Lecture , electron presentation and discussion	Theoretical question , discussions , a oral tests
Week 3	2	To prepare the student to be a successful biology teacher researcher	**Marchantia**	Lecture , electron presentation and discussion	Theoretical question , discussions , a oral tests
Week 4	2	To prepare the student to be a successful biology teacher researcher	**Pellia**	Lecture , electron presentation and discussion	Theoretical question , discussions , a oral tests
Week 5	2	To prepare the student to be a successful biology teacher researcher	**Anthceros**	Lecture , electron presentation and discussion	Theoretical question , discussions , a oral tests
Week 6	2	To prepare the student to be a successful biology teacher researcher	**Monthly Exam**	Lecture , electron presentation and discussion	Theoretical question , discussions , a oral tests
Week 7	2	To prepare the student to be a successful biology teacher researcher	**Sphagnum**	Lecture , electron presentation and discussion	Theoretical question , discussions , a oral tests
Week 8	2	To prepare the student to be a successful biology teacher researcher	**Funaria**	Lecture , electron presentation and discussion	Theoretical question , discussions , a oral tests
Week 9	2	To prepare the student to be a successful biology teacher	**Pteridophytes – Psilotum**	Lecture , electron presentation and discussion	Theoretical question , discussions , a oral tests

		researcher			
Week 10	2	To prepare the student to be a successful biology teacher researcher	**Lycopodium**	Lecture , electron presentation and discussion	Theoretical question , discussions , a oral tests
Week 11	2	To prepare the student to be a successful biology teacher researcher	**Equisetum**	Lecture , electron presentation and discussion	Theoretical question , discussions , a oral tests
Week 12	2	To prepare the student to be a successful biology teacher researcher	**Adiantum**	Lecture , electron presentation and discussion	Theoretical question , discussions , a oral tests
Week 13	2	To prepare the student to be a successful biology teacher researcher	**Monthly Exam**	Lecture , electron presentation and discussion	Theoretical question , discussions , a oral tests
Week 14	2	To prepare the student to be a successful biolog teacher or researcher	**Salvinia**	Lecture , electron presentation and discussion	Theoretical question , discussions , a oral tests
Week 15	2	To prepare the student to be a successful biolog teacher or researcher	**Gymnospermae**	Lecture , electroni presentation and discussion	Theoretical question , discussions , a oral tests

11. Course Evaluation

Monthly exam : 20% , Daily exam : 5% , Reports : 5% , Practical exam : 10% , Final exam : 60%

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	1- Algae and Archegoneates by Bahram K.M. and Dr. Ali H. Saadi 2- Website
Main references (source)	Lectures led by the subject professo
Recommended books and references (scientific journals, reports…)	
Electronic references, websites.	

Course Description

1. Course Name:
Headway Plus Pre-Intermediate
2. Course Code:
3. Semester / Year:
Semester
4. Description Preparation Date:
28/٣/2024
5. Available Attendance Forms:
Attendance in classrooms
6. Number of Credit Hours (Total) / Number of Units (Total)
30 hours / 15 units
7. Course administrator's name (mention all, if more than one name)
Name: Prof.Dr. Ali Sabah Jameel Email: alisabah40@uoanbar.edu.iq
8. Course Objectives

Course Objectives	• Training students in creative reading, mastering language skills, mastering writing, and developing a cognitive vocabulary store. • The ability to use multiple types of reading. • understand written materials, distinguish between concepts, and analyze text to divide information into parts. • Forming a coherent cognitive text that expresses information in a specific field.

9. Teaching and Learning Strategies	
Strategy	Modern lecture, group work, and using technology tool.

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or Subject Name	Learning Method	Evaluation Method
1	2	**As mentioned in item 8**	**Getting to Know You**		
2	2	**As mentioned in item 8**	**Whatever Makes You Happy.**		
3	2	**As mentioned in item 8**	**What's in the News.**		
4	2	**As mentioned in item 8**	**Review Units 1, 2, and 3.**		
5	2	**As mentioned in item 8**	**Eat, Drink. And be Merry!**		
6	2	**As mentioned in item 8**	**Looking Forward.**		

7	2	**As mentioned in item 8**	**The Way I see it.**		
8	2	**As mentioned in item 8**	**Mid-Term Exam**		
9	2	**As mentioned in item 8**	**Living History.**		
10	2	**As mentioned in item 8**	**Girls and Boys.**		
11	2	**As mentioned in item 8**	**Time for a Story.**		
12	2	**As mentioned in item 8**	**Our Interactive World.**		
13	2	**As mentioned in item 8**	**Life's What you make it!**		
14	2	**As mentioned in item 8**	**Just Wondering.**		
15	2	**As mentioned in item 8**	**Review Units 7 -12.**		

11. Course Evaluation

The evaluation process consisted of 2 mid-term exams allotted 40 marks, and summative exam allotted 60 marks.

12.Learning and Teaching Resources

Required textbooks (curricular books, if any)	Headway Plus Pre-Intermediate
Main references (source)	
Recommended books and references (scientific journals, reports…)	
Electronic references, websites.	

Course Description

1. Course Name:
Genetics 2
2. Course Code:
EWB3304
3. Semester / Year:
First Semester / 2024
4. Description Preparation Date:
− Adding new sciences for students for future benefit − Keeping pace with scientific development − The student knows the basic principle of genetics
5. Available Attendance Forms:
Attendance in classrooms
6. Number of Credit Hours (Total) / Number of Units (Total)
30 theoretical/2
7. Course administrator's name (mention all, if more than one name)
Name: Assist. Prof. Dr. Omar Ismail Hazem aq.omar.hazym@uoanbar.edu.iq Email: Assisi. Prof. Dr. Hadeel Abdelelah Abdel Razaaq sc.hadeel_aldaraji@uoanbar.edu.iq
8. Course Objectives

Course Objectives	**• Adding new sciences for students f future benefit • Keeping pace with scientific development • The student knows the basic principle of genetics •**

9. Teaching and Learning Strategies	
Strategy	**Student activities Legends Daily exams Reports Discussions during the lecture**

10. Course Structure

Week	H	Required Learning Outcomes	Unit or	Learning	Evaluation

	ours		subject name	method	method
the first the second the third the fourth Fifth VI Seventh Ninth The tenth eleventh twelveth Thirteenth fourteenth Fifteenth	4	Adding a new scientific aspect + cognitive objectiv Adding a new scientific aspect + cognitive objectiv Adding a new scientific aspect + cognitive objectives Adding a new scientific aspect + cognitive objectiv Adding a new scientific aspect + cognitive objectiv Adding a new scient aspect + cognitive objectiv Adding a new scientific aspe + cognitive objectives Adding a new scientific aspect cognitive objectives Adding a new scientific aspe + cognitive objectives Adding a new scientific aspe + cognitive objectives Adding a new scientific aspect + cognitive objectives Adding a new scientific aspe + cognitive objectives Adding a new scientific aspe + cognitive objectives Adding a new scientific aspe + cognitive objectives Adding a new scientific asp + cognitive objectives	Estimating the number of genes for quantitative traits Gender assignment Sex-related traits Linkage, crossing, and genetic maps Cytoplasmic inheritance First month exam Genetic mutations Chromosomal mutations Genetic structure, chromosomal and genetic mutations Genetic structure, chromosomal and genetic mutations Genes and heredity Evidence that DNA is the genetic material Stability of the amount of DNA in chromosomes The nature of nucleic acids Replication of deoxygenated genetic material Translation The importance of proteins in genetics	**Theoretical demonstrat** Theoretical + demonstration Theoretical + demonstration Theoretical + demonstration Theoretical + demonstration Theoretical + demonstration Theoretical + demonstration Theoretical + demonstration Theoretical + demonstration Theoretical + demonstration Theoretical + demonstration Theoretical + demonstration	Daily exams Daily exams Daily exams Daily exams Daily exams Daily exams Daily exams Daily exams Daily exams Daily exams Daily exams

11. Course Evaluation

Distributing the score out if 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)	Basics of genetics, introduction human genetics
Main references (source)	Jenna Smith, The Post-Genomic E Jenna Smith, The Post-Genomic Era
Recommended books and references (scientific journals, reports…)	
Electronic references, websites.	

Course Description

1. Course Name:
Biotechnology
2. Course Code:
EWB3311
3. Semester / Year:
Semester
4. Description Preparation Date:
6\4\2024
5. Available Attendance Forms:
6. Number of Credit Hours (Total) / Number of Units (Total)
48 hours
7. Course administrator's name (mention all, if more than one name)
Name: Assist. Prof. Dr. Mohammed Abbas Jasim Email: mohammed.a.jasim@uoanbar.edu.iq
8. Course Objectives

Course Objectives	• **Learning biotechnology concepts and it's medical, agricultural and industrial application**
9. Teaching and Learning Strategies	
Strategy	• Theoretical teaching • Practical teaching • Virtual labs

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1 2	4 4	Learning and thinking	Introduction Biotechnology	Theoretical teaching	- Monthly exams

3 4 5 6 7 8 9 10 11 12 13 14	4 4 4 4 4 4 4 4 4 4 4 4	biotechnology concepts Understanding and imagination Connecting theoretical and li applications Analyzing of thos connections Explaining thoughts	Fermentations appli. Culture media composition Genetic Engineering Plant Biotechnology Plant Biotechnology app. Animal Biotechnolog Animal Biotechnolog app. Biosensors Gene therapy Protein and Enzyme engineering Scientific research ethics	Practical teaching Virtual labs	- Written and oral quizzes

11. Course Evaluation

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

Quizzes	Laboratory	Term Tests	semester	Final Exam	Final
5	15	20	40	60	100

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	- Biology and Biotechnology, 2016 - Molecular Biology and Biotechnology, 5th Edition, ٢٠١٨
Main references (source)	- Agricultural Biotechnology: Strategies for National Competitiveness, 2020 المقدمة في الهندسة الوراثية وعلم الاحياء الجزيئي، ٢٠١١ – الهندسة الوراثية المتقدمة الاسس والتطبيقات،
Recommended books and references (scientific journals, reports…)	Biotechnology procedures and experiments handbook, Harisha S. 2007. Molecular biology and biotechnology . John M. Walker and ralph Rapley 2009. Animal cell biotechnology Ralf Pörtner, 20
Electronic references, websites.	

Course Description

1. Course Name:
Basics of general entomology
2. Course Code:
EWB3302
Semester / Year:
Semester
Description Preparation Date:
30-3-2024
Available Attendance Forms:
weekly
Number of Credit Hours (Total) / Number of Units (Total)
2 theoretical hours + 2 practical hours = (4 hours) per week Number of units (3)
Course administrator's name (mention all, if more than one name)
Name: Lecture Dr. Imtithal Ismael Jaloot & Ghufran Taha Email: Edw.kaliomer2004@uoanbar.edu.iq

Course Objectives	
Course Objectives	Introducing students to the shape, behavior, nature and habits of insect the diversity of their members and their spread in all environments and various places; In the soil, in cold and hot regions. Identifying the morphological characteristics of insects and their interna structure

Teaching and Learning Strategies	
Strategy	Explanation and clarification 2- The method of the lecture 3- Student groups 4- Practical lessons in the laboratory and scientific trips .

Course Structure

Week	Hr	Required Learning Outcome	Unit or subject nam	Learning metho	Evaluation method
1	4	Introduction to the position o insects in the animal kingdom and theories of the emergence of insects ar their importance	Basics of general entomolog	Explanation and presentation of th slide model and lecture	Theoretica tests Practical tes Reports
2	4	Morphology of insects	Basics of	Explanation and	Theoretica

			general entomology	presentation of the slide model and lecture	tests Practical tes Reports
3	4	The thorax and appendages	Basics of general entomology	Explanation and presentation of the slide model a lecture	Theoretica tests Practical tes Reports
4	4	The abdominal and appendag	Basics of general entomology	Explanation and presentation of the slide model and lecture	Theoretica tests Practical tes Reports
5	4	The first exam	Basics of general entomology	Explanation and presentation of the slide model and lecture	Theoretica tests Practical tes Reports
6	4	The Respiratory system	Basics of general entomology	Explanation and presentation of the slide model and lecture	Theoretica tests Practical tes Reports
7	4	The Digestive System	Basics of general entomology	Explanation and presentation of the slide model and lecture	Theoretica tests Practical tes Reports
8	4	The Excretory organs	Basics of general entomology	Explanation and presentation of the slide model and lecture	Theoretica tests Practical tes Reports
9	4	The Reproductive System	Basics of general entomology	Explanation and presentation of the slide model and lecture	Theoretica tests Practical tes Reports
10	4	The Nervous System	Basics of general entomology	Explanation and presentation of the slide model and lecture	Theoretica tests Practical tes Reports
11	4	The Circulatory System	Basics of general entomology	Explanation and presentation of the slide model and lecture	Theoretica tests Practical tes Reports
12	4	Sensory organs in insects	Basics of general entomology	Explanation and presentation Of the slide Model and	Theoretica tests Practical tes Reports

				lecture	
13	4	Development & metamorphos	Basics of general entomolog	Explanation and presentation of the slide model and lecture	Theoretica tests Practical tes Reports
14	4	Classification of insects	Basics of general entomolog	Explanation and presentation of the slide model and lecture	Theoretica tests Practical tes Reports
15	4	The second exam	Basics of general entomolog	Explanation and presentation of the slide model and lecture	Theoretica tests Practical tes Reports

Course Evaluation
Distributing the score out if 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports,…etc. Monthly exams 25 marks Daily preparation, daily exams and reports 5 marks Practical exam: 10 marks Strive 40 degrees Final exam (45 marks for theoretical exam + 15 marks for practical exam) = 60 marks

Learning and Teaching Resources	
Required textbooks (curricular books, if any	General entomology Written by: Hussein Abbas Al-Ali, d. Nidal Mahdi Al Fund Practical Entomology Book By Abdul Latif Mulan
Main references (source)	Principle Of General Entomology By Pr. Bedir M. Al. Azawi
Recommended books and references (scientii journals, reports…)	The Insects: An Outline of Entomology, 4th Edition By P. J. Gullan & P.S. Cranston
Electronic references, websites.	Use electronic references and websites

Course Description

1. Course Name:
Applied Entomology
2. Course Code:
EWB3308
Semester / Year:
Semester
Description Preparation Date:
30-3-2024
Available Attendance Forms:
weekly
Number of Credit Hours (Total) / Number of Units (Total)
2 theoretical hours + 2 practical hours = (4 hours) per week Number of units (3)
Course administrator's name (mention all, if more than one name)
Name: Lecture Dr. Imtithal Ismael Jaloot & Ghufran Taha Email: Edw.kaliomer2004@uoanbar.edu.iq

Course Objectives	
Course Objectives	Introducing students to the shape, behavior, nature and habits of insects, the diversity of their members and their spread in all environments and various places Recognizing the medical importance o insect species through their presence on t various previously mentioned places, an what caused huge losses to agricultura crops

Teaching and Learning Strategies	
Strategy	1- Explanation and clarification, 2- Lecture method, 3- Student groups, 4 Practical lessons in the laboratory and scientific trips, 5- Brainstorming

Course Structure

Week	Hour	Required Learning Outcomes	Unit or subjec name	Learning metho	Evaluation method

1	4	Introduction of Economic & medical entomology meaning…importanc …etc.	Applied Entomology	Explanation and presentation of th slide model and lecture	Theoretical tests Practical test Reports
2	4	Important economic insects in In	Applied Entomology	Explanation and presentation of th slide model and lecture	Theoretical tests Practical test Reports
3	4	Pest Control Method	Applied Entomology	Explanation and presentation of th slide model and lecture	Theoretical tests Practical test Reports
4	4	Methods of transmitting pathogenic microbes for humans and animals	Applied Entomology	Explanation and presentation of th slide model and lecture	Theoretical tests Practical test Reports
5	4	Pulex types of medicinal and veterinary importanc	Applied Entomology	Explanation and presentation of th slide model and lecture	Theoretical tests Practical test Reports
6	4	Culicidae family, types of Culex and control methods	Applied Entomology		Theoretical tes Practical test Reports
7	4	Annulatus types of medicinal and veterinary importanc	Applied Entomology	Explanation and presentation of th slide model and lecture	Theoretical tests Practical test Reports
8	4	First month exam	Applied Entomology	Explanation and presentation of th slide model and lecture	Theoretical tests Practical test Reports
9	4	Diptera order of medicinal and veterinary importanc	Applied Entomology	Explanation and presentation of th slide model and lecture	Theoretical tests Practical test Reports
10	4	House fly, life cycle, types of fly and control methods	Applied Entomology	Explanation and presentation of th slide model and lecture	Theoretical tests Practical test Reports

11	4	Insecticides	Applied Entomology	Explanation and presentation of the slide model and lecture	Theoretical tests Practical test Reports
12	4	Insects behavior	Applied Entomology		Theoretical tests Practical test Reports
13	4	Social relationships between insects	Applied Entomology	Explanation and presentation of the slide model and lecture	Theoretical tests Practical test Reports
14	4	Insect environment	Applied Entomology	Explanation and presentation the slide model a lecture	Theoretical tests Practical test Reports
15	4	Second month exam	Applied Entomology	Explanation and presentation of the slide model and lecture	Theoretical tests Practical test Reports

Course Evaluation
Distributing the score out if 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports,…etc. Monthly exams 25 marks Daily preparation, daily exams and reports 5 marks Practical exam: 10 marks Strive 40 degrees Final exam (45 marks for theoretical exam + 15 marks for practical exam) = 60 marks

Learning and Teaching Resources	
Required textbooks (curricular books, if any)	Specialization book Environmental Protection - Theoretical medical and veterinary insects https://drive.google.com/file/d/1PC4zEC7nBYIcI4oDR4sI CEZpveERdF7/view Environmental Protection Specialization Book - Practical Medical and Veterinary Insects https://drive.google.com/file/d/1F8PgpvGoaNrSgo8AhFjA3 UEgcJ8ue/view
Main references (source)	Practical Medical Entomology By Pr. Dr. Abdul-lateef Molan

Recommended books and references (scientifi journals, reports…)	Fundamentals of medical and veterinary entomology Written by Prof. Dr.: Mr. Hassan Shorb Professor Zo, Head of Entomology Department, Faculty of Science - Cairo University 2013
Electronic references, websites.	Use electronic references and websites

Course Description

1. Course Name:
Animal Physiology
2. Course Code:
WEB3312
3. Semester / Year:
Semester
4. Description Preparation Date:
30−3−2024
5. Available Attendance Forms:
Weekly
6. Number of Credit Hours (Total) / Number of Units (Total)
2 theoretical hours + 2 practical hours = (4 hours) per week Number of units (3)
7. Course administrator's name (mention all, if more than one name)
Name: Nbaa Mutea Abid AL-Alh & Nuha Hatem Khalif Email: naba.mutia@uoanbar.edu.iq nuha.tatem@uoanbar.edu.iq
8. Course Objectives
9. Teaching and Learning Strategies

Strategy	• Presenting the lecture through a meeting using the blackboard or projector (data show)- dialogue - group discussion - investigation and exploration - problem solving - scientific research - practical application in the laboratory - brainstorming.

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	4	Explanation, lecture, and presentation of the material using the blackboard and projector. Conducting laboratory experiments, preparing reports, and discussing	Circulation physiology1	Knowledge and understanding Ability to analyze Developing teaching skill solving problems Practical application skill	Theoretical tests Practical tests Reports
2	4	Explanation, lecture, and presentation of the material using the blackboard and projector. Conducting laboratory experiments, preparing reports, and discussing	Circulation physiology2	Knowledge and understanding Ability to analyze Developing teaching skill solving problems Practical application skill	Theoretical tests Practical tests Reports
3	4	Explanation, lecture, and presentation of the material using the blackboard and projector. Conducting laboratory experiments, preparing reports, and discussing	Circulation physiology3	Knowledge and understanding Ability to analyze Developing teaching skill solving problems Practical application skill	Theoretical tests Practical tests Reports
4	4	Explanation, lecture, and presentation of the material using the blackboard and projector. Conducting laboratory experiments, preparing reports, and discussing	Respiratory physiology1	Knowledge and understanding Ability to analyze Developing teaching skill solving problems Practical application skill	Theoretical tests Practical tests Reports
5	4	Explanation, lecture, and presentation of the material using the blackboard and projector. Conducting laboratory experiments, preparing reports, and discussing	Respiratory physiology2	Knowledge and understanding Ability to analyze Developing teaching skill solving problems Practical application skill	Theoretical tests Practical tests Reports

6	4	Explanation, lecture, and presentation of the material using the blackboard and projector. Conducting laboratory experiments, preparing reports, and discussing	Regulation of body fluid or homeostasis	Knowledge and understanding Ability to analyze Developing teaching skill solving problems Practical application skill	Theoretical tests Practical tests Reports
7	4	Explanation, lecture, and presentation of the material using the blackboard and projector. Conducting laboratory experiments, preparing reports, and discussing	Physiology of kidney	Knowledge and understanding Ability to analyze Developing teaching skill solving problems Practical application skill	Theoretical tests Practical tests Reports
8	4		First month exam		Theoretical tests Practical tests Reports
9	4	Explanation, lecture, and presentation of the material using the blackboard and projector. Conducting laboratory experiments, preparing reports, and discussing	Digestive physiology1	Knowledge and understanding Ability to analyze Developing teaching skill solving problems Practical application skill	Theoretical te Practical tests Reports
10	4	Explanation, lecture, and presentation of the material using the blackboard and projector. Conducting laboratory experiments, preparing reports, and discussing	Digestive physiology2	Knowledge and understanding Ability to analyze Developing teaching skill solving problems Practical application skill	Theoretical tests Practical tests Reports
11	4	Explanation, lecture, and presentation of the material using the blackboard and projector. Conducting laboratory experiments, preparing reports, and discussing	Temperature regulation	Knowledge and understanding Ability to analyze Developing teaching skill solving problems Practical application skill	Theoretical tests Practical tests Reports

12	4	Explanation, lecture, and presentation of the material using the blackboard and projector. Conducting laboratory experiments, preparing reports, and discussing	General energ metabolism	Knowledge and understanding Ability to analyze Developing teaching skill solving problems Practical application skill	Theoretical tests Practical tests Reports
13	4	Explanation, lecture, and presentation of the material using the blackboard and projector. Conducting laboratory experiments, preparing reports, and discussing	Nervous physiology	Knowledge and understanding Ability to analyze Developing teaching skill solving problems Practical application skill	Theoretical tests Practical tests Reports
14	4		second month exam		Theoretical tests Practical tests Reports
15	4	Explanation, lecture, and presentation of the material using the blackboard and projector. Conducting laboratory experiments, preparing reports, and discussing	Muscles physiology	Knowledge and understanding Ability to analyze Developing teaching skill solving problems Practical application skill	Theoretical tests Practical tests Reports

11. Course Evaluation

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

Monthly exams 25 marks
Daily preparation, daily exams and reports 5 marks
Practical exam: 10 marks
Strive 40 degrees
Final exam (45 marks for theoretical exam + 15 marks for practical exam) = 60 marks

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Youssef Muhammad Arab, Sabah Nasser Al-Alouji, Farouk Naji Karmasha, Marwan Abdel Rahim Yas. Animal Physiology.1989

Main references (source)	Guyton and Hall Textbook of medical physiology / John E. Hall & Michael E Hall , 14 edition,2016
Recommended books and references (scientific journals, reports…)	Principle of anatomy and physiology / Derrickson, Bryan H., Tortora, Gerard j.2017 * Animal physiology .Richard W Hill, Gordon A.Wyse, Margaret Anderson . 2016
Electronic references, websites.	Use electronic references and websites

Course Description

1. Course Name:
Genetics 1
2. Course Code:
EWB3303
3. Semester / Year:
First Semester / 2024
4. Description Preparation Date:
− Adding new sciences for students for future benefit − Keeping pace with scientific development − The student knows the basic principle of genetics
5. Available Attendance Forms:
Attendance in classrooms
6. Number of Credit Hours (Total) / Number of Units (Total)
30 theoretical/2
7. Course administrator's name (mention all, if more than one name)
Name: Assist. Prof. Dr. Omar Ismail Hazem aq.omar.hazym@uoanbar.edu.iq Email: Assisi. Prof. Dr. Hadeel Abdelelah Abdel Razaaq sc.hadeel_aldaraji@uoanbar.edu.iq
8. Course Objectives

Course Objectives	**• Adding new sciences for students f future benefit • Keeping pace with scientific development • The student knows the basic principle of genetics •**

9. Teaching and Learning Strategies

Strategy	**Student activities Legends Daily exams Reports Discussions during the lecture**

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2	Adding a new scientific aspect + cognitive objectiv	Genetics	Theoretical demonstrat	Daily exams
2	2	Adding a new scientific aspect + cognitive objectiv	Genetic Mendelian	Theoretical + demonstration	Daily exams
3	2	Adding a new scientific aspect + cognitive objectives	Genetic Mendelian	Theoretical + demonstration	Daily exams
4	2	Adding a new scientific aspect + cognitive objectiv	Deviations from Mendel's first law	Theoretical + demonstration	Daily exams
5	2	Adding a new scientific aspect + cognitive objectiv	Penetrance & expressivity	Theoretical + demonstration	Daily exams
6	2	Adding a new scient aspect + cognitive objectiv	First month exam		
7	2	Adding a new scientific aspe + cognitive objectives	Epistasis	Theoretical + demonstration	Daily exams
8	2	Adding a new scientific aspect cognitive objectives	Epistasis	Theoretical + demonstration	Daily exams
9	2	Adding a new scientific aspe + cognitive objectives	Multiple alleles	Theoretical + demonstration	Daily exams
10	2	Adding a new scientific aspe + cognitive objectives	Multiple alleles	Theoretical + demonstration	Daily exams
11	2	Adding a new scientific aspect + cognitive objectives	Quantitative traits	Theoretical + demonstration	Daily exams
12	2	Adding a new scientific aspe + cognitive objectives	Heritability	Theoretical + demonstration	Daily exams
13	2	Adding a new scientific aspe + cognitive objectives	Sex determination	Theoretical + demonstration	Daily exams
14	2	Adding a new scientific aspe + cognitive objectives	Sex limited traits	Theoretical + demonstration	Daily exams
15	2	Adding a new scientific asp + cognitive objectives	Second month exam		

11. Course Evaluation

Distributing the score out if 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)	Basics of genetics, introduction human genetics
Main references (source)	Jenna Smith, The Post-Genomic E Jenna Smith, The Post-Genomic Era
Recommended books and references (scientific journals, reports…)	
Electronic references, websites.	

Course Description

1. Course Name:
Microscopes preparation
2. Course Code
: EWB3307
3. Semester / Year:
semester / second year
4. Description Preparation Date: second
30/3/ 2024
5. Available Attendance Forms:
Weekly
6. Number of Credit Hours (Total) / Number of Units (Total)
3 hours theoretical / 2 units
7. Course administrator's name (mention all, if more than one name)
Name: Hebatallah adel abdullah Email: Hebatallah85@uoanbar.edu.iq
8. Course Objectives

Course Objectives	**Introduse students to the type of tissue that make up the body of an organism** **How to obtain plant and animal samples.** **Examine the steps involved in routine histological microscopy preparation** **Installation, its importance and materials used** **Follow all the sequential steps to staining ,loading and microscope....**

9. Teaching and Learning Strategies

Strategy	Learning Outcomes,Teaching, Learning and Assessment Methode

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
The first 2 3	4	Tissue components of livingorganism theoretical lectur Daily test How to samples,installatio ,its characteri importance and type of stabilize	theoretical lecture	Daily t	

4 5 6 7 8 10 11		advantages and disadvata Microscopic preparation Washing ,materials used and t requird Microscopic preparation Monthly exam Clarification importance,mateerials used in and imperegnation First month exam Dyeing and loading examina under a microscope distinguishing histological sectio Siloden technology and freez technology electron microsc Second month exam			
Distributing the score out if 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports,...etc. 60 monthly 20 daily oral 10 written exams10 reports					
11.Learning and Teaching Resources					
Required textbooks (curricular books, if any)			Textbook of Textile Technology Professor Dr. Nouri bin Taher Tayeb		
Main references (source)			Microscopic preparation		
Recommended books and references (scientific journals, reports…)			Practical obligation		
Electronic references, websites.			Online educational lectures		

Course Description

1. Course Name:	
Plant classification	
2. Course Code	
EWB3310	
3. Semester / Year:	
2023–2024	
4. Description Preparation Date:	
29\3\2014	
5. Available Attendance Forms:	
Student attendance in the halls	
6. Number of Credit Hours (Total) / Number of Units (Total)	
32\2	
7. Course administrator's name (mention all, if more than one name)	
Name: Prof. Dr. Ashwaq Talib Hameed Email: ashwaq.talib@uoanbar.edu.iq	
8. Course Objectives	
Course Objectives	• ….. **Enhancing understanding of biodiver Students learn about the diversity of plant and its importance to ecosystems.** **Develop scientific and research skills provide a basis for studying pla scientifically, including determining t identity, anatomy, and evolution relationships.** **Promoting conservation awarene Knowledge of plant diversity is critical conservation efforts and understand environmental impacts.** **Support agricultural and horticult applications: Helps improve yields, p control and sustainable agricultural practice** **Building analytical thinking: Encoura critical thinking and problem solving thro observation and classification.**

	To prepare for advanced studies: serves a foundational knowledge base for furt academic endeavors in biology and rela fields……

9. Teaching and Learning Strategies

Strategy	-Lectures and educational presentations (Powerpoint) -Field trips to forests and nature reserves to collect and stu plants

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
first second third fourth Fifth Sixteen Seventh Eighteen Ninth The tenth The eleven twelveth Thirteenth fourteenth Fifteenth	2	Definition of taxonomy The importance of taxonom and its relationship to other sciences Plant classification systems Nomenclature and diagnosi Collecting plants and pressing them Monocot family First month exam The Najili and Saadian famil Anatomical classification Chemical classification Scientific and general nomenclature Plantain family The family of the goose mar and the pomegranate Composite and cruciferous family Second month exam	Classifi ion plant species	Theoretical lectu = = = = = Theoretical exam Theoretical lectu = = = = = =	Daily cuz = = = = = Paper exam Daily cuz = = = = Paper exam

11. Course Evaluation

Distributing the score out if 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)	Plant taxonomy - Dr. Ali Hussein Al-Moussawi
Main references (source)	Plant Morphology Book - Dr. Ashwaq Talib Hameed
Recommended books and references (scientific journals, reports…)	
Electronic references, websites.	

Course Description

1. Course Name:
Plant Morphology
2. Course Code:
EWB3306
3. Semester / Year:
2023−2024
4. Description Preparation Date:
29\3\2024
5. Available Attendance Forms:
Presence in the halls
6. Number of Credit Hours (Total) / Number of Units (Total)
32\2
7. Course administrator's name (mention all, if more than one name)
Name: Prof. Dr.Ashwaq Talib Hameed Email: ashwaq.talib@uoanbar.edu.iq
8. Course Objectives

Course Objectives	**Understanding plant form and function: To provide students with an depth understanding of the form (morphology) and function (physiolo of plants, including the study of plant organs such as roots, ste leaves, flowers and fruits, and how these structures adapt to t environment.** **• Identification skills: to develop the ability to identify and classify pla based on their morphological traits. This includes learning how to keys and clues to identify plants, which is essential for fieldwork, resea and ecological studies.** **• Evolutionary Insights: To gain insights into the evolution of plant for and structure over time, and to understand how morphological adaptati have enabled plants to colonize a wide range of habitats on Earth……**

9. Teaching and Learning Strategies	
Strategy	Critical Thinking and Problem Solving: To develop critical thinkin and problem-solving skills by analyzing morphological data, interpreting patterns of plant evolution, and understanding the adaptive significance of plant structures.

	Communication Skills: To enhance communication skills through accurate description and documentation of plant morphology, enabling effective sharing of knowledge with peers, professionals and the public. Appreciation of Plant Diversity*: To foster appreciation of the gr diversity of plant forms and the aesthetic value of plants, and foster interest in plant observation, horticulture and conservati as lifelong pursuits.

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
the first second the third the four Fifth Sixth Seventh Eighth Ninth The tent The eleven twelveth Thirteer fourteer Fifteenth	2	Definition of morphology The importance of morphology and its relationship to oth sciences Description of root and their types Description of plan leaves and their typ Variations of plant leaves Leaf mutations First month exam Description of plan stems Stem mutations Earthen stems Flowers Types of flowers ar their shapes Plant flower mutations Fruits and seeds Second month exa	Morphologic plant	Theoretical lecture = = = = = Theoretical exam = = = = = = Theoretical exam	Daily cuz = = = = = Paper exam Daily cuz = = = = = = Paper exam

11. Course Evaluation

Distributing the score out if 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)	Classification plant by Dr. Ali Hussein Al-Moussawi
Main references (source)	Plant morphology.D. Ashwaq Taleb Hameed
Recommended books and references (scientific journals, reports…)	
Electronic references, websites.	

Course Description

1. Course Name:
comparative anatomy of chordate
Course Code:
2.
EWB3301
3. Semester / Year:
Semester
4. Description Preparation Date:
30\3\2024
5. Available Attendance Forms:
Weekly
6. Number of Credit Hours (Total) / Number of Units (Total)
2 theoretical hours + 2 practical hours = (4 hours) per week Number of units (3)
7. Course administrator's name (mention all, if more than one name)
Name: Hanan Fawzi Salman Email: hanan. fawzi@uoanbae.edu.iq
8. Course Objectives

Course Objectives	• Students learned about the most impor phyla included in the classification chordates • Students learned about compari between animals through internal anato and comparison of their systems and orga • In addition to studying all types and orc of animal groups • Introducing students to the most impor characteristics and characteristics chordates..... .
9. Teaching and Learning Strategies	
Strategy	1- Explanation and clarification, 2- Lecture method, 3- Student groups, 4- Practical lessons in the laboratory and scientific trips, 5- Brainstorming

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	4	General features chordata	chordata	Explanation presentation the slide mo and lecture	Theoretical tests Practical tests Repor ts

2	4	group of vertebrates	chordata	Explanation presentation the slide mo and lecture	Theoretical tests Practical tests Reports
3	4	Chordata classificat	chordata	Explanation presentation the slide mo and lecture	Theoretical tests Practical tests Reports
4	4	Skin system	chordata	Explanation presentation the slide mo and lecture	Theoretical tests Practical tests Reports
5	4	Skeletal system	Chordat	Explanation presentation the slide mo and lecture	Theoretical tests Practical tests Reports
6	4	First month exam	chordata		Theoretical tests Practical tests Reports
7	4	Nerves system	chordata	Explanation presentation the slide mo and lecture	Theoretical tests Practical tests Reports
8	4	Digestive system	chordata	Explanation presentation the slide mo and lecture	Theoretical tests Practical tests Reports
9	4	Circulation of syste	chordata	Explanation presentation the slide mo and lecture	Theoretical tests Practical tests Reports
10	4	Pulmantory systrm	chordata	Explanation presentation the slide mo and lecture	Theoretical tests Practical tests Reports
11	4	Muscular system	chordata	Explanation presentation the slide mo and lecture	Theoretical tests Practical tests Reports
12	4	Second month exam	chordata		Theoretical tests Practical tests Reports
13	4	excretory system	chordata	Explanation presentation the slide mo and lecture	Theoretical tests Practical tests Reports
14	4	Reproductive syster	chordata	Explanation presentation the slide mo and lecture	Theoretical tests Practical tests Reports
15	4	Sense organs	chordata	Explanation presentation the slide mo and lecture	Theoretical tests Practical tests Reports
11. Course Evaluation					

Distributing the score out if 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports,…etc. **Monthly exams 25 marks** **Daily preparation, daily exams and reports 5 marks** **Practical exam: 10 marks** **Strive 40 degrees** **Final exam (45 marks for theoretical exam + 15 marks for practical exam) = 60 marks**

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	-Basics of comparative anatomy of chordates / wri by Shukri Habib Khalil, Abdul Zahra Kazem
Main references (source)	Book: Comparative Anatomy of Vertebrates Wri by: Dr. Mona Farid Abdel Rahman
Recommended books and references (scientific journals, reports…)	Atlas of comparative anatomy of chordates
Electronic references, websites.	Use electronic references and websites

Course Description

1. Course Name:
Headway Plus Intermediate
2. Course Code:
3. Semester / Year:
Semester
4. Description Preparation Date:
28/٣/2024
5. Available Attendance Forms:
Attendance in classrooms
6. Number of Credit Hours (Total) / Number of Units (Total)
30 hours / 15 units
7. Course administrator's name (mention all, if more than one name)
Name: Prof.Dr. Ali Sabah Jameel Email: alisabah40@uoanbar.edu.iq
8. Course Objectives

Course Objectives	• Training students in creative reading. • Mastering language skills, mastering writing, and developing a cognitive vocabulary store. • The ability to use multiple types of reading. • Understand written materials, and distinguish between concepts. • Analyze text to divide information into parts. • Forming a coherent cognitive text that expresses information in a specific field

9. Teaching and Learning Strategies	
Strategy	Modern lecture, group work, and using technology tool.

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or Subject Name	Learning Method	Evaluation Method
1	2	**As mentioned in item 8**	**It's wonderful world.**		
2	2	**As mentioned in item 8**	**Get Happy.**		
3	2	**As mentioned in item 8**	**Telling Tales.**		
4	2	**As mentioned in item 8**	**Review Units 1, 2, and 3.**		
5	2	**As mentioned in item 8**	**Doing the Right Thing.**		
6	2	**As mentioned in item 8**	**On the Move.**		

7	2	**As mentioned in item 8**	**Just Love it.**		
8	2	**As mentioned in item 8**	**Mid-Term Exam**		
9	2	**As mentioned in item 8**	**The world of Work.**		
10	2	**As mentioned in item 8**	**Just Imagine!**		
11	2	**As mentioned in item 8**	**Getting on Together.**		
12	2	**As mentioned in item 8**	**Obsessions.**		
13	2	**As mentioned in item 8**	**Tell me about It!**		
14	2	**As mentioned in item 8**	**Life's Great Events!**		
15	2	**As mentioned in item 8**	**Review Units 7 -12.**		

11. Course Evaluation

The evaluation process consisted of 2 mid-term exams allotted 40 marks, and summative exam allotted 60 marks.

12.Learning and Teaching Resources

Required textbooks (curricular books, if any)	Headway Plus Intermediate.
Main references (source)	
Recommended books and references (scientific journals, reports…)	
Electronic references, websites.	

Course Description

1. Course Name:
Molecular Biology
2. Course Code:
EWB3406
3. Semester / Year:
1st Semester
4. Description Preparation Date:
6/4/2024
5. Available Attendance Forms:
Personal, weekly
6. Number of Credit Hours (Total) / Number of Units (Total)
48
7. Course administrator's name (mention all, if more than one name)
Name: Assist. Prof. Dr. Mohammed Abbas Jasim Email: mohammed.a.jasim@uoanbar.edu.iq

8. Course Objectives	
Course Objectives	• ..... • ..... • .....

9. Teaching and Learning Strategies	
Strategy	• Lectures. • Educational videos. • Self-learning method (assigning students to complete learning some skills after giving them the basics). • Scientific Labs. • Virtual labs • Discussions • Brainstorming

10. Course Structure

Week	Hours	Required Learning	Unit or subject	Learning	Evaluation

		Outcomes	name	method	method
1 2 3 4 5 6 7 8 9 10 11 12 13 14	4 4 4 4 4 4 4 4 4 4 4 4 4 4	Learning and thinking Molecular biology concepts Understanding and imagination Connecting theoretical and li applications Analyzing of thos connections Explaining thoughts	Genetic materials Structure DNA Replication DNA Replication II: The Mechanism of Transcription in Bacteria Operons DNA–Protein Interactions in Bacteria Eukaryotic RNA Polymerases and Their Promoters General Transcription Factors in Eukaryotes Transcription Activators in Eukaryotes Chromatin Structure and Its Effects on Transcription RNA Processing I: Splicing RNA Processing II: Capping and Polyadenylatio n Other RNA Processing	Theoretical teaching Practical teaching Virtual labs Learning groups	- Monthly exams - Written and oral quizzes

			Events and Post-Transcriptional Control of Gene Expression The Mechanism of Translation I: Initiation The Mechanism of Translation II: Elongation and Termination Ribosomes and Transfer RNA		

11.
Distributing the score out if 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports,…etc. Quizzes 5 — Laboratory 15 — Term Tests 20 — semester 40 — Final Exam 60 — Final 100

12. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	- Molecular biology, Robert F. Weaver 2017
Main references (source)	- Molecular biology, Nashaat G. Mostafa, 2018 - Molecular biology, Abbas A. AlJanabi 2013
Recommended books and references (scientific journals, reports…)	
Electronic references, websites.	

Course Description

1. Course Name:

Ecology

2. Course Code:

qe27ywb

3. Semester / Year:

Semester

4. Description Preparation Date:

30−3−2024

5. Available Attendance Forms:

weekly

6. Number of Credit Hours (Total) / Number of Units (Total)

2 theoretical hours + 2 practical hours = (4 hours) per week
Number of units (3)

7. Course administrator's name (mention all, if more than one name)

Name: Assist.Prof. Dr. Mohammed musleh &berka hmood
mohammed.musleh@uoanbar.edu.iq

8. Course Objectives

Course Objectives
Introduce the student to the principles of ecology and the relationship of living organisms with non –living components and the effect of each factor on the other
Learn about the different types of ecosystem.
Learn about living environmental factors.

9. Teaching and Learning Strategies

Strategy	1- Explanation and clarification, 2- Lecture method, 3- Student g Practical lessons in the laboratory and scientific trips, 5- Brainstorming

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Lear met
1	4	A brief history of ecology	Ecology	Expla resen he sl

				nd le
2	4	The foundation of the division of ecology	Ecology	Expla resen he sl nd le
3	4	Ecosystem	Ecology	Expla resen he sl nd le
4	4	Primary Division - its characteristics And its classification	Ecology	Expla resen he sl nd le
5	4	tolerance laws and limiting factors	Ecology	Expla resen he sl nd le
6	4	First month exam	Ecology	
7	4	Productivity	Ecology	Expla resen he sl nd le
8	4	Food chin	Ecology	Expla resen he sl nd le
9	4	Nets chin	Ecology	Expla resen he sl nd le
10	4	Energy of pyramids	Ecology	Expla resen he sl nd le
11	4	population	Ecology	Expla resen he sl nd le
12	4	Second month exam	Ecology	
13	4	Environmental **suc**cession	Ecology	Expla resen he sl nd le

14	4	Environmental factor	Ecology	Expla resen he sl nd le
15	4	Species divergence	Ecology	Expla resen he sl nd le

11. Course Evaluation

Distributing the score out if 100 according to the tasks assigned to the student such as daily preparat on, d or written exams, reports,...etc.

Monthly exams 25 marks
Daily preparation, daily exams and reports 5 marks
Practical exam: 10 marks
Strive 40 degrees
Final exam (45 marks for theoretical exam + 15 marks for practical exam) = 60 marks

12. Learning and Teaching Resources

	Al-raw i , r and A bl-al ashee (198 pollut on Bagh ad
Main references (source)	Al-raw i , r and A bl-al ashee (198 pollut on Bagh ad
Recommended books and references (scientific journals, reports…)	Obscu e Pr
Electronic references, websites.	Use el ctro websi es

Course Description

1. Course Name:

Ecology

2. Course Code:

qe27ywb

3. Semester / Year:

Semester

4. Description Preparation Date:

30−3−2024

5. Available Attendance Forms:

weekly

6. Number of Credit Hours (Total) / Number of Units (Total)

2 theoretical hours + 2 practical hours = (4 hours) per week
Number of units (3)

7. Course administrator's name (mention all, if more than one name)

Name: Assist.Prof. Dr. Mohammed musleh &berka hmood
mohammed.musleh@uoanbar.edu.iq

8. Course Objectives

Course Objectives

Introduction the student to the sources of pollution and thi3r danger to humans and how to treat than
Identifying environmental pollution of all kinds knowing source and to how to treat it
Knowing the pollution substance or energy and the extent of its impact.
Studying the dangers of pollution of all kinds and their impact on humans .

9. Teaching and Learning Strategies

Strategy	1- Explanation and clarification, 2- Lecture method, 3- Student g lessons in the laboratory and scientific trips, 5- Brainstorming

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name
1	4	Abrief history of pollution	Environmental pollution
2	4	*Effects of Environmental pollution*	Environmental pollution
3	4	Air pollution	Environmental pollution
4	4	Noise pollution	Environmental pollution
5	4	Radiation pollution	Environmental pollution
6	4	First month exam	Environmental pollution
7	4	Water pollution	Environmental pollution
8	4	Food contamination	Environmental pollution
9	4	Microbiology contamination	Environmental pollution
10	4	Soil pollution	Environmental pollution

11	4	The ozone	Enviro hmen olluti
12	4	Second month exam	Enviro hmen olluti
13	4	Global warming	Enviro hmen olluti
14	4	Drug contamination	Enviro hmen olluti
15	4	Global pollution	Enviro hmen pollut n

11. Course Evaluation

Distributing the score out if 100 according to the tasks assigned to the student such as daily preparati n, da exams, reports,…etc.

Monthly exams 25 marks
Daily preparation, daily exams and reports 5 marks
Practical exam: 10 marks
Strive 40 degrees
Final exam (45 marks for theoretical exam + 15 marks for practical exam) = 60 marks

12. Learning and Teaching Resources

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Main references (source)	Al- awi Abl alra ash eer(pol utio

Recommended books and references (scientific journals, reports…)	Obs cure
Electronic references, websites.	Use el we site

Course Description

1. Course Name:
applied bacteria
2. Course Code:
EWB3403
3. Semester / Year:
Semester
4. Description Preparation Date:
30-3-2024
5. Available Attendance Forms:
weekly
6. Number of Credit Hours (Total) / Number of Units (Total)
2 theoretical hours + 2 practical hours = (4 hours) per week Number of units (3)
7. Course administrator's name (mention all, if more than one name)
Name: Assist.Prof. Dr.afaa tali radef & riyam ahmed ghani Email: **waf-tal-1982@uoanbar.edu.iq**
8. Course Objectives

Course Objectives	Identify the most important bacteria tha live within their environment in nature, such as air bacteria, water bacteria, fooc bacteria, soil bacteria, as well as medica bacteria and industrial bacteria, and stu their characteristics and the most important activities in that environment

9. Teaching and Learning Strategies	
Strategy	1- Explanation and clarification, 2- Lecture method, 3- Student groups, 4- Practical lessons in the laboratory and scientific trips, 5- Brainstorming

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2	Introduction and definition of applied bacteriology	Applied bacteria	Explanation presentation of slide model lecture	Theoretical test Practical tests Reports
2	2	Introduction and definition of applied bacteriology	Applied bacteria	Explanation presentation of slide model	Theoretical test Practical tests Reports

				lecture	
3	2	air bacteria	Applied bacteria	Explanation presentation of slide model lecture	Theoretical test Practical tests Reports
4	2	water bacteria	Applied bacteria	Explanation presentation of slide model lecture	Theoretical test Practical tests Reports
5	2	Use of bacteria as an indicator of fecal Use of bacteria as an indicator of fecal contamination of water	Applied bacteria	Explanation presentation of slide model lecture	Theoretical test Practical tests Reports
6	2	sewage bacteria	Applied bacteria	Explanation presentation of slide model lecture	Theoretical test Practical tests Reports
7	2	Food bacteria (meat	Applied bacteria	Explanation presentation of slide model lecture	Theoretical test Practical tests Reports
8	2	Food bacteria (milk	Applied bacteria	Explanation presentation of slide model lecture	Theoretical test Practical tests Reports
9	2	First mounth exam	Applied bacteria	Explanation presentation of slide model lecture	Theoretical test Practical tests Reports
10	2	soil bacteria	Applied bacteria	Explanation presentation of slide model lecture	Theoretical test Practical tests Reports
11	2	Bacteria that contribute to nitrogen solvation in nature	Applied bacteria	Explanation presentation of slide model lecture	Theoretical test Practical tests Reports
12	2	Second month exam	Applied bacteria		Theoretical test Practical tests Reports
13	2	Industrial bacteria	Applied bacteria 1	Explanation presentation of slide model lecture	Theoretical test Practical tests Reports
14	2	Some industries in which industrial bacteria contribute	Invertebrates 1	Explanation presentation of slide model lecture	Theoretical test Practical tests Reports

15	4	Medical bacteria	Invertebrates 1	Explanation & presentation of slide model & lecture	Theoretical test Practical tests Reports

11.Course Evaluation

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

Monthly exams 25 marks
Daily preparation, daily exams and reports 5 marks
Practical exam: 10 marks
Strive 40 degrees
Final exam (45 marks for theoretical exam + 15 marks for practical exam) = 60 marks

12.Learning and Teaching Resources

Required textbooks (curricular books, if any)	Dr.. Al-Zaidi, Hamid Majeed. (2000). Microbiology (theoretical), Ministry of Higher Education and Scientific Research, University of Baghdad
Main references (source)	
Recommended books and references (scientific journals, reports…)	
Electronic references, websites.	Use electronic references and websites

Course Description

1. Course Name:
Immunity
2. Course Code:
EWB3409
3. Semester / Year:
Semester
4. Description Preparation Date:
30-3-2024
5. Available Attendance Forms:
weekly
6. Number of Credit Hours (Total) / Number of Units (Total)
2 theoretical hours + 2 practical hours = (4 hours) per week Number of units (3)
7. Course administrator's name (mention all, if more than one name)
Name: . Dr. Hanan Fawzi Salman & Dr. wafa talea Email: hanan .fawzi@uoanbar.edu.iq
8. Course Objectives

Course Objectives	• • Introducing students to the role of immune cel in resisting diseases • And learn about the mechanical mechanisms of i work • As well as the importance of immunity in our da lives and how the body responds when a foreign body enters

9. Teaching and Learning Strategies

Strategy	1- Explanation and clarification, 2- Lecture method, 3- Student groups, 4- Practical lessons in the laboratory and scientific trips, 5- Brainstorming

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	4	Introduction to history of immunology	Immunity	Explanation a presentation of slide model a lecture	Theoretical test Practical tests Reports
2	4	The lympha system and components	Immunity	Explanation a presentation of slide model a lecture	Theoretical test Practical tests Reports

3	4	Acquired and inn immunity	Immunity	Explanation a presentation of slide model a lecture	Theoretical test Practical tests Reports
4	4	Antibodies, their ty and functions	Immunity	Explanation a presentation of slide model a lecture	Theoretical test Practical tests Reports
5	4	Antigens	Immunity	Explanation a presentation of slide model a lecture	Theoretical test Practical tests Reports
6	4	First month exam	Immunity		Theoretical test Practical tests Reports
7	4	Immune receptors	Immunity	Explanation a presentation of slide model a lecture	Theoretical test Practical tests Reports
8	4	Immune response	Immunity	Explanation a presentation of slide model a lecture	Theoretical test Practical tests Reports
9	4	Complementary system	Immunity	Explanation a presentation of slide model a lecture	Theoretical test Practical tests Reports
10	4	Serums, vaccines, and methods of manufacturing them	Immunity	Explanation a presentation of slide model a lecture	Theoretical test Practical tests Reports
11	4	Inflammation a infection, their types a symptoms	Immunity	Explanation a presentation of slide model a lecture	Theoretical test Practical tests Reports
12	4	Second month exam	Immunity		Theoretical test Practical tests Reports
13	4	Allergies	Immunity	Explanation a presentation of slide model a lecture	Theoretical test Practical tests Reports
14	4	Immunodeficiency diseases	Immunity	Explanation a presentation of slide model a lecture	Theoretical test Practical tests Reports
15	4	Autoimmune diseases	Immunity	Explanation a presentation of slide model a lecture	Theoretical test Practical tests Reports

11.Course Evaluation

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

Monthly exams 25 marks
Daily preparation, daily exams and reports 5 marks
Practical exam: 10 marks
Strive 40 degrees
Final exam (45 marks for theoretical exam + 15 marks for practical exam) = 60 marks

12.Learning and Teaching Resources

Required textbooks (curricular books, if any)	Lippincotts Illlustrated Reviews- Richard Harf
Main references (source)	Basic science principles and immunological tes James Abdel Rahman Fundamentals of physic Mohamed Abdel Aziz
Recommended books and references (scientific journals, reports…)	Cellular and Molecular Immunology - Paul Andrew H. Lichtman Practical immunobinding-binding immunoassays
Electronic references, websites.	Use electronic references and websites

Course Description

1. Course Name:
Cellular metabolism
2. Course Code:
EWB3407
3. Semester / Year:
First course ٢٠٢٤/٢٠٢٣
4. Description Preparation Date:
2024/3/29
5. Available Attendance Forms:
weekly
6. Number of Credit Hours (Total) / Number of Units (Total)
3/ 4
7. Course administrator's name (mention all, if more than one name)
Name: Atheer obaid talak , Nedhal Ibrahim Lateff Email: atheer_obaid@uoanbar.edu.iq , Edw.nedhal_79@uoanbar.edu.iq
8. Course Objectives

Course Objectives	• **Knowledge of amino acid metabolism** • **Knowledge of the metabolic process** • **Knowledge of carbohydrate metabolism**

9. Teaching and Learning Strategies	
Strategy	The lecture is explained and clarified by presenting it to the students on the screen and re-clarifying it practicall after which the student is tested through daily exams.

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
First	4	Metabolism	Cellular metabolism	A theoretical and practical lecture	Daily exams and daily assignments
Second	٤	Factors that affect t metabolism process	=	=	=
Third	٤	Carbohydrate metabolism process	=	=	=
Fourth	٤	Sections of carbohydrates	=	=	=
Fifth	٤	Digestion and absorption of carbohydrates	=	=	=
Sixth	٤	Cellular respiration	=	=	=
Seventh	٤	Oxidation and reduction reactions	=	Practical and theoretical exam	=
Eighth	٢	First month exam	=		
Ninth	٤	Metabolic processes on different food parts	=	=	=
Tenth	٤	Hydrolysis	=	=	=
Eleventh	٤	Stages of cellular respiration	=	=	=
Twelveth	٤	Summary of glycolysis	=	=	=
Thirteenth	٤	Redox reactions in the cell	=	=	=
Fourteenth	٤	Amino acid metabolism	=	Practical and theoretical exa	=
Fifteenth	٢	Second month exam	=		

11. Course Evaluation

The grade is distributed out of 100 according to the theoretical exams: 20 marks, the practical exams: 10 marks, the daily exams: 5 marks, and the daily assignments: 5 marks. The final exam is 60 marks, divided into 15 practical marks and 40 theoretical marks.

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	
Main references (source)	Book of biochemistry and metabolic processes
Recommended books and references (scientific journals, reports…)	
Electronic references, websites.	

Course Description

1. Course Name: Basic of plant science

2. Course Code: EWb3104

3. Semester / Year: Semester

4. Description Preparation Date: 28/3/2024

5. Available Attendance Forms: Presence

6. Number of Credit Hours (Total) / Number of Units (Total): 30

7. Course administrator's name (mention all, if more than one name)

Name: Prof. Dr. Ali Hussein Ibraheem Al-Bayati Email: ag.ali Hussein@uoanbar.edu.iq
Lecture Dr. Asmaa Abdulameer Bedn asmaa.abdulameer@uoanbar.edu.iq

8. Course Objectives

Course Objectives	This course aims to enable the biologist sciences student to master the general basics of botany, and includes a historical introduction. The branches of science, its scope, and its importance. It also mainly deals with the study of the apparent appearance and internal structure of the plant, the most important biological processes that occur in the plant, and the plant's relationship with humans and the environment.

9. Teaching and Learning Strategies

Strategy	Through theoretical lectures and the laboratory aspect of training in the field of botany and determining the characteristics of its parts morphologically and anatomically using clarification methods and daily examinations, as well as discussing quarterly reports.

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
First	5	Introduction, and getting acquainted with the basic terms in the field of botany.	Basic of plant Science	Giving the lecture	Weekly exam
Second	5	Learn about the history of the development of botany and the contribution of Arab	Basic of plant Science	Giving the lecture	Weekly exam

Third	5	and Muslim scientists in the progress of science, its fields and branches and its importance. Plant tissue Meristem tic plant tissue. Permanent plant tissues. Basic plant tissues. Plant connective tissue. Vascular plant tissue. Secretory plant tissue.	Basic of plant Science	Giving the lecture	Weekly exam
Fourth	5	Learn about the composition of the plant cell and interpretation of basic biological processes in plants and linking basic concepts in botany and plant chemistry.	Basic of plant Science	Giving the lecture	Weekly exam
Fifth	5	Root phenotypic structure. Types of roots - and the anatomical structure of the roots - natural secondary growth and types of modifications in the apparent and anatomical structure of the roots to adapt to the environment.	Basic of plant Science	Giving the lecture	Weekly exam
Sixth	5	Semester exam	Basic of plant Science	-	-
Seventh	5	Phenotypic structure of the leg. Types of stems - and the anatomical structure of the stem - natural secondary growth and types of modifications in the apparent and anatomical structure of the stems to adapt to the environment.	Basic of plant Science	Giving the lecture	Weekly exam
Eight					

	5	Phenotypic structure of leaves. Types of leaves according to function - and the anatomical structure of the leaf -and types of modifications in the apparent and anatomical structure of leaves to adapt to the environment.	Basic of plant Science	Giving the lecture	Weekly exam
Ninth	5	Flower structure - types of inflorescences - and different types of fruits.	Basic of plant Science	Giving the lecture	Weekly exam
Tenth	5	Root anatomy	Basic of plant Science	Giving the lecture	Weekly exam
Eleventh		Semester exam	Basic of plant Science	–	–
Twelfth	5	Stem anatomy	Basic of plant Science	Giving the lecture	Weekly exam
Thirteenth	5	Anatomy of leaves	Basic of plant Science	Giving the lecture	Weekly exam
Fourteenth	5	The basic biological processes in plants (photosynthesis and respiration) and their relationship to the environment.	Basic of plant Science	Giving the lecture	Weekly exam
Fifteenth	5	The relationship between plants, humans, medicinal and economic plants	Basic of plant Science	Giving the lecture	Weekly exam

11.Course Evaluation

30% for each semester exam - 20% for weekly exams and 20% for the semesterly report.

12.Learning and Teaching Resources

Required textbooks (curricular books, if any)	Basic of plant science
Main references (source)	Basics of Botany - Ruqaya Hussein Jassim - 2013 - Dar That Al Salasil for Printing and Publishing.
Recommended books and references (scientific journals, reports…)	Principles of Plant Science: Environmental factors and technology in growing plants. by Dennis R. Decoteau (Author)2005.
Electronic references, websites.	https://www.agro-lib.site/2019/01/blog-post_66.html https://academic.oup.com/journals/

	pages/plant-science-hub?campaignid=21060394715&adgroupid=160285785780&adid=692152224375&gad_source=1&gclid=Cj0KCQjwzZmwBhD8ARIsAH4v1gWSCnLo

Course Description

1. Course Name:
Headway Plus Upper- Intermediate
2. Course Code:
3. Semester / Year:
Semester
4. Description Preparation Date:
28/٣/2024
5. Available Attendance Forms:
Attendance in classrooms
6. Number of Credit Hours (Total) / Number of Units (Total)
30 hours / 15 units
7. Course administrator's name (mention all, if more than one name)
Name: Prof.Dr. Ali Sabah Jameel Email: alisabah40@uoanbar.edu.iq
8. Course Objectives

Course Objectives	• Training students in creative reading. • Mastering language skills, mastering writing, and developing a cognitive vocabulary store. • The ability to use multiple types of reading. • Understand written materials, and distinguish between concepts. • Analyze text to divide information into parts. • Forming a coherent cognitive text that expresses information in a specific field

9. Teaching and Learning Strategies	
Strategy	Modern lecture, group work, and using technology tool.

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or Subject Name	Learning Method	Evaluation Method
1	2	**As mentioned in item 8**	**No place Like Home.**		
2	2	**As mentioned in item 8**	**Been there, Done That!**		
3	2	**As mentioned in item 8**	**What a Story.**		
4	2	**As mentioned in item 8**	**Review Units 1, 2, and 3.**		
5	2	**As mentioned in item 8**	**Nothing But the Truth.**		

6	2	**As mentioned in item 8**	**An Eye to the Future.**		
7	2	**As mentioned in item 8**	**Making it Big.**		
8	2	**As mentioned in item 8**	**Mid-Term Exam**		
9	2	**As mentioned in item 8**	**Getting on together.**		
10	2	**As mentioned in item 8**	**Going to Extremes.**		
11	2	**As mentioned in item 8**	**Things ain't What they Used to Be!**		
12	2	**As mentioned in item 8**	**Risking Life and Limb.**		
13	2	**As mentioned in item 8**	**In Your Dreams.**		
14	2	**As mentioned in item 8**	**It is Never too Late.**		
15	2	**As mentioned in item 8**	**Review Units 7 -12.**		

11. Course Evaluation

The evaluation process consisted of 2 mid-term exams allotted 40 marks, and summative exam allotted 60 marks.

12.Learning and Teaching Resources

Required textbooks (curricular books, if any)	Headway Plus Upper- Intermediate.
Main references (source)	
Recommended books and references (scientific journals, reports…)	
Electronic references, websites.	