Ministry of Higher Education and Scientific Research
Scientific Supervision and Scientific Evaluation Apparatus
Directorate of Quality Assurance and Academic Accreditation
Accreditation Department
College of education for pure sciences
Department of biology

Academic Program and Course Description Guide

2025

Introduction:

The educational program is a well-planned set of courses that include procedures and experiences arranged in the form of an academic syllabus. Its main goal is to improve and build graduates' skills so they are ready for the job market. The program is reviewed and evaluated every year through internal or external audit procedures and programs like the External Examiner Program.

The academic program description is a short summary of the main features of the program and its courses. It shows what skills students are working to develop based on the program's goals. This description is very important because it is the main part of getting the program accredited, and it is written by the teaching staff together under the supervision of scientific committees in the scientific departments.

This guide, in its second version, includes a description of the academic program after updating the subjects and paragraphs of the previous guide in light of the updates and developments of the educational system in Iraq, which included the description of the academic program in its traditional form (annual, quarterly), as well as the adoption of the academic program description circulated according to the letter of the Department of Studies T 3/2906 on 3/5/2023 regarding the programs that adopt the Bologna Process as the basis for their work.

In this regard, we can only emphasize the importance of writing an academic programs and course description to ensure the proper functioning of the educational process.

Concepts and terminology:

Academic Program Description: The academic program description provides a brief summary of its vision, mission and objectives, including an accurate description of the targeted learning outcomes according to specific learning strategies.

Course Description: Provides a brief summary of the most important characteristics of the course and the learning outcomes expected of the students to achieve, proving whether they have made the most of the available learning opportunities. It is derived from the program description.

Program Vision: An ambitious picture for the future of the academic program to be sophisticated, inspiring, stimulating, realistic and applicable.

Program Mission: Briefly outlines the objectives and activities necessary to achieve them and defines the program's development paths and directions.

Program Objectives: They are statements that describe what the academic program intends to achieve within a specific period of time and are measurable and observable.

Curriculum Structure: All courses / subjects included in the academic program according to the approved learning system (quarterly, annual, Bologna Process) whether it is a requirement (ministry, university, college and scientific department) with the number of credit hours.

Learning Outcomes: A compatible set of knowledge, skills and values acquired by students after the successful completion of the academic program and must determine the learning outcomes of each course in a way that achieves the objectives of the program.

Teaching and learning strategies: They are the strategies used by the faculty members to develop students' teaching and learning, and they are plans that are followed to reach the learning goals. They describe all classroom and extra-curricular activities to achieve the learning outcomes of the program.

Academic Program Description Form

University Name: .. Al-Muthanna University

Faculty/Institute: .....College of Education For Pure Sciences

Scientific Department: Biology

Academic or Professional Program Name: B. Edu. in Biology

Final Certificate Name: B. Edu. in Biology

Academic System: Yearly

Description Preparation Date:

File Completion Date:

Signature:

Head of Department Name:
Asst. Prof. Dr. Dhay Ali Azeez

Date: 6/10/2024

Signature:

Scientific Associate Name:
Prof. Dr. Mohammed Alsaahn

Date: 6/10/2024

The file is checked by: Mustafa Abbas Fadhel

Department of Quality Assurance and University Performance

Director of the Quality Assurance and University Performance Department:

Date: 8/10/2024

Signature:

Approval of the Dean

1. **Program Vision**
Program vision is written here as stated in the university's catalogue and website.

2. **Program Mission**
Program mission is written here as stated in the university's catalogue and website.

3. **Program Objectives**
General statements describing what the program or institution intends to achieve.

4. **Program Accreditation**
Does the program have program accreditation? And from which agency?

5. **Other external influences**
Is there a sponsor for the program?

6. **Program Structure**

Program Structure	Number of Courses	Credit hours	Percentage	Reviews*
Institution Requirements				
College Requirements				
Department Requirements				
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**

8. Expected learning outcomes of the program	
Knowledge	
Learning Outcomes 1	Learning Outcomes Statement 1
Skills	
Learning Outcomes 2	Learning Outcomes Statement 2
Learning Outcomes 3	Learning Outcomes Statement 3
Ethics	
Learning Outcomes 4	Learning Outcomes Statement 4
Learning Outcomes 5	Learning Outcomes Statement 5

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

10. Evaluation methods
Implemented at all stages of the program in general.

11. Faculty			
Faculty Members			
Academic Rank	**Specialization**	**Special Requirements/Skills (if applicable)**	**Number of the teaching staff**

	General	Special			Staff	Lecturer

Professional Development
Mentoring new faculty members
Briefly describes the process used to mentor new, visiting, full-time, and part-time faculty at the institution and department level.
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)

13. The most important sources of information about the program

State briefly the sources of information about the program.

14. Program Development Plan

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

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

Course Description Form

1. Course Name:
GENERAL BIOLOGY
2. Course Code:
Bio 100
3. Semester / Year:
2024-2025
4. Description Preparation Date:
2024-2025
5. Available Attendance Forms
: Daily attendance
6. Number of Credit Hours (Total) / Number of Units (Total):
٢ hours (theoretical) + 2 hours (practical) / 6 units
7. Course administrator's name (mention all, if more than one name)
Name: Pro.dr. yassir dakheel kremsh alasadiy Email: dr.yassiralasadiy@mu.edu.iq
8. Course Objectives

Course Objectives	Give a complete idea of zoology, botany and what has to do with other science
9. Teaching and Learning Strategies	
Strategy	1- Lecture, use of the blackboard and presentation 2- Demonstration (using graphs, pictures and educational films using a data projector) 3- Interactive discussion 4- Self-education

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	4	knowledge	**Overview Historical review of the growth of biology**	-Lecture, use of the blackboard and presentation -Demonstration (using graphs, pictures and educational films using a data projector) -Interactive discussion -Self-education - Open educational classes using the Classroom platform	Theoretical, practical/oral and written examinations (daily, monthly and midterm exam) and scientific reports
2	4	knowledge	**Evolution of biology**	**====**	**====**
3	4	knowledge	**The importance of biology**	**====**	**====**

4	4	knowledge	Branches of Biology	====	====
5	4	knowledge	Characteristics of life Definition of qualities of life The main method of construction of living matter	====	====
6	4	knowledge	Classification systems	====	====
7	4	knowledge	Classification of living organisms Historical stages	====	====
8	4	knowledge	Plant and animal classification bases Concept of species	====	====
9	4	knowledge	Reproduction and growth in plant	====	====
10	4	knowledge	completed :Reproduction and growth in plants	====	====
11	4	knowledge	Reproduction and growth in animals	====	====
12	4	knowledge	completed :Reproduction and growth in animals	====	====
13	4	knowledge	Coordination in animals	====	====
14	4	knowledge	Coordination in Human	====	====
15	4	knowledge	Coordination in plants	====	====
16	4	knowledge	Evolution The most important concepts of evolution	====	====
17	4	knowledge	Theories of Evolution Lamarck Theory Darwinism	====	====
18	4	knowledge	Evolution of low animals	====	====
19	4	knowledge	Evolution of vertebrates	====	====
20	4	knowledge	Animal behavior	====	====
21	4	knowledge	Nervous system and behavior	====	====
22	4	knowledge	Fatal and learner behavior	====	====
23	4	knowledge	Orientation in time and space	====	====
24	4	knowledge	Collective movement and migration	====	====
25	4	knowledge	Monotony and the biological clock	====	====
26	4	knowledge	Hierarchical Dominance in Animal Groups	====	====
27	4	knowledge	Ecology Some concepts of ecology	====	====
28	4	knowledge	Biological spectrum - ecosystem (Biogeochemical Cycles and relationships)	====	====

29	**4**	knowledge	**The human concept of ecology and its most important divisions , The concept of groups Population density**	**====**	**====**
30	**4**	knowledge	**Home ranges Ecological pyramids Major natural ecosystems**	**====**	**====**

11. Course Evaluation

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

40 marks (5 marks for the first monthly exam + 5 marks for the second monthly exam + 10 marks for the midterm exam) + 10 marks for daily preparation and daily tests + 5 marks for the first practical exam + 5 marks for the second monthly practical exam)
60 marks (20 marks final practical exam + 40 marks final theoretical exam)

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	not available
Main references (sources)	General Zoology - for undergraduate - third edition Written by Dr. Mohammed Ammar Al-Rawi with a group of animal science professors Animal biology - Part II and III Written by Ahmad Hammad Al - Husseini and Amal 1995 Practical Plant Part I and II Written by Dr. Hazem Al-Alusi and Dr. Abdul Raouf Sayala 1989 The basics of modern ecology - authored by Dr. Kadhim Al – Mikdadi,2017
Recommended books and references (scientific journals, reports…)	Biology - Reviewed and written by Prof. Dr. Hussein Ali Al-Saadi and Prof. Dr. Hussein Abdel Moneim Daoud University of Baghdad - 2005
Electronic References, Websites	Websites available on Google Chrome

Course Description Form

1. Course Name:
Plant Anatomy
2. Course Code:
Bio 101
3. Semester / Year:
2024−2025
4. Description Preparation Date:
2024−2025
5. Available Attendance Forms
: Daily attendance
6. Number of Credit Hours (Total) / Number of Units (Total):
٢ hours (theoretical) + 2 hours (practical) / 6 units
7. Course administrator's name (mention all, if more than one name)
Name: Mr. Asmaa Sahib Abdul Abbas Email: asmaa.sahib@mu.edu.iq
8. Course Objectives

Course Objectives	**Identify the parts of the plant, their functions, and the method of dissecting each part**
9. Teaching and Learning Strategies	
Strategy	1- Delivering the Lecture and using the board. 2- Demonstration (using the data show- using educational images and videos) . 3- Interactive discussion. 4- Self-education.

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	**4**	knowledge	**Introduction to plant anatomy**	Lecture, using the board, delivery and Demonstration (using educational images and videos using the data show, interactive discussion and -Self-education (Open) Google Classroom Class on	Theoretical, practical/oral and written examinations (daily, monthly and midterm exam) and scientific reports
2	**4**	knowledge	**The difference**	Lecture, using the board, delivery	-------

			between plant cells and animal cells	and Demonstration (using educational images and videos using the data show, interactive discussion and -Self-education (Open) Google Classroom Class on	
3	**4**	knowledge	**Plant cell / General and chemical components / Functions**	Lecture, using the board, delivery and Demonstration (using educational images and videos using the data show, interactive discussion and -Self-education (Open) Google Classroom Class on	--------
4	**4**	knowledge	**Internal structure of roots / Root hairs / Epidermis**	Lecture, using the board, delivery and Demonstration (using educational images and videos using the data show, interactive discussion and -Self-education (Open) Google Classroom Class on	--------
5	**4**	knowledge	**Internal structure of the stem/ skin / Epidermis / Cortex / Vascular cylinder**	Lecture, using the board, delivery and Demonstration (using educational images and videos using the data show, interactive discussion and -Self-education (Open) Google Classroom Class on	-------
6	**4**	knowledge	**Protoplasm / Its components, functions**	Lecture, using the board, delivery and Demonstration (using educational images and videos using the data show, interactive discussion and -Self-education (Open) Google Classroom Class on	---------
7	**4**	knowledge	**/ Golgi bodies / Endoplasmic reticulum**	Lecture, using the board, delivery and Demonstration (using educational images and videos using the data show, interactive discussion and -Self-education (Open) Google Classroom Class on	----------
8	**4**	knowledge	**Plastids / Their types, functions**	Lecture, using the board, delivery and Demonstration (using educational images and videos using the data show, interactive discussion and -Self-education (Open) Google Classroom Class on	-------
9	**4**	knowledge	**Ribosomes / Mitochondria / Lysosomes / Nucleus / Nucleoplasm / Vacuoles / Their**	Lecture, using the board, delivery and Demonstration (using educational images and videos using the data show, interactive discussion and	--------

			functions	-Self-education (Open) Google Classroom Class on	
10	**4**	knowledge	**Crystals / Starch / Difference between cavities /**	Lecture, using the board, delivery and Demonstration (using educational images and videos using the data show, interactive discussion and -Self-education (Open) Google Classroom Class on	--------
11	**4**	knowledge	**Theories of the development of Plant tissues**	Lecture, using the board, delivery and Demonstration (using educational images and videos using the data show, interactive discussion and -Self-education (Open) Google Classroom Class on	-------
12	**4**	knowledge	**Meristematic tissues and their types**	Lecture, using the board, delivery and Demonstration (using educational images and videos using the data show, interactive discussion and -Self-education (Open) Google Classroom Class on	---------
13	**4**	knowledge	**Types of permanent tissue and their shapes / Functions of tissues**	Lecture, using the board, delivery and Demonstration (using educational images and videos using the data show, interactive discussion and -Self-education (Open) Google Classroom Class on	----------
14	**4**	knowledge	**Perenchyma tissue / Collenchyma tissue, storage and aerial / Fibers**	Lecture, using the board, delivery and Demonstration (using educational images and videos using the data show, interactive discussion and -Self-education (Open) Google Classroom Class on	-------
15	**4**	knowledge	**Connective tissues, their types, locations and functions**	Lecture, using the board, delivery and Demonstration (using educational images and videos using the data show, interactive discussion and -Self-education (Open) Google Classroom Class on	--------
16	**4**	knowledge	**Primary epidermis and surrounding epidermis**	Lecture, using the board, delivery and Demonstration (using educational images and videos using the data show, interactive discussion and -Self-education (Open) Google Classroom Class on	--------
17	**4**	knowledge	**Skin tags, types**	Lecture, using the board, delivery	-------

				and Demonstration (using educational images and videos using the data show, interactive discussion and -Self-education (Open) Google Classroom Class on	
18	**4**	knowledge	**Guard cells and their types**	Lecture, using the board, delivery and Demonstration (using educational images and videos using the data show, interactive discussion and -Self-education (Open) Google Classroom Class on	---------
19	**4**	knowledge	**Internal structure of the flower, its parts / its origin / fruits, their structure, origin**	Lecture, using the board, delivery and Demonstration (using educational images and videos using the data show, interactive discussion and -Self-education (Open) Google Classroom Class on	----------
20	**4**	knowledge	**Pharma tissue / cork cambium and vascular cambium / sieve tube / companion cells**	Lecture, using the board, delivery and Demonstration (using educational images and videos using the data show, interactive discussion and -Self-education (Open) Google Classroom Class on	-------
21	**4**	knowledge	**Xylem tissue / fibers, tracheids and regular tracheids / primary wood and secondary wood**	Lecture, using the board, delivery and Demonstration (using educational images and videos using the data show, interactive discussion and -Self-education (Open) Google Classroom Class on	--------
22	**4**	knowledge	**Cambium / primary, fascicle, vascular / types of spring summer wood / fascicles and their types**	Lecture, using the board, delivery and Demonstration (using educational images and videos using the data show, interactive discussion and -Self-education (Open) Google Classroom Class on	--------
23	**4**	knowledge	**Vascular cylinder / its types, wood is widespread Pores, annular pore wood/ core wood, soft wood**	Lecture, using the board, delivery and Demonstration (using educational images and videos using the data show, interactive discussion and -Self-education (Open) Google Classroom Class on	-------
24	**4**	knowledge	**Secretory cells and tissues, their origin / water stomata /**	Lecture, using the board, delivery and Demonstration (using educational images and videos using the data show, interactive discussion and	---------

			external or human glands / hairs / internal or spherical glands	-Self-education (Open) Google Classroom Class on	
25	**4**	knowledge	**Tubular secretory ducts / resin ducts, gum ducts / structures and milk ducts, their types**	Lecture, using the board, delivery and Demonstration (using educational images and videos using the data show, interactive discussion and -Self-education (Open) Google Classroom Class on	----------
26	**4**	knowledge	**Flower structure**	Lecture, using the board, delivery and Demonstration (using educational images and videos using the data show, interactive discussion and -Self-education (Open) Google Classroom Class on	-------
27	**4**	knowledge	**Dissection and differentiation of flower parts of a group of plants different in shape, color, structure and contents**	Lecture, using the board, delivery and Demonstration (using educational images and videos using the data show, interactive discussion and -Self-education (Open) Google Classroom Class on	--------
28	**4**	knowledge		Lecture, using the board, delivery and Demonstration (using educational images and videos using the data show, interactive discussion and -Self-education (Open) Google Classroom Class on	--------
29	**4**	knowledge	**Dissection of a group of fruits of different plants and differentiation of differences in shape and structure**	Lecture, using the board, delivery and Demonstration (using educational images and videos using the data show, interactive discussion and -Self-education (Open) Google Classroom Class on	-------
30	**4**	knowledge	**Study some of the anatomical structures that plants have shown to adapt to their surrounding environment**	Lecture, using the board, delivery and Demonstration (using educational images and videos using the data show, interactive discussion and -Self-education (Open) Google Classroom Class on	--------

11. Course Evaluation

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

40 marks (5 marks for the first monthly exam + 5 marks for the second monthly exam + 15 marks for the midterm exam) + 5 marks for daily preparation and daily tests)
60 marks (40 marks final theoretical exam)

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	not available
Main references (sources)	**Basics of Plant Anatomy / Dr. Badri Awad, Dr. Qaisar Najib**
Recommended books and references (scientific journals, reports…)	**Plant Anatomy Principles and Applications /Talib Awad Al-Kharji,Zahraa Bakr Muhammad** **Plant Anatomy/ Dr. Khazal Dabaa**
Electronic References, Websites	

Course Description Form

1. Course Name:
Cell Bilogy
2. Course Code:
Bio 102
3. Semester / Year:
2024-2025
4. Description Preparation Date:
2024-2025
5. Available Attendance Forms
: Daily attendance
6. Number of Credit Hours (Total) / Number of Units (Total) :
٢hours (theoretical) / Number of Units 6
7. Course administrator's name (mention all, if more than one name)
Name: Lecturer. dr. Fouad Qasim Jubair Al-Zayadi Email: fouad.qasim@mu.edu.iq
8. Course Objectives

Course Objectives	Cell biology is considered one of the very important topics in the Department of Life Sciences due to the great importance it represents in knowing the cell's structures, components, and the behavior of its divisions.
9. Teaching and Learning Strategies	
Strategy	1- Lecture, use of the blackboard and presentation 2- Demonstration (using graphs, pictures and educational films using a data projector) 3- Interactive discussion 4- Self-education

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	1	knowledge	**Modern theory of the cell**	-Lecture, use of the blackboard and presentation -Demonstration (using graphs, pictures and educational films	Theoretical, practical/oral and written examinations (daily, monthly and midterm exam) and scientific reports

				using a data projector) -Interactive discussion -Self-education - Open educational classes using the Classroom platform	
2	**2**	knowledge	**Comparison between eukaryote, prokaryote cells and viruses**	**====**	**====**
3	**2**	knowledge	**Chemical components of the cell**	**====**	**====**
4	**2**	knowledge	**Methods of studying cells - types of microscopes**	**====**	**====**
5	**2**	knowledge	**Cutting method - smear preparation - centrifugation**	**====**	**====**
6	**2**	knowledge	**Cellular membranes - a brief overview of the development of biological membranes**	**====**	**====**
7	**2**	knowledge	**Fluid mesaic model - the passage of materials through membranes**	**====**	**====**
8	**2**	knowledge	**Cytoplasmic vacuolar system**	**====**	**====**
9	**2**	knowledge	**Components of the cytoplasm - the endoplasmic reticulum, its types and functions - the Golgi apparatus**	**====**	**====**
10	**2**	knowledge	**Lysosomes - Microbodies and their types - Ribosomes**	**====**	**====**
11	**2**	knowledge	**Energy organelles**	**====**	**====**
12	**2**	knowledge	**Mitochondria**	**====**	**====**
13	**2**	knowledge	**Chloroplast**	**====**	**====**
14	**2**	knowledge	**Light reactions and carbon dioxide fixation**	**====**	**====**
15	**2**	knowledge	**Central bodies, cilia and flagella**	**====**	**====**
16	**2**	knowledge	**Types of genetic material**	**====**	**====**
17	**2**	knowledge	**Cloning of genetic material**	**====**	**====**
18	**2**	knowledge	**Chromosomes and their types**	**====**	**====**
19	**2**	knowledge	**Genetic expression of proteins (translation)**	**====**	**====**
20	**2**	knowledge	**Cellular division**	**====**	**====**
21	**2**	knowledge	**Direct and non-mitotic division**	**====**	**====**
22	**2**	knowledge	**Mitosis**	**====**	**====**
23	**2**	knowledge	**Meiosis**	**====**	**====**
24	**2**	knowledge	**Reproductive cycle**	**====**	**====**
25	**2**	knowledge	**Study of the phenomenon of crossing over and genetic mutation**	**====**	**====**

26	**2**	knowledge	**Regulating cell divisions - important factors**	**====**	**====**
27	**2**	knowledge	**Cancer cells - how they form and behave**	**====**	**====**
28	**2**	knowledge	**Study of cellular components under an electron microscope**	**====**	**====**
29	**2**	knowledge	**Animal tissues**	**====**	**====**
30	**2**	knowledge	**Types of animal tissues**	**====**	**====**

11. Course Evaluation

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

40 marks (5 marks for the first monthly exam + 5 marks for the second monthly exam + 15 marks for the midterm exam) + 5 marks for daily preparation and daily tests)
60 marks (40 marks final theoretical exam+20 marks final practical exam)

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	not available
Main references (sources)	Cell Biology - Gabriel Barhoum Aziz - University of Mosul
Recommended books and references (scientific journals, reports…)	Cell Biolgy- Pollard (2017)
Electronic References, Websites	

Course Description Form

1. Course Name:
Fungi
2. Course Code:
Bio 302
3. Semester / Year:
2023-2024
4. Description Preparation Date:
2023-2024
5. Available Attendance Forms
: Daily attendance
6. Number of Credit Hours (Total) / Number of Units (Total):
2 hours (theoretical) 2 hours(practical)
7. Course administrator's name (mention all, if more than one name)
Name: lecturer israa hamdan Email: israa.hamdan@mu.edu.iq
8. Course Objectives

Course Objectives	1- Teaching students about laboratory work and dealing with tools and chemicals 2- Teaching students to prepare solutions and perform chemical calculations 3- Providing students with the skill of scientific research into cause and effect 4- Teaching students some organic reactions
9. Teaching and Learning Strategies	
Strategy	Education strategy collaborative concept planning. 2- Brainstorming education strategy. 3- Education Strategy Notes Series

10. Course Structure					
Week	**Hours**	**Required Learning Outcomes**	**Unit or subject name**	**Learning method**	**Evaluation method**
1	**2**	knowledge	**Explanation of the material in detail**	A student who	Weekly, monthly,

			Review the article and Connect it to life **Questions and answers Cozas**	knows how to handle dangerous and toxic chemicals He also knows the correct handling method in the laboratory He is good at explaining chemistry and linking it to biology, as he is a life sciences teacher In addition to the skill of chemical calculations We teach organic reactions and their benefits in daily life	daily, written exams, and the end-of-year exam.

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11. Course Evaluation	
The distribution is as follows: the first semester exam is 5%, the second semester is 5%, and the half year is 15%, the first semester practical exam is 5%, and the second semester practical exam is 5%, in addition to absences 3%.	
12. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	
Main references (sources)	
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	Websites available on Google Chrome

Course Description Form

1. Course Name:
Geology
2. Course Code:
Bio 104
3. Semester / Year:
٢٠٢٥_٢٠٢٤
4. Description Preparation Date:
٢٠٢٥_٢٠٢٤
5. Available Attendance Forms
: Daily attendance
6. Number of Credit Hours (Total) / Number of Units (Total):
٢ hours (theoretical)
7. Course administrator's name (mention all, if more than one name)
Name: Assist. Pro.dr. Nadia Hussein Ali Email: nadiasaoudi@mu.edu.iq
8. Course Objectives

Course Objectives	Providing information about Earth science and the related natural processes that affect the Earth's crust and the Earth's interior, the composition of rocks, their surface and subterranean appearances, the processes affecting them, the methods of their formation, the economic minerals they contain, and how to search for and exploit them, as well as the methods of the presence of groundwater and petroleum, and the scientific methods for searching for them.

9. Teaching and Learning Strategies	
Strategy	1- Lecture, use of the blackboard and presentation 2- Demonstration (using graphs, pictures and educational films using a data projector) 3- Interactive discussion 4- Self-education

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2	knowledge	**Branches of geology and their**	-Lecture, use of the blackboard and	Theoretical, practical/oral and

			relationship to other sciences	presentation -Demonstration (using graphs, pictures and educational films using a data projector) -Interactive discussion -Self-education - Open educational classes using the Classroom platform	written examinations (daily, monthly and midterm exam) and scientific reports
2	**2**	knowledge	**Earth's structure and structure**	**====**	**====**
3	**2**	knowledge	**Earth covers Gas, water and lithosphere**	**====**	**====**
4	**2**	knowledge	**The interior of the earth: the crust, the core, and the core**	**====**	**====**
5	**2**	knowledge	**Elements that make up the crust**	**====**	**====**
6	**2**	knowledge	Theories of the creation of the universe (theories of the solar system)	**====**	**====**
7	**2**	knowledge	Plate theory	**====**	**====**
8	**2**	knowledge	**Minerals (natural properties of minerals, chemical composition of minerals)**	**====**	**====**
9	**2**	knowledge	Classification of minerals	====	**====**
10	**2**	knowledge	Description of the most common minerals	====	**====**
11	**2**	knowledge	Rocks (types of rocks, rock cycle in nature, igneous rocks)	**====**	**====**
12	**2**	knowledge	Chemical composition of rocks	**====**	**====**
13	**2**	knowledge	Sedimentary rocks (weathering and erosion)	**====**	**====**
14	**2**	knowledge	Chemical and mineral composition	**====**	**====**
15	**2**	knowledge	**Classification of sedimentary rocks**	**====**	**====**
16	**2**	knowledge	Metamorphic rocks (types of metamorphic rocks, classification of metamorphic rocks)	**====**	**====**
17	**2**	knowledge	Geological time	====	**====**
18	**2**	knowledge	Fossils	**====**	**====**
19	**2**	knowledge	Metamorphic rocks (types of metamorphic rocks, classification of metamorphic rocks)	**====**	**====**
20	**2**	knowledge	Geological time	**====**	**====**
21	**2**	knowledge	Fossils	**====**	**====**
22	**2**	knowledge	Earthquakes	====	**====**
23	**2**	knowledge	Factors affecting the occurrence of earthquakes	====	**====**
24	**2**	knowledge		====	**====**
25	**2**	knowledge		**====**	**====**

26	**2**	knowledge		**====**	**====**
27	**2**	knowledge		**====**	**====**
28	**2**	knowledge		**====**	**====**
29	**2**	knowledge		**====**	**====**
30	**2**	knowledge		**====**	**====**

11. Course Evaluation

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

40 marks (5 marks for the first monthly exam + 5 marks for the second monthly exam + 15 marks for the midterm exam) + 5 marks for daily preparation and daily tests)
60 marks (40 marks final theoretical exam)

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	not available
Main references (sources)	
Recommended books and references (scientific journals, reports…)	
Electronic References, Websites	Websites available on Google Chrome

ش

Course name:Principles of Education.١٣

codeThe decision: CREQ 101.١٤

the chapter /Year:Semester 2024-2025.١٥

Date of preparation of thisDescription: 19/1/2025.١٦

AAvailable attendance forms: In-person lectures in classrooms..١٧

Number of study hours (total) / Number of units (total) 1 hour per week / 1 unit.١٨

Course Instructor Name(If more than one name is mentioned) .١٩

the name: M.M Nebras Traveler Thankful **Email:**nibrasmosafr@mu.edu.iq

Goals The decision .20

Is The material Academic/Providing the student with knowledge about the basics cation and its relationship to the general foundations of life.	**eparing the student to know the concept of education and its objectives. Its functions and characteristics. *Introducing the student to the historical roots of education. Student's knowledge of economic, social and scientific foundations For education. *The student's knowledge of the child's life in Islamic law.**

Strategies education And learning .21

AFor strategy	**modern teaching strategies and methods including:MethodsTeaching and learning for development tudent motivation to learn and instill a spirit of competition to achieve the desired educational goals.**

Course structure .٢٢

Evaluation	Learnin	Name of the unit or	Required learning outcomes	W	The

method	g method	topic		at c h e s	week
- Questions Calendar. Assignment Students By writing Reports on ndations of Education	creditation road - Discussion ective - Storm Mental	clarification Goals The material/ concept of education and its importance. racteristics and - functions of education. orical growth of - education (education mitive -Chinese-Greek-Egyptian- nic - Media of Arab Thought and Media Greek thought). al basis (educational - role) the family - the educational role of the school-Foundations cational cooperation between family and school). nomic basis (the - difference between cation and development- Motives for spending on cation - Social and Economic Development elopment means-Economic return on education cation financing-Primary sources To finance education) ntific basis (concept of - science) objectives - the importance of scientific education - the method ntific and its foundations and aracteristics of scientific research iculties of the scientific method in the social sciences.	Knowing the term education And education Historical foundations of education social basis Economic basis Scientific basis The role of the child in Sharia Islamic	3	he week 1 The week 2 The week 3 The week 4 The week 5 The week 6 The week 7 The week 8 The week 9 ne week 10 Week 11 Week 12 Week 13 Week 14 Week 15 he week16 he week17 18 19 20

		erminants of the scientific method in the social sciences. dren's rights in Islamic law - w did the Messenger, peace upon him, deal with people in his time? child-Islam and Child Education - Rights d in education-Principles of parenting The child in Islamic law. role of the family and the university in reducing gative phenomena in society (drug phenomenon)			

Course Evaluation .٢٣

distribution Degree from**100**According to Tasks The person in charge With it The student like preparation Daily And tests Daily Oral and exams Monthly and editorial and reports....etc

Exam of the monththe first/ 10 degrees. -1

Reportsweekly/ 2 degrees. -2

Attendance / 3 marks. -3

Second month exam / 15 points. -4

Third month exam/ 10 points. -5

Final exam / 60 marks. -6

sources Learning And teaching .24

nothing	Books The reporter Required(methodology that I found)
ninations in the Fundamentals of Education / Dr. Qasim Ali Qahwan	the reviewer President(Sources)
Family and Child Rearing / Hoda Mahmoud Al-Nashef	Books References chock that Recommended With it(Magazines Scientific, Reports....
Locations that There is In it Lectures that Related In education Modern.	the reviewer Electronic , Sites The Internet

Course Description Form

1. Course Name:

Computer

2. Course Code:

UREQ ١٠٣

3. Semester / Year:

2024-2025/ first stage

4. Description Preparation Date:

2024-2025

5. Available Attendance Forms

: 2 hours per week

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

6٠ hours /2 unit

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

Name: Shaimaa Kareem Abdullah Email: **shaimaa.kareem@mu.edu.iq**

8. Course Objectives

Course Objectives	• To effectively use computers and understand operating systems, file management, and folder organization. • To use Microsoft Office programs such as Word, Excel, and PowerPoint. • To navigate the internet, search for information, and communicate through email and web pages.

9. Teaching and Learning Strategies

Strategy	• Direct Instruction: Involves the teacher providing guidance, transferring knowledge and concepts, presenting information clearly, and guiding discussions and learning activities. • Blended Learning: Aims to integrate traditional and electronic elements in the learning process. Modern technology and electronic tools are used alongside traditional methods such as face-to-face lessons and printed books. • Collaboration and Interaction: Encourages collaboration between learners and between the teacher and students, including group work, discussions, and interactive learning. • Active Learning: Encourages students to actively participate in the learning process, including engaging in hands-on activities and practical application of concepts. • Problem-Based Learning: Focuses on solving real problems and challenges that students face. This includes problem analysis and application of strategies to solve them.

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
First	2	Introduction to Computer: Concepts of Hardware and Software with their components.	Computer Basics.	Theoretical	Daily quizzes + Questions and Answers
Second	2	Introduction to Computer (Cont.): Concept of Computing, Data and Information; Applications of Information Connecting input/output devices, and peripherals to CPU.	Computer Basics.	Theoretical	Daily quizzes.
Third	2	Computer Components: Computer Portions, Hardware Parts, I/O Units.	.	Theoretical	Daily quizzes + Questions and Answers
Fourth	2	Computer Components (Cont.): Memory Types: Volatile and Non-Volatile Memory, Secondary Storage.	======	Theoretical	Daily quizzes + Questions and Answers
Fifth	2	Computer Components (Cont.): CPU Components: Control Unit (CU), Arithmetic Logic Unit (ALU) and Registers.	======	Theoretical	Daily quizzes + Questions and Answers
Sixth	2	Computer Components (Cont.): Computer Ports, Personal Computer (Features and Types).	======	Theoretical	Questions and Answers
Seventh	2	Operating System and Graphical User Interface GUI: Operating System; Basics of Common Operating Systems; The User Interface, Using Mouse Techniques.	======	Theoretical & practical	Questions and Answers
Eighth	2	Operating System and Graphical User Interface GUI (Cont.): Use of Common Icons, Status Bar, Using Menu and Menu-selection.	======	Theoretical & practical	Daily quizzes + Questions and Answers
Ninth	2	Operating System and Graphical User Interface GUI (Cont.): Concept of Folders and Directories, Opening and closing of different Windows; Creating Short cuts.	======	Theoretical & practical	Daily quizzes + Questions and Answers
Tenth	2	Operating System and Graphical User Interface GUI (Cont.): Customization and Personalization of GUIs, Accessibility Features in GUIs, User Experience (UX).	======	Theoretical & practical	Questions and Answers
Eleventh	2	Word Processing: Word Processing Basics; Basic Features of Word Processors, Opening and Closing of documents.	Word	Theoretical & practical	Daily quizzes + Oral questions and answers.
Twelfth	2	Word Processing (Cont.): Text creation and Manipulation; Formatting Text and Paragraphs, Using Templates for Document Creation.	======	Theoretical & practical	Daily quizzes.
Thirteenth	2	Word Processing (Cont.): Creating and Managing Tables, Utilizing Styles and Themes.	======	Theoretical & practical	Daily quizzes + Questions and Answers
Fourteenth	2	Word Processing (Cont.): Spell Check and Grammar Tools, Using Headers	======	Theoretical & practical	

		and Footers.			
Fifteenth	**2**	Spread Sheet: Introduction to Spreadsheet Software, Creating and Formatting Worksheets.	Excel	Theoretical & practical	Daily quizzes + Questions and Answers.
Sixteenth	**2**	Spread Sheet (Cont.): Sorting and Filtering Data, Using Formulas and Functions	======	Theoretical & practical	Daily quizzes + Questions and Answers.
Seventeenth		Spread Sheet (Cont.): Using Formulas and Functions, Using Pivot Tables for Data Analysis.	======	Theoretical & practical	
Eighteenth	**2**	Spread Sheet (Cont.): Data Validation and Error Checking, Data Visualization: Creating Charts and Graphs.	======	Theoretical & practical	Daily quizzes + Questions and Answers.
Nineteenth	**2**	Presentation Software: Introduction to Presentation Software, Overview of Popular Presentation Tools, Creating a New Presentation.	PowerPoint	Theoretical & practical	Daily quizzes + Oral questions and answers.
Twentieth	**2**	Presentation Software (Cont.): Using Templates and Themes, Inserting and Formatting Text and Images, Transition and Animation Effects.	======	Theoretical & practical	Daily quizzes + Questions and Answers.
Twenty-first	**2**	Presentation Software (Cont.): Using Speaker Notes and Timers, Advanced Features: Hyperlinks and Action Buttons.	======	Theoretical & practical	Daily quizzes + Oral questions and answers.
Twenty-second	**2**	Presentation Software (Cont.): Troubleshooting Common Presentation Issues, Future Trends in Presentation Technology	======	Theoretical & practical	Daily quizzes + Questions and Answers.
Twenty-third	**2**	Introduction to Internet and Web Browsers: Computer networks Basic; LAN, WAN.	Internet and Web Browsers	Theoretical & practical	Daily quizzes + Oral questions and answers.
Twenty-fourth	**2**	Introduction to Internet and Web Browsers (Cont.): Concept of Internet and its Applications; connecting to internet.	======	Theoretical & practical	Daily quizzes + Practical skills.
Twenty-fifth	**2**	Introduction to Internet and Web Browsers (Cont.): World Wide Web; Web Browsing software's, Search Engines.	======	Theoretical & practical	Daily quizzes + Questions and Answers.
Twenty-sixth	**2**	Introduction to Internet and Web Browsers (Cont.): Understanding URL; Domain name; IP Address.	======	Theoretical & practical	Daily quizzes + Oral questions and answers.
Twenty-seventh	**2**	Communications and Emails: Basics of electronic mail; Getting an email account; Sending and receiving emails; Accessing sent emails; Using Emails; Document collaboration.	Communications and Emails	Theoretical & practical	Daily quizzes + Questions and Answers.
Twenty-eighth	**2**	Communications and Emails (Cont.): Sending and receiving emails; Accessing sent emails; Using Emails; Document collaboration.	======	Theoretical & practical	Daily quizzes + Oral questions and answers.
Twenty-ninth	**2**	Introduction to Cloud Computing and Services: Definition of Cloud Computing and its concept, Cloud-Based Office Suites (Office 365 and Google Workspace).	======	Theoretical & practical	Daily quizzes + Practical skills.
Thirtieth	**2**	Introduction to Cloud Computing and	======	Theoretical &practical	Daily quizzes + Oral questions and answers.

		Services (Cont.): Google Workspace: Google Docs, Google Sheets, Google Drive, Google Meet.			

11. Course Evaluation	
Monthly tests for academic subjects. Daily tests with multiple-choice questions for academic subjects. Oral assessment through engaging students in discussions. Practical exams.	
12. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	– "أساسيات الحاسوب2016", الخضر علي الخضر بحاث" – "مدخل إلى عالم الذكاء الاصطناعي2005", الدكتور عادل عبدالنور"
Main references (sources)	Minister Of Higher Education and Scientific Research
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	– Graham Brown, David Watson, "Cambridge IGCSE Inform and Communication Technology", الطبعة الثالثة (2020) – Alan Evans, Kendall Martin, Mary Anne Poatsy, "Technolo In Action Complete", الطبعة السادسة عشر (2020) – Ahmed Banafa, "Introduction to Artificial Intelligence (AI)" الطبعة الأولى (2024) – Microsoft Office 2019 Step by Step الطبعة الأولى بواسطة Curtis Frye & Joan Lambert

Course Description Form

1. Course Name:
Laboratory Safety and Security
2. Course Code:
3. Semester / Year:
Fall Semester / 2024-2025
4. Description Preparation Date:
2024−2025
5. Available Attendance Forms
Daily attendance
6. Number of Credit Hours (Total) / Number of Units (Total):
2 Credit Hours / 3 Units
7. Course administrator's name (mention all, if more than one name)
Name: osama ghazi Email: Asama.khazi@mu.edu.iq
8. Course Objectives

Introducing students to the basics laboratory work, highlighting potent errors and methods to address probler and explaining the different types laboratories and the types of toxi generated in laboratories.	

9. Teaching and Learning Strategies	
Strategy	Strategy 1: Lectures using multimedia presentations and case studies Strategy 2: Laboratory sessions for insect identification and dissectio Strategy 3: Field trips for observing insects in their natural habitats. Strategy 4: Group discussions and collaborative projects on p managemen

10. Course Structure					
Week	**Hours**	**Required Learning Outcomes**	**Unit or subject name**		
1	**2**	knowledge	**Ensuring proper behavior within the laboratory**		
2	**2**	knowledge	**Recommendations for actions when problems occur**		

3	**2**	knowledge	**Safety precautions**		
4	**2**	knowledge	**Hazards in the chemistry laboratory**		
5	**2**	knowledge	**Various hazards of chemicals**		
6	**2**	knowledge	**Toxins and the dangers of the biology laboratory**		
7	**2**	knowledge	**Radiation hazards**		
8	**2**	knowledge	**Biological hazards**		
9	**2**	knowledge	**Definition of biological hazards**		
10	**2**	knowledge	Methods of controlling risks		
11	**2**	knowledge	**How to choose the appropriate person**		
12	**2**	knowledge	**Hazardous waste**		
13	**2**	knowledge	**Handling and dealing with hazardous waste**		
14	**2**	knowledge	**Biological safety**		
15	**2**	knowledge	**Dangers of biological waste**		
16	**2**	knowledge	***Stakeholders in biological safety***		
17	**2**	knowledge	**Biosafety**		
18	**2**	knowledge	***Factors affecting biosafety***		
19	**2**	knowledge	**Human relations behaviors**		
20	**2**	knowledge	**Objectives of human relations**		
21	**2**	knowledge	**Work division system in the laboratory**		
22	**2**	knowledge	**Storage**		
23	**2**	knowledge	**Types of storage**		
24	**2**	knowledge	**Fires**		
25	**2**	knowledge	**Methods of extinguishing fires**		
26	**2**	knowledge	**Causes of fires**		
27	**2**	knowledge	First aid		
28	**2**	knowledge	**First responder's duties**		
29	**2**	knowledge	**General characteristics of laboratories and their importance**		
30	**2**	knowledge	**Fires**		

11. Course Evaluation

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

40 marks (5 marks for the first monthly exam + 5 marks for the second

monthly exam + 15 marks for the midterm exam) + 5 marks for daily preparation and daily tests) 60 marks (40 marks final theoretical exam)

12. Learning and Teaching Resources

A collection of topics included in the ministe curriculum, compiled from various modern a updated books.	
Main references (sources)	
Book: Insect Physiology Author: Dr. Osama Mohamed Ali Book: Insect Classification Author: Dr. Mohamed Abdel Fattah Hassan Book: Study of Insects in the Environment Author: Dr. Hala Mohamed Hassan	
Electronic References, Websites	

Course Description Form

1. Course Name:
Plant taxonomy
2. Course Code:
Bio 304
3. Semester / Year:
2024-2025
4. Description Preparation Date:
2024-2025
5. Available Attendance Forms
: Daily attendance
6. Number of Credit Hours (Total) / Number of Units (Total):
2 hours (theoretical)
7. Course administrator's name (mention all, if more than one name)
Name: lecturer.dr. mohamed baqer Hussein Email: .::Mohamed-almosawy@mu.edu.iq @mu.edu.iq
8. Course Objectives

Course Objectives	Giving a complete idea about introducing the student to the concept of management, developing the concept of school and educational administration, and learning about the concept of leadership, its functions, and the characteristics of general leadership.
9. Teaching and Learning Strategies	
Strategy	1- Lecture, use of the blackboard and presentation 2- Demonstration (using graphs, pictures and educational films using a data projector) 3- Interactive discussion 4- Self-education

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2	knowledge	**The concept of management and the development of the concept of management**	-Lecture, use of the blackboard and presentation -Demonstration (using graphs, pictures and educational films using a data projector) -Interactive discussion -Self-education - Open educational classes using the	Theoretical, practical/oral and written examinations (daily, monthly and midterm exam) and scientific reports

				Classroom platform	
2	**2**	knowledge	**School administration theories**	**====**	**====**
3	**2**	knowledge	**The concept of educational administration and school administration**	**====**	**====**
4	**2**	knowledge	**Leadership and management**	**====**	**====**
5	**2**	knowledge	**General functions and characteristics of leadership**	**====**	**====**
6	**2**	knowledge	**The concept of educational planning**	**====**	**====**
7	**2**	knowledge	**Foundations and rules of educational planning**	**====**	**====**
8	**2**	knowledge	**Stages and requirements for successful educational planning**	**====**	**====**
9	**2**	knowledge	**Benefits of educational planning**	====	**====**
10	**2**	knowledge	The role of planning in the educational process	====	**====**
11	**2**	knowledge	**Definition of decision and its importance**	**====**	**====**
12	**2**	knowledge	**Decision making steps and types of decisions**	**====**	**====**
13	**2**	knowledge	**Administrative leadership styles**	**====**	**====**
14	**2**	knowledge	**Factors affecting the leader in adopting the administrative style**	**====**	**====**
15	**2**	knowledge	**The concept of classroom management**	**====**	**====**
16	**2**	knowledge	**The concept of educational supervision and its tasks And his goals**	**====**	**====**
17	**2**	knowledge	**Methods of educational supervision**	====	**====**
18	**2**	knowledge	**Motivation concept**	**====**	**====**
19	**2**	knowledge	**The importance of incentives**	**====**	**====**
20	**2**	knowledge	**Types of incentives**	**====**	**====**
21	**2**	knowledge	**The concept of performance evaluation**	**====**	**====**
22	**2**	knowledge	**The importance of performance evaluation**	====	**====**
23	**2**	knowledge	**Performance evaluation objectives**	====	**====**
24	**2**	knowledge	**Performance evaluation elements**	====	**====**
25	**2**	knowledge	**Basic rules for performance evaluation**	**====**	**====**
26	**2**	knowledge	**Benefits of performance evaluation**	**====**	**====**
27	**2**	knowledge	**Developing the performance evaluation process**	**====**	**====**
28	**2**	knowledge	**Stages of performance evaluation**	**====**	**====**

29	**2**	knowledge	**Leadership and administrative tasks of the administrative leader**	**====**	**====**
30	**2**	knowledge	**Supervisory methods**	**====**	**====**

11. Course Evaluation

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

40 marks (5 marks for the first monthly exam + 5 marks for the second monthly exam + 15 marks for the midterm exam) + 5 marks for daily preparation and daily tests)
60 marks (40 marks final theoretical exam)

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	not available
Main references (sources)	
Recommended books and references (scientific journals, reports…)	Towards the development of school administration ((theoretical and fie studies), Psychology of school administration.
Electronic References, Websites	Websites available on Google Chrome

Course Description Form

1. Course Name:
Histology
2. Course Code:
Bio 202
3. Semester / Year:
2024-2025
4. Description Preparation Date:
2024-2025
5. Available Attendance Forms
: Daily attendance
6. Number of Credit Hours (Total) / Number of Units (Total):
٢ hours (theoretical) / Number of Units 6
7. Course administrator's name (mention all, if more than one name)
Name: Lecturer. **Duaa Hamad Hamza** Email: doaa.hamad@mu.edu.iq
8. Course Objectives

Course Objectives	Identifying the tissues required for the organs of the living body's systems and their components, each tissue, its types and locations in the human body, and knowing the function of each type of tissue
9. Teaching and Learning Strategies	
Strategy	1- Lecture, use of the blackboard and presentation 2- Demonstration (using graphs, pictures and educational films using a data projector) 3- Interactive discussion 4- Self-education

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	4	knowledge	**Definition in Histology**	-Lecture, use of the blackboard and presentation -Demonstration (using graphs, pictures and educational films using a data projector) -Interactive discussion -Self-education - Open educational classes using the Classroom platform	Theoretical, practical/oral and written examinations (daily, monthly and midterm exam) and scientific reports
2	4	knowledge		====	====

			classification of animal tissue		
3	**4**	knowledge	**Epithelial tissue, simple epithelial tissue**	**====**	**====**
4	**4**	knowledge	**stratified epithelial tissue**	**====**	**====**
5	**4**	knowledge	**Glandular epithelial tissue**	**====**	**====**
6	**4**	knowledge	**Connective tissue , components of connective tissue**	**====**	**====**
7	**4**	knowledge	**Proper connective tissue**	**====**	**====**
8	**4**	knowledge	**Bone**	**====**	**====**
9	**4**	knowledge	**Cartilage**	====	**====**
10	**4**	knowledge	**Blood**	====	**====**
11	**4**	knowledge	**Blood component**	**====**	**====**
12	**4**	knowledge	**Muscle tissue**	**====**	**====**
13	**4**	knowledge	**Type of muscle tissue**	**====**	**====**
14	**4**	knowledge	**Skeletal muscle**	**====**	**====**
15	**4**	knowledge	**Nerves tissue**	**====**	**====**
16	**4**	knowledge	Type of neuron	**====**	**====**
17	**4**	knowledge	**Circulatory system**	====	**====**
18	**4**	knowledge	**Heart**	**====**	**====**
19	**4**	knowledge	**Respiratory system**	**====**	**====**
20	**4**	knowledge	**Lung , Trachea ,Bronchioles**	**====**	**====**
21	**4**	knowledge	**Digestive system**	**====**	**====**
22	**4**	knowledge	**Esophagus ,stomach, intestine**	====	**====**
23	**4**	knowledge	**Central nervous system**	====	**====**
24	**4**	knowledge	**Peripheral nervous system**	====	**====**

25	**4**	knowledge	Urinary system	**====**	**====**
26	**4**	knowledge	**Integment system (skin)**	**====**	**====**
27	**4**	knowledge	**Male reproductive system**	**====**	**====**
28	**4**	knowledge	**Female reproductive system**	**====**	**====**
29	**4**	knowledge	**Lymphatic system**	**====**	**====**
30	**4**	knowledge	**Spleen, Thymus, Tonsils**	**====**	**====**

11. Course Evaluation

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

40 marks (5 marks for the first monthly exam + 5 marks for the second monthly exam + 15 marks for the midterm exam) + 5 marks for daily preparation and daily tests)
60 marks (40 marks final theoretical exam+20 marks final practical exam)

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Basic Histology
Main references (sources)	
Recommended books and references (scientific journals, reports…)	-Histology and Cell biology - HISTOLOGY A TEXT AND ATLAS Atlas of Descriptive Histology
Electronic References, Websites	

Course Description Form

1. Course Name:
Embryology
2. Course Code:
Bio 203
3. Semester / Year:
2024−2025
4. Description Preparation Date:
2024−2025
5. Available Attendance Forms
: Daily attendance
6. Number of Credit Hours (Total) / Number of Units (Total):
2 hours (theoretical) 2 hours(practical)
7. Course administrator's name (mention all, if more than one name)
Name: Assist. Prof. Eqbal Awadh Gatea Email: eq_bio2013@mu.edu.iq
8. Course Objectives

Course Objectives	Introducing the student to embryology and its importance. Embryology is concerned with studying the stages of embryonic development that living organisms from the beginning of the formation of gametes to the formation of the zygote and then its development into an individual with the characteristics of the parents. It also searches how the fetal body is formed and the factors causing the morphological changes
9. Teaching and Learning Strategies	
Strategy	1- Lecture, use of the blackboard, and delivery 2- Demonstration (using diagrams and educational pictures using datashows, videos) 3- Teaching through exploratory lecture 4- Interactive discussion 5- Practical tests used in laboratories 6- E-learning using Google Classroom platforms

10. Course Structure					
Week					
1	**2**	knowledge	Introduction to embryology	Lecture, use of the blackboard, and delivery , Demonstration (using diagrams and educational pictures using	Theoretical, practical/oral and written examinations (daily, monthly and midterm

				datashows, videos), Teaching through exploratory lecture, Interactive discussion, Practical tests used in laboratories, E-learning using Google Classroom platforms	exam) and scientific reports
2	2	knowledge	Spermatogenesis	====	====
3	2	knowledge	Oogenesis	====	====
4	2	knowledge	Fertilization	====	====
5	2	knowledge	Cleavage	====	====
6	2	knowledge	Growth and differentiation	====	====
7	2	knowledge	early embryonic development in amphioxus	====	====
8	2	knowledge	Organogenesis (neural tube and gut) in amphioxus embryo	====	====
9	2	knowledge	Organogenesis (mesoderm) in amphioxus embryo	====	====
10	2	knowledge	early embryonic development in amphibian	====	====
11	2	knowledge	Neurulation in Frog Embryo	====	====
12	2	knowledge	Origin of Heart and blood at frog embryo	====	====
13	2	knowledge	3 mm Frog embryo	====	====
14	2	knowledge	6 mm Frog embryo	====	====
15	2	knowledge	First-semester exam	====	====
16	2	knowledge	early embryonic development in birds	====	====
17	2	knowledge	embryonic development from cleavage to blastula in chick embryo	====	====
18	2	knowledge	embryonic development (gastrula and primitive streak) in chick embryo	====	====
19	2	knowledge	Chick embryo until 18 hr's incubation	====	====
20	2	knowledge	Chick embryo until 24 hr's incubation	====	====
21	2	knowledge	Chick embryo until 33 hr's incubation	====	====
22	2	knowledge	Chick embryo until 48 hr's	====	====

			incubation		
23	**2**	knowledge	Chick embryo until 72 hr's incubation	====	====
24	**2**	knowledge	Embryonic membranes	====	====
25	**2**	knowledge	Male and female reproductive system in humans	====	====
26	**2**	knowledge	early embryonic development in human	====	====
27	**2**	knowledge	Embryonic development until the 20 days in humans	====	====
28	**2**	knowledge	Embryonic development until the 6 weeks in humans	====	====
29	**2**	knowledge	Embryonic development until the 7 months in humans	====	====
30	**2**	knowledge	second-semester exam	====	====

11. Course Evaluation

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

40 marks (5 marks for the first monthly exam + 5 marks for the second monthly exam + 15 marks for the midterm exam) + 5 marks for daily preparation and daily tests)
60 marks (40 marks final theoretical exam)

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	
Main references (sources)	Langman's Medical Embryology Larsen's Human Embryology
Recommended books and references (scientific journals, reports…)	
Electronic References, Websites	Websites available on internet

Course Description Form

1. Course Name:
Biochemistry
2. Course Code:
3. Semester / Year: 2th
2024-2025
4. Description Preparation Date:
2024-2025
5. Available Attendance Forms
: Daily attendance
6. Number of Credit Hours (Total) / Number of Units (Total):
1 hours (theoretical) 2 hours(practical)
7. Course administrator's name (mention all, if more than one name)
Name: lecturer israa hamdan Email: israa.hamdan@mu.edu.iq
8. Course Objectives

Course Objectives	1- Teaching students about laboratory work and dealing with tools and chemicals 2- Teaching students to prepare solutions and perform chemical calculations 3- Providing students with the skill of scientific research into cause and effect 4- Teaching students some organic reactions
9. Teaching and Learning Strategies	
Strategy	Education strategy collaborative concept planning. 2- Brainstorming education strategy. 3- Education Strategy Notes Series

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2	knowledge	Carbohydrates, introduction, its prevalence and importance of studying it Properties, classification, monosaccharides Disaccharides, polysaccharides, starches Glycogen, dextrins Cellulose, amino sugars	A student who knows how to handle dangerous and toxic chemicals He also knows the correct handling method in the	Weekly, monthly, daily, written exams, and the end-of-year .exam

			Fats, classification, properties, neutral lipids, phospholipids Sphingomyelin, glycolipids, cerebrosides Waxes, steroids, terpenes Proteins, their importance, existence, general properties, classification Amino acids (essential and non-essential), non-protein amino acids, properties of amino acids and zwitterionic composition. Primary structure of protein, Secondary structure of protein, Tertiary structure of protein Methods of protein purification, Methods of protein quantification, Methods of protein molecular weight estimation Types of peptides, Physiologically active peptides, Identification of amino acids at the ends of the peptide chain Enzymes, Structure, Importance, Classification, Nomenclature of enzymes Kinetic properties of enzymes, Mechanism of action of regulatory enzymes (allostery) Isotypic enzymes, Enzyme activators and inhibitors Exam	laboratory He is good at explaining chemistry and linking it to biology, as he is a life sciences teacher In addition to the skill of chemical calculations We teach organic reactions and their benefits in daily life	

11. Course Evaluation	
The distribution is as follows: the first semester exam is 5%, the second semester is 5%, and the half year is 15%, the first semester practical exam is 5%, and the second semester practical exam is 5%, in addition to absences 3%.	
12. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	
Main references (sources)	
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	Websites available on Google Chrome

Course Description Form

13. Course Name:	
Computer	
14. Course Code:	
UREQ 201	
15. Semester / Year:	
2024-2025/ second stage	
16. Description Preparation Date:	
2024-2025	
17.Available Attendance Forms	
: 2 hours per week	
18.Number of Credit Hours (Total) / Number of Units (Total):	
60 hours	
19. Course administrator's name (mention all, if more than one name)	
Name: Shaimaa Kareem Abdullah	Email: **shaimaa.kareem@mu.edu.iq**
20. Course Objectives	
Course Objectives	• To effectively use computers and understand operating systems, file management, and folder organization. • To use Microsoft Office programs such as Word, Excel, and PowerPoint. • To navigate the internet, search for information, and communicate through email and web pages.
21. Teaching and Learning Strategies	
Strategy	• Direct Instruction: Involves the teacher providing guidance, transferring knowledge and concepts, presenting information clearly, and guiding discussions and learning activities. • Blended Learning: Aims to integrate traditional and electronic elements in the learning process. Modern technology and electronic tools are used alongside traditional methods such as face-to-face lessons and printed books. • Collaboration and Interaction: Encourages collaboration between learners and between the teacher and students, including group work, discussions, and interactive learning. • Active Learning: Encourages students to actively participate in the learning process, including engaging in hands-on activities and practical application of concepts. • Problem-Based Learning: Focuses on solving real problems and challenges that students face. This includes problem analysis and application of strategies to solve them.

22. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
First	2	Security and Networks: What is a network? Types of networks. Basic network components.	Security and Networks	Theoretical &practical	Daily Tests + Questions and Answers
Second	2	Security and Networks (continued): Basic network components.	======	Theoretical &practical	Daily Tests + Questions and Answers
Third	2	Security and Networks (continued): Basics of network security. Understanding network threats. Network troubleshooting.	======	Theoretical &practical	Daily Tests + Practical Task Evaluation
Fourth	2	Security and Networks (continued): Introduction to network troubleshooting, common network problems and symptoms, network troubleshooting tools and utilities.	======	Theoretical &practical	Daily Tests + Questions and Answers
Fifth	2	Security and Networks (continued): Using command-line tools for diagnostics, identifying and resolving connectivity issues, diagnosing network performance issues.	======	Theoretical &practical	Daily Tests + Practical Skills
Sixth	2	E-commerce: Concepts of electronic banking including online banking: ATM services and debit cards.	E-commerce	Theoretical &practical	Daily Tests + Questions and Answers
Seventh	2	E-commerce (continued): Phone banking, SMS banking, e-alerts, mobile banking.	======	Theoretical &practical	Daily Tests + Practical Skills
Eighth	2	Computer Troubleshooting: Introduction to computer troubleshooting, common hardware problems and solutions, diagnosing software issues.	Computer Troubleshooting	Theoretical &practical	Daily Tests + Practical Task Evaluation
Ninth	2	Computer Troubleshooting (continued): Hardware components: diagnostics and repair, using safe mode for troubleshooting.	======	Theoretical &practical	Daily Tests + Questions and Answers
Tenth	2	Computer Troubleshooting (continued): Troubleshooting operating system issues, identifying and resolving blue screen errors, dealing with slow computer performance.	======	Theoretical &practical	Daily Tests + Questions and Answers
Eleventh	2	Computer Troubleshooting (Cont.): Virus and Malware Removal Techniques, Updating Drivers and Software.	======	Theoretical &practical	Daily Tests + Practical Skills
Twelfth	2	Introduction to AI: Definition of AI, History of AI, AI Techniques and Approaches.	AI	Theoretical &practical	Daily Tests + Questions and Answers
Thirteenth	2	Introduction to AI (Cont.): Key Characteristics of AI, Benefits of AI, Challenges and Ethical considerations.	======	Theoretical &practical	Daily Tests + Practical Task Evaluation
Fourteenth	2	Introduction to AI (Cont.):	======	Theoretical &practical	Daily Tests + Questions and

		Challenges and Limitations of AI, The Role of Data in AI Systems.			Answers
Fifteenth	**2**	Introduction to AI (Cont.): AI Tools and Frameworks.	======	Theoretical & practical	Daily Tests + Questions and Answers
Sixteenth	**2**	The Role of AI in Modern Smartphones: AI-Driven Mobile Technologies, Virtual Assistants (Siri, Google Assistant, Alexa).	======	Theoretical &practical	Daily Tests + Practical Skills
Seventeenth	**٢**	The Role of AI in Modern Smartphones (Cont.): Adaptive Learning, Real-Time Translation Services.	======	Theoretical &practical	
Eighteenth	**2**	The Role of AI in Modern Smartphones (Cont.): The Future of AI in Smartphone Technology, Challenges of Implementing AI in Mobile Devices.	======	Theoretical &practical	Daily tests + Questions and Answers
Nineteenth	**2**	Applications and Tools of AI: Overview of AI Applications in Various Industries, Education and Healthcare.	======	Theoretical &practical	Daily tests + Questions and Answers
Twentieth	**2**	Applications and Tools of AI (Cont.): Transportation and Advertising.	======	Theoretical &practical	Daily tests + Oral Questions and Answers
Twenty-first	**2**	Applications and Tools of AI (Cont.): Finance, Robotics and Automation Technologies.	======	Theoretical &practical	Daily tests + Questions and Answers
Twenty-second	**2**	Applications and Tools of AI (Cont.): AI in Marketing: Targeting and Personalization.	======	Theoretical &practical	Daily tests + Oral Questions and Answers
Twenty-third	**2**	Applications and Tools of AI (Cont.): AI in Image and Video Analysis, Smart Cities.	======	Theoretical &practical	Daily tests + Practical Skills
Twenty-fourth	**2**	Applications and Tools of AI (Cont.): Future Trends in AI Applications and Tools.	======	Theoretical &practical	Daily tests + Questions and Answers
Twenty-fifth	**2**	AI and Society: Introduction to AI and Its Societal Impact, The Role of AI in Enhancing Public Safety.	======	Theoretical &practical	Daily tests + Oral Questions and Answers
Twenty-sixth	**2**	AI and Society (Cont.): Cultural Perspectives on AI Adoption, AI and Governance: Policy Implications	======	Theoretical &practical	Daily tests + Questions and Answers
Twenty-seventh	**2**	Ethical Challenges in AI: Introduction to Ethics in AI, Transparency and Explainability of AI Systems, Privacy Concerns in AI Data Usage	======	Theoretical &practical	Daily tests + Oral Questions and Answers
Twenty-eighth	**2**	Ethical Challenges in AI (Cont.): The Ethical Implications of Autonomous Systems, Ethics in AI-Driven Marketing and Advertising	======	Theoretical &practical	Daily tests + Practical Skills
Twenty-ninth	**2**	Ethical Challenges in AI (Cont.): Ethical Considerations in Education, Human Rights and AI Implementation	======	Theoretical &practical	Daily tests + Oral Questions and Answers
Thirtieth	**2**	The Future of AI: Future trends in AI, recent research and emerging technologies.	======	Theoretical &practical	Daily tests + Questions and Answers

23. Course Evaluation
• Monthly tests for academic subjects.

• Daily tests with multiple-choice questions for academic subjects. • Oral assessment through engaging students in discussions. • Practical exams.	
24. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	– "أساسيات الحاسوب2016", الخضر علي الخضر بحاث – " مدخل إلى عالم الذكاء الاصطناعي", الدكتور عادل عبدالنور2005
Main references (sources)	Minister Of Higher Education and Scientific Research
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	– Graham Brown, David Watson, "Cambridge IGCSE Information and Communication Technology", الطبعة الثالثة (2020) – Alan Evans, Kendall Martin, Mary Anne Poatsy, "Technology In Action Complete", الطبعة السادسة عشر (2020) – Ahmed Banafa, "Introduction to Artificial Intelligence (AI)", الطبعة الأولى (2024) – Microsoft Office 2019 Step by Step الطبعة الأولى بواسطة Curtis Frye & Joan Lambert

Course Description Form

1. Course Name:
Educational administration and secondary education
2. Course Code:
CREQ 202
3. Semester / Year:
٢٠٢٥_٢٠٢٤
4. Description Preparation Date:
٢٠٢٥_٢٠٢٤
5. Available Attendance Forms
: Daily attendance
6. Number of Credit Hours (Total) / Number of Units (Total):
٢ hours (theoretical)
7. Course administrator's name (mention all, if more than one name)
Name: Assist. Pro.dr. Nadia Hussein Ali Email: nadiasaoudi@mu.edu.iq
8. Course Objectives

Course Objectives	Giving a complete idea about introducing the student to the concept of management, developing the concept of school and educational administration, and learning about the concept of leadership, its functions, and the characteristics of general leadership.
9. Teaching and Learning Strategies	
Strategy	1- Lecture, use of the blackboard and presentation 2- Demonstration (using graphs, pictures and educational films using a data projector) 3- Interactive discussion 4- Self-education

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2	knowledge	**The concept of management and the development of the concept of management**	-Lecture, use of the blackboard and presentation -Demonstration (using graphs, pictures and educational films using a data projector) -Interactive discussion -Self-education - Open educational classes using the	Theoretical, practical/oral and written examinations (daily, monthly and midterm exam) and scientific reports

				Classroom platform	
2	**2**	knowledge	**School administration theories**	**====**	**====**
3	**2**	knowledge	**The concept of educational administration and school administration**	**====**	**====**
4	**2**	knowledge	**Leadership and management**	**====**	**====**
5	**2**	knowledge	**General functions and characteristics of leadership**	**====**	**====**
6	**2**	knowledge	**The concept of educational planning**	**====**	**====**
7	**2**	knowledge	**Foundations and rules of educational planning**	**====**	**====**
8	**2**	knowledge	**Stages and requirements for successful educational planning**	**====**	**====**
9	**2**	knowledge	**Benefits of educational planning**	====	**====**
10	**2**	knowledge	The role of planning in the educational process	====	**====**
11	**2**	knowledge	**Definition of decision and its importance**	**====**	**====**
12	**2**	knowledge	**Decision making steps and types of decisions**	**====**	**====**
13	**2**	knowledge	**Administrative leadership styles**	**====**	**====**
14	**2**	knowledge	**Factors affecting the leader in adopting the administrative style**	**====**	**====**
15	**2**	knowledge	**The concept of classroom management**	**====**	**====**
16	**2**	knowledge	**The concept of educational supervision and its tasks And his goals**	**====**	**====**
17	**2**	knowledge	**Methods of educational supervision**	====	**====**
18	**2**	knowledge	**Motivation concept**	**====**	**====**
19	**2**	knowledge	**The importance of incentives**	**====**	**====**
20	**2**	knowledge	**Types of incentives**	**====**	**====**
21	**2**	knowledge	**The concept of performance evaluation**	**====**	**====**
22	**2**	knowledge	**The importance of performance evaluation**	====	**====**
23	**2**	knowledge	**Performance evaluation objectives**	====	**====**
24	**2**	knowledge	**Performance evaluation elements**	====	**====**
25	**2**	knowledge	**Basic rules for performance evaluation**	**====**	**====**
26	**2**	knowledge	**Benefits of performance evaluation**	**====**	**====**
27	**2**	knowledge	**Developing the performance evaluation process**	**====**	**====**
28	**2**	knowledge	**Stages of performance evaluation**	**====**	**====**

29	**2**	knowledge	**Leadership and administrative tasks of the administrative leader**	**====**	**====**
30	**2**	knowledge	**Supervisory methods**	**====**	**====**

11. Course Evaluation

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

40 marks (5 marks for the first monthly exam + 5 marks for the second monthly exam + 15 marks for the midterm exam) + 5 marks for daily preparation and daily tests)
60 marks (40 marks final theoretical exam)

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	not available
Main references (sources)	
Recommended books and references (scientific journals, reports…)	Towards the development of school administration ((theoretical and fie studies), Psychology of school administration.
Electronic References, Websites	Websites available on Google Chrome

Course Description Form

1. Course Name:
biostatistics
2. CourseCode :
3. Semester / Year:
4. Description Preparation Date:
2024-2025
5. Available Attendance Forms: In person
6. Number of Credit Hours (Total) / Number of Units (Total)
Number of Credit Hours (Total) 60 hours
7. Course administrator's name)mention all, (if more than one name
Name: D.Mohammed Radwn Mahmoud e: modrn@mu.edu.iq
8. Course Objectives

Course Objectives	**1- Identify the concept of inferential and inferential statistics.** **2- Identify the null and alternative statistical hypotheses and how to verify them.** **3- Identify the differences between statistics.** **4- Enabling students to be able to interpret statistical results.** **5- Enabling students to be able to distinguish between how to use nonparametric statistics.** **٦- Enabling students to apply statistical methods appropriately in light of each topic.**

9. Teaching and Learning Strategies

Strat	**Strategic teaching and learning methods** **Audio methods (teaching explanation of the topic)** **Style of writing on the blackboard** **The method of direct dialogue between the teacher and the student, with student's evaluation in class participation** **Conduct experiments.**

10. Course Structure

Week	Hours	SEMISTER 1	SEMISTER 2	Learning method	Evaluation method
The first week	٢**Theoretical .**	**To know and distinguish between**	**Introduction to statistics**		**Exams , reports,**

		the population and the sample and employ sampling methods when selecting the sample			**discussions Quizzes**
second week	٢**Theoretical .**	**Data tab**	**Population and sample/methods for selecting samples/parameters and estimates/sample errors**		**Exams , reports, discussions**
the third week	٢**Theoretical .**	**Arithmetic mean -**	**Measures of central tendency 1**		**Exams , reports, discussions**
fourth week	٢**Theoretical .**	**The mediator - Manwal**	**Measures of central tendency 2**		**Exams , reports, discussions**
The fifth week	٢**Theoretical .**	**Variance – Standard Deviation Range – Mean Deviation**	**Data tab - tabular display**		**Exams , reports, discussions**
the sixth week	٢**Theoretical .**	**Standard error - coefficient of variation**	**• Frequency distribution table.**		**Exams , reports, discussions**
Seventh week	٢**Theoretical .**	**To employ statistical hypotheses in research**	**• Tabular display of metadata.**		**Exams , reports, discussions**
The eighth week	٢**Theoretical .**	**To reduce the possibility of the researcher making an error when testing the hypotheses, type 1 alpha error and type 2 beta error**	**• Frequency distribution table for quantitative data.**		
Week nine	٢**Theoretical .**	**To employ the level of significance / degrees of freedom / examples using the statistical package**	**• Ascending and descending clustered frequency table.**		**Exams , reports, discussions**
The tenth week	٢**Theoretical .**	**To know the inferential statistics of the monthly test**	**Measures of dispersion1**		**Exams , reports, discussions**
Week eleven	٢**Theoretical .**	**To employ statistical hypotheses in research**	**Measures of dispersion2**		**Exams , reports, discussions**
The twelfth week	٢**Theoretical .**	**z test**	**Measures of dispersion3**		**Exams , reports, discussions**
The thirteenth week	٢**Theoretical .**	**T test**	**Monthly test**		**Exams , reports, discussions**
The fourteenth week	٢**Theoretical .**	**F test**	**Statistical hypotheses/what are statistical hypotheses/null and alternative hypotheses**		**Exams , reports, discussions**
The fifteenth week		**Monthly exams**	**The chances of the researcher making an error when testing hypotheses/type 1 alpha error/type 2 beta error**		

11. Course Evaluation

Distributing the score out of ١٠٠ according to the tasks assigned to the student such as daily written exams, reports .... etcor ,oral, monthly preparation, daily	
12. Learning and Teaching Resources	
(if any ,curricular books) Required textbo	**Introduction to Statistics by Dr. Khashia Al-Rawi, University of Mosul 2000 - Principles of Statistics by Dr. Khashia Al-Rawi - Naim Thatmi Al-Muhammad - Muayyad Ahmed Al-Younes - Zulayd Khaled Al-Marai**
Main references (sources)	From methodological books, help books, Internet, and scientific research
Recommended books and references (…scientific journals, reports)	Iraqi Scientific journals in basic specializations
Electronic References, Websites	Al-Muthanna University e-learning website https://agr.mu.edu.iq/

Course Description Form

1. Course Name:
Environment and Pollution
2. Course Code:
Bio 300
3. Semester / Year:
202٤-202٥
4. Description Preparation Date:
202٤-202٥
5. Available Attendance Forms
Daily attendance
6. Number of Credit Hours (Total) / Number of Units (Total):
٢ hours (theoretical) / Number of Units 6
7. Course administrator's name (mention all, if more than one name)
Name: Lecturer. Dr. Abbas Abdulameer Azeez Al-Raad Email: Alraadabbas89@gmail.com
8. Course Objectives

Course Objectives	Providing students with the main concepts about the environment, its divisions, and the relationship of environmental sciences to geography. Explaining the concept of the natural ecosystem and its components. The relationship between humans and the environment. Introducing the student to the types of environments on the Earth's surface, their characteristics, and the differences between them. Introducing the student to environmental problems, especially global ones (such as the problem of climate change and the resulting modern environmental phenomena such as global warming and the main ozone hole), and ways to confront them.

9. Teaching and Learning Strategies

Strategy	1- Presenting the lecture in an interactive discussion method. 2- Use the whiteboard 2- Demonstration (using graphs, pictures and educational films using a data projector) 4- Self-education

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	1	knowledge	Introduction to ecology	1. Presenting the lecture in an interactive discussion manner.	Theoretical, practical/oral and written exams (daily

				2. Encouraging students to self-learn.	**and monthly) and scientific reports**
2	**2**	knowledge	**Branches of ecology**	**// // //**	**// // //**
3	**2**	knowledge	**Environmental system**	**// // //**	**// // //**
4	**2**	knowledge	**Biogeochemical cycles**	**// // //**	**// // //**
5	**2**	knowledge	**Biogeochemical cycles 2**	**// // //**	**// // //**
6	**2**	knowledge	**Sedimentary cycle**	**// // //**	**// // //**
7	**2**	knowledge	**Determining factors**	**// // //**	**// // //**
8	**2**	knowledge	**Determining factors 2**	**// // //**	**// // //**
9	**2**	knowledge	**Energy and its relationship with environmental systems**	**// // //**	**// // //**
10	**2**	knowledge	**Energy and its relationship with environmental systems 2**	**// // //**	**// // //**
11			**First semester exam**		
12	**2**	knowledge	**Populations**	**// // //**	**// // //**
13	**2**	knowledge	**Population 2**	**// // //**	**// // //**
14	**2**	knowledge	**Populations 3**	**// // //**	**// // //**
15	**2**	knowledge	***Environmental communities***	**// // //**	**// // //**
16			**Mid-year exam**		
17	**2**	knowledge	***Environmental communities 2***	**// // //**	**// // //**
18	**2**	knowledge	**Relationships between species**	**// // //**	**// // //**
19	**2**	knowledge	***Ecological succession***	**// // //**	**// // //**
20	**2**	knowledge	**Ecological succession ٢**	**// // //**	**// // //**
21	**2**	knowledge	**Introduction to environmental pollution**	**// // //**	**// // //**
22	**2**	knowledge	**Air pollution and noise pollution**	**// // //**	**// // //**
23	**2**	knowledge	**Water Pollution and pesticide contamination**	**// // //**	**// // //**
24	**2**	knowledge	**Soil contamination**	**// // //**	**// // //**
25		……..	**Radioactive pollution**	**// // //**	**// // //**
26			**Second semester exam**		
27	**2**	knowledge	**Climate change**	**// // //**	**// // //**
28	**2**	knowledge	**Pollutants of a global nature**	**// // //**	**// // //**
29	**2**	knowledge	**Ozone Layer**	**// // //**	**// // //**
30	**2**	knowledge	**Global Warming**	**// // //**	**// // //**

11. Course Evaluation

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

40 marks (5 marks for the first monthly exam + 5 marks for the second

monthly exam + 15 marks for the midterm exam) + 5 marks for daily preparation and daily tests) 60 marks (40 marks final theoretical exam+20 marks final practical exam)

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Mawlid, Bahram Khader, Hussein Ali Al-Saadi, Fawzi Shanawa Al-Zubaidi. (1992). Environmental Science. University of Babylon.
Main references (sources)	……
Recommended books and references (scientific journals, reports…)	Ecology and pollution. a. Dr. Hussein Al-Saadi. Basics of ecology. a. Dr. Ibrahim Abdel Rahman. Scientific journals, periodicals and research in the field
Electronic References, Websites	……..

Course Description Form

1. Course Name:	
comparative anatomy	
2. Course Code:	
201BIN	
3. Semester / Year:	
2024-2025	
4. Description Preparation Date:	
2024-2025	
5. Available Attendance Forms	
: Daily attendance	
6. Number of Credit Hours (Total) / Number of Units (Total):	
2 hours (theoretical) 2 hours(practical)	
7. Course administrator's name (mention all, if more than one name)	
Name: Email: Assist. Lecturer nawal jumaah shanshool nawal.jumaah@mu.edu.iq	
8. Course Objectives	
Course Objectives	1-Study the origin and ancestor of charades and comparative study of different system structurally and functionally. 2. Study symmetry and similarity between organs 3. Detailed study on the composition of an explanation of vertebrata animals
9. Teaching and Learning Strategies	
Strategy	1- Lecture, use of the blackboard, and delivery 2- Demonstration (using diagrams educational pictures using datashows, videos) 3- Teaching through exploratory lecture Interactive discussion 5- Practical tests used in laboratories 6- E-learning using Goo Classroom platforms

10. Course Structure

Week	H0urs	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2	knowledge	Origin & general characters of chordates	Lecture, use of the blackboard, and delivery , Demonstration (using diagrams and educational pictures using datashows, videos), Teaching through exploratory lecture, Interactive discussion, Practical tests used in laboratories, Elearning using Google Classroom platform	Theoretical, practical/oral and written examinations (daily, monthly and midterm exam) and scientific reports
2	2	knowledge	Origin & general characters of chordates	_____	_____
3	2	knowledge	Classification of Chordates (2)	_____	_____
4	2	knowledge	Integumentary system (1)		_____
5	2	knowledge	Integumentary system (2)	_____	_____
6	2	knowledge	Skin Derivatives	_____	_____
7	2	knowledge	Muscular system (1)	_____	_____
8	2	knowledge	Muscular system (2)	_____	_____
9	2	knowledge	Digestive system (1)	_____	_____

10	2	knowledge	Digestive system (2)	_____	_____
11	2	knowledge	Digestive gland	_____	_____
12	2	knowledge	Respiratory system (1)	_____	_____
13	2	knowledge	Respiratory system (2)	_____	_____
14	2	knowledge	Respiratory system (3)	_____	
15	2	knowledge	Respiratory system (3)	_____	_____
16	2	knowledge	Excretory system (1)	_____	_____
17	2	knowledge	Excretory system (2)	_____	_____
18	2	knowledge	Excretory system (3)	_____	
19	2	knowledge	Genital system (1)	_____	_____
20	2	knowledge	Genital system (2)	_____	_____
21	2	knowledge	Genital system (3)	_____	_____
22	2	knowledge	Hermaphroditism	_____	_____
23	2	knowledge	Circulatory system	_____	_____
24	2	knowledge	Heart	_____	_____
25	2	knowledge	Aortic arches	_____	_____
26	2	knowledge	Nervous system	_____	_____
27	2	knowledge	Brain	_____	_____
28	2	knowledge	Cranial	_____	_____
29	2	knowledge	Skeletal system (1)	_____	_____
30	2	knowledge	Skeletal system (2)	_____	_____

11. Course Evaluation	
Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc 40 marks (5 marks for the first monthly exam + 5 marks for the second monthly exam + 15 marks for the midterm exam) + 5 marks for daily preparation and daily tests) 60 marks (40 marks final theoretical exam)	
12. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	comparative anatomy
Main references (sources)	_____
Recommended books and references (scientific journals, reports...)	-comparative anatomy: function, evolution kardong k.v.(2012) - comparative anatomy of the vertebrates ke G.carr.R.k.(2001) - kardong k.v.(1995) vertebrates comparative function.
Electronic References, Websites	TechME Anatomay

Course Description Form

1. Course Name:
Phycology
2. Course Code:
Bio 304
3. Semester / Year:
2024-2025
4. Description Preparation Date:
2024-2025
5. Available Attendance Forms
: Daily attendance
6. Number of Credit Hours (Total) / Number of Units (Total):
2 hours (theoretical)
7. Course administrator's name (mention all, if more than one name)
Name: lecturer.dr. mohamed baqer Hussein Email: .::Mohamed-almosawy@mu.edu.iq @mu.edu.iq
8. Course Objectives

Course Objectives	Giving a complete idea about introducing the student to the concept of management, developing the concept of school and educational administration, and learning about the concept of leadership, its functions, and the characteristics of general leadership.
9. Teaching and Learning Strategies	
Strategy	1- Lecture, use of the blackboard and presentation 2- Demonstration (using graphs, pictures and educational films using a data projector) 3- Interactive discussion 4- Self-education

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2	knowledge	**The concept of management and the development of the concept of management**	-Lecture, use of the blackboard and presentation -Demonstration (using graphs, pictures and educational films using a data projector) -Interactive discussion	Theoretical, practical/oral and written examinations (daily, monthly and midterm exam) and scientific reports

				-Self-education - Open educational classes using the Classroom platform	
2	**2**	knowledge	**School administration theories**	**====**	**====**
3	**2**	knowledge	**The concept of educational administration and school administration**	**====**	**====**
4	**2**	knowledge	**Leadership and management**	**====**	**====**
5	**2**	knowledge	**General functions and characteristics of leadership**	**====**	**====**
6	**2**	knowledge	**The concept of educational planning**	**====**	**====**
7	**2**	knowledge	**Foundations and rules of educational planning**	**====**	**====**
8	**2**	knowledge	**Stages and requirements for successful educational planning**	**====**	**====**
9	**2**	knowledge	**Benefits of educational planning**	====	**====**
10	**2**	knowledge	The role of planning in the educational process	====	**====**
11	**2**	knowledge	**Definition of decision and its importance**	**====**	**====**
12	**2**	knowledge	**Decision making steps and types of decisions**	**====**	**====**
13	**2**	knowledge	**Administrative leadership styles**	**====**	**====**
14	**2**	knowledge	**Factors affecting the leader in adopting the administrative style**	**====**	**====**
15	**2**	knowledge	**The concept of classroom management**	**====**	**====**
16	**2**	knowledge	**The concept of educational supervision and its tasks And his goals**	**====**	**====**
17	**2**	knowledge	**Methods of educational supervision**	====	**====**
18	**2**	knowledge	**Motivation concept**	**====**	**====**
19	**2**	knowledge	**The importance of incentives**	**====**	**====**
20	**2**	knowledge	**Types of incentives**	**====**	**====**
21	**2**	knowledge	**The concept of performance evaluation**	**====**	**====**
22	**2**	knowledge	**The importance of performance evaluation**	====	**====**
23	**2**	knowledge	**Performance evaluation objectives**	====	**====**
24	**2**	knowledge	**Performance evaluation elements**	====	**====**
25	**2**	knowledge	**Basic rules for performance evaluation**	**====**	**====**
26	**2**	knowledge	**Benefits of performance evaluation**	**====**	**====**
27	**2**	knowledge	**Developing the performance evaluation process**	**====**	**====**

28	**2**	knowledge	**Stages of performance evaluation**	**====**	**====**
29	**2**	knowledge	**Leadership and administrative tasks of the administrative leader**	**====**	**====**
30	**2**	knowledge	**Supervisory methods**	**====**	**====**

11. Course Evaluation

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

40 marks (5 marks for the first monthly exam + 5 marks for the second monthly exam + 15 marks for the midterm exam) + 5 marks for daily preparation and daily tests)
60 marks (40 marks final theoretical exam)

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	not available
Main references (sources)	
Recommended books and references (scientific journals, reports…)	Towards the development of school administration ((theoretical and fie studies), Psychology of school administration.
Electronic References, Websites	Websites available on Google Chrome

Course Description Form

13.	Course Name: Genetics
14.	Course Code:
15.	Semester / Year: 2024/2025
16.	Description Preparation Date: ٢٠/١/2025
17.	Available Attendance Forms:
18.	Number of Credit Hours (30h) / Number of Units (6)
19.	Course administrator's name
Name: Asst. Prof. Dr. Arshad Naji Alhasnawi Email: arshad@mu.edu.iq	
20.	Course Objectives
Course Objectives	• The student learns about the basic principles of genetics • Explain sex-linked traits • Describes the basic structure of genetic material
21.	Teaching and Learning Strategies
Strategy	• Presentation strategy • Brainstorming strategy • Teamwork strategy • Discussion strategy • Blended learning strategy • Training and application strategy • Interactive lesson strategy

22. Course Structure

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

1	٢	1.Mendelian inheritance	1. Introduction, the law of isolation, the law of free distribution, and their cytological interpretation	Use learning strategies	• View questions and answers • Presenting and interpreting educational situations • The student is assigned to write a report • Tasks and duties of Kozat • Monthly exams
٢	٢	٢.Expansion of Mendelian inheritance	2. Incomplete dominance, co-dominance		
		٣. Genes	3.Lethal genes, gene action overlap		
	٢				
٣		٤. Alleles	4.Multiple alleles, heredity and sex, penetrance and gene expression		
٤	٢				
		٥. Quantitative genetics	5.Quantitative genetics: the importance of multiple genes, genetic Heritability, twins		
٥	٢				
		6. Genetic linkage and crossing over	6.Genetic linkage and crossing over: incomplete linkage, complete linkage, crossing mechanism, factors affecting crossing over		
٦	٢				
٧	٢				
		٧. Genetic maps	7.How to draw genetic maps for eukaryotic organisms, comparison between crossing over and exchange between sister chromatids		
٨	٢				
		٨. Bacteria	8.Methods for the emergence of new genetic structures in bacteria		
	٢				
٩		٩. Chromosomes	9. Sex chromosomes and sex determination in various organisms		
	٢				
١٠		10. Chromosomal mutations	10.Chromosomal mutations, chromosomal abnormalities in humans		
١١	٢	11.Cytoplasmic inheritance	11.Cytoplasmic inheritance and maternal influence, shell wrapping in the shell Lymnaea, as in Paramecium.		
١٢	٢				
		12. Mutations and diseases	12.Mutations in mitochondrial DNA in humans and some diseases		
١٣	٢				
		13. Synthesis DNA & RNA	13.Synthesis and molecular analysis of genetic material DNA,		
			Experiments to prove that DNA is genetic material		
			And RNA is the genetic material in some		
١٤	٢				
		14.DNA replication	14. DNA replication		
			Proof that multiplication is performed in a semi-conservative manner.		
١٥	٢				
		15. First semester exam	15. Replication enzymes		
١٦	٢				
		16. The role of RNA	16. The role of RNA, the processes of cutting and modification in its three types		
١٧	٢		17. Translation (protein		

		17. Translation	synthes, Genetic code and its characteristics, Cofactors, Construction of the peptide chain		
١٨	٢				
		18. One gene	18.Development of the theory of one gene – one polypeptide chain, genetic control of metabolism		
١٩	٢		19.Regulation of gene expression in eukaryotic cells		
		19. Eukaryotic			
٢٠	٢	20. Prokaryotes	20. Regulating gene expression in prokaryotes		
٢١	٢		21. Genetic mutation. Types according to molecular changes, mutation,		
		21. Genetic mutation			
٢٢	٢	:	Mutations are caused by radiation and some 22. DNA damage repair systems,		
	٢	22. DNA damage	Transposable elements		
٢٣		٢٣. Genomics	23.Genomics Genomics: Structure of chromosomes, regulation of DNA sequences in them, DNA extraction, and clones		
٢٤	٢		24.Applying some literature on genetic technology, such as genetic engineering, in diagnosing some genetic diseases and sorting DNA fingerprints Completing the human genome project		
		24. Genetic technology Student seminar	٢٥.Student seminar		
٢٥	٢		26. Developmental genetics, Apoptosis,		
٢٦	2	25 semester exams	, How the niche state is revealed from the organism's genome		
		26.Developmental genetics	27. Population genetics27. genetic repositories Hardy law, Weinberg, Gene replication and influencing genetic factors		
٢٧	٢				
		27.Population genetics			
٢٨	٢		28.Genetics and development: Chromosomal changes and its relationship to the emergence of species,		
		28.Genetics and development:			
	٢	Chromosomal changes	The chromosome number doubled		
٢٩	٢		٢٩ Quiz		
٣٠	٢		30. Second semester exam		
		٢٩. Quiz			
		30. Second semester			

		exam			

23. Course Evaluation

The grade is distributed out of 100 according to the tasks assigned to the student, such as daily preparation, daily, oral, monthly and written exams, reports, etc. The annual effort is calculated as follows: [Theoretical 27% (10% first semester + 10% second semester + 7% activities, assignments, attendance, reports, etc.)] + [Practical 13% (5% first semester + 5% second semester + 3% activities, assignments, attendance, reports, etc.)] = 40% annual effort
40% annual effort + 60% final exam = 100%

24. Learning and Teaching Resources

Required textbooks (curricular books, if any)	
Main references (sources)	1. Arshad Naji Al-Hasnawi, Yasser Dakhil Al-Asadi, Zubaydah Adnan Al-Jashmi (2024) Principles of Genetics. 2. Saad Jaber Taj El-Din, General Genetics, Abdul Hussein Al-Faisal .Genetics 3. Snustad, D. P., & Simmons, M. J. (2015). Principles of genetics. John Wiley & Sons
Recommended books and references (scientific journals, reports…)	Jorde, L. B., Carey, J. C., & Bamshad, M. J. (2015). Medical genetics e-Book. Elsevier Health Sciences. Griffiths, P., & Stotz, K. (2013). Genetics and philosophy: an introduction. Cambridge University Press . Trivedi S. ،Rehman H. ،Saggu S. ، Panneerselvam C. & Ghosh S. K. (2020). DNA barcoding and molecular phylogeny (Second.). Springer. MI Genetics Resource Center (2018). Genetic Inheritance Patterns. https://migrc.org/teaching-tools/genetic-inheritance-patterns/
Electronic References, Websites	Yes

Course Description Form

1. Course Name:
Curricula and teaching methods / third stage
2. Course Code:
CREQ 300
3. Semester / Year:
2024-2025
4. Description Preparation Date:
2025/1/27
5. Available Attendance Forms:
My presence
6. Number of Credit Hours (Total) / Number of Units (Total)
2 hours / number of units 4
7. Course administrator's name (mention all, if more than one name)
Name: Duaa Raheem Katun Email: duaa.raheem@mu.edu.iq
8. Course Objectives

Course Objectives	**• Identifying the types of curricula and the foundations of their construction and principles** **The goals and beliefs that guide each individual's activity and provide him with the values he should** **To take it as a guide for his behavior in life.** **• Also learn about the elements of building curricula.** **• Identifying the content that achieves academic goals and methods** **Teaching aids and textbooks are important in the educational process.** **• Identify the behavioral objectives of the course and the conditions for its formulation and knowledge** **How to prepare daily and annual plans for the teacher**

9. Teaching and Learning Strategies

Strategy	• Direct oral delivery • Writing on the blackboard, and adopting a visual, educational-guided writing to confirm the information. • PowerPoint presentation • Discussion • Cooperative learning

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
The first week	2		Concept of science and technology Components of science and its characteristics	PowerPoint presenta And discuss	Oral question And daily exams
second week	2		Scientific thinking skills Philosophy of science teaching	PowerPoint presentation And discuss	Oral question And daily exams
the third week	2		Basic concepts in the curriculum The concept of method (logical and psychologic	PowerPoint presentation And discuss	Oral question And daily exams
fourth week	2		Foundations of building the curriculum - Cognitive basis. - Social basis. - Psychological basis. - Philosophical basis.	PowerPoint presentation And discus	Oral question And daily exams
The fifth week	2		Types of curricula - Separate subjects curriculum - Activity curriculum - Units curriculum - Broad field approach Core curriculum	PowerPoint presentation And discuss	Oral question And daily exams
the sixth week	2		Curriculum elements/curriculum as a four-part system - The meaning and importance of educational objectives Sources for deriving educational objectives	PowerPoint presentation And discuss	Oral question And daily exams
Seventh week	2		Levels of educational objectives (general, speci behavioral) Behavioral purposes (conditions and formulati	PowerPoint presentation And discuss	Oral question And daily exams
The eighth week	2		Classification of behavioral purposes Objectives of teaching science at this stage	PowerPoint presentation And discuss	Oral question And daily exams
Week nine	2		public education Practical applications	PowerPoint presentation And discuss	Oral question And daily exams
The tenth week	2		Educational content and experiences - The concept of content, scientific experience Rules for choosing a curriculum (knowledge an educational experiences) Organizing curriculum content	PowerPoint presentation And discuss	Oral question

Week eleven	2		Practical applications/contents of science curri in general education	PowerPoint presentation And discuss	And daily exams
The twelfth week	2		Teaching methods related to behavioral theorie - Programming/computer education	PowerPoint presentation And discuss	Oral question And daily exams
The thirteenth week	2		Teaching methods related to behavioral theorie - Cooperative education - Assembly discussions. - Projects Educational games	PowerPoint presentation And discuss	Oral question And daily exams
The fourteenth week	2		Other teaching methods Direct presentation, interrogation, field visits, preparing reports	PowerPoint presentation And discuss	Oral question And daily exams
The fifteenth week	2		Other teaching methods Direct presentation, interrogation, field visits, preparing reports	PowerPoint presentation And discuss	Oral question And daily exams
Sixteenth week	2		Educational technologies/their concept and typ Practical applications on preparing and using educational technologies.	PowerPoint presentation And discuss	Oral question And daily exams
Seventeenth week	2		Calendar - Its concept, characteristics, types. Curriculum evaluation	PowerPoint presentation And discuss	Oral question And daily exams
Eighteenth week	2		Specifications and characteristics of classroom questions and their types General principles for formulating and using classroom questions. General guidelines for increasing the adequacy classroom questions	PowerPoint presentation And discuss	Oral question And daily exams
Week nineteen	2		school book: Its importance and function Basics of its preparation	PowerPoint presentation And discuss	Oral question And daily exams
The twentieth week	2		Characteristics of a good textbook Practical applications (textbook content analysi	PowerPoint presentation And discuss	Oral question And daily exams
Twenty-first week	2		Planning in teaching The concept of planning and its importance	PowerPoint presentation And discuss	Oral question And daily exams
Twenty-second week	2		Annual plan Quarterly plan	PowerPoint presentation And discuss	Oral question And daily exams
Twenty-third week	2		Daily plan Practical applications	PowerPoint presentation And discuss	Oral question And daily exams
Twenty-fourth week	2		Effective classroom learning. Principles that are taken into account for effecti teaching. Characteristics of an effective learner Educational competencies necessary for a scien teacher	PowerPoint presentation And discuss	Oral question And daily exams

Twenty-fifth week	2		Characteristics of a good teacher Distinctive characteristics of two models of teachers Characteristics of a creative or innovative teach Characteristics of a skilled craftsman teacher	PowerPoint presentation And discuss	Oral question And daily exams
Twenty-sixth week	2		Individual education for people with special needs and integrated education.	PowerPoint presentation And discuss	Oral question And daily exams
Twenty-seventh week	2		The importance of the laboratory in teaching science Types of illustrative experiments in terms of presenting them	PowerPoint presentation And discuss	Oral question And daily exams
Twenty-eighth week	2		Use picture puzzles Field or field work The importance of field or field work methods Conditions that must be taken into account in fieldwork.	PowerPoint presentation And discuss	Oral question And daily exams
Twenty-ninth week	2		The six hats in teaching students with learning difficulties Professional ethics.	PowerPoint presentation And discuss	Oral question And daily exams
the third week	2		Discussion method Conditions for the discussion method and procedures Advantages of the discussion method Disadvantages of the discussion method Discussion methods	PowerPoint presentation And discuss	PowerPoint presentation And discuss

11. Course Evaluation	
Distribution is as follows: 25 marks for monthly and daily exams for the first semester. 25 marks for monthly and daily exams for the second semester. 50 marks for final exams	
12. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	Modern trends in science teaching
Main references (sources)	educational subjects What's new in science teaching
Recommended books and references (scientific journals, reports…)	• The successful teacher • Methods of teaching science • Modern models and teaching metho
Electronic References, Websites	Borsippa Library Al Noor Library https://almo3allem.com

Course Description Form

1. Course Name:
Foundations of scientific research
2. Course Code:
CREQ301
3. Semester / Year:
٢٠٢٥-٢٠٢٤
4. Description Preparation Date:
٢٠٢٥-٢٠٢٤
5. Available Attendance Forms
: Daily attendance
6. Number of Credit Hours (Total) / Number of Units (Total):
٢ hours (theoretical)
7. Course administrator's name (mention all, if more than one name)
Name: Assist. Pro.dr. Nadia Hussein Ali Email: nadiasaoudi@mu.edu.iq
8. Course Objectives

Course Objectives	Introducing the student to studying the meaning of scientific research, its types and goals, and in-depth studying research methods, the historical, experimental and descriptive approach.
9. Teaching and Learning Strategies	
Strategy	1- Lecture, use of the blackboard and presentation 2- Demonstration (using graphs, pictures and educational films using a data projector) 3- Interactive discussion 4- Self-education

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2	knowledge	Science: Definition of science, the origins of science and its development	-Lecture, use of the blackboard and presentation -Demonstration (using graphs, pictures and educational films using a data projector) -Interactive discussion -Self-education - Open educational classes using the Classroom platform	Theoretical, practical/oral and written examinations (daily, monthly and midterm exam) and scientific reports
2	2	knowledge	The difference between science	====	====

			and knowledge, scientific thinking and its basics		
3	**2**	knowledge	Science and its goals	**====**	**====**
4	**2**	knowledge	Scientific research and its relationship to science, the development of the concept of publishing scientific research	**====**	**====**
5	**2**	knowledge	Search Plan	**====**	**====**
6	**2**	knowledge	The concept of the problem and its characteristics	**====**	**====**
7	**2**	knowledge	How to formulate the problem	**====**	**====**
8	**2**	knowledge	Assumptions	**====**	**====**
9	**2**	knowledge	Research plan and framework	====	**====**
10	**2**	knowledge	Scientific research methods and tools, survey method and tools	====	**====**
11	**2**	knowledge	The descriptive method and its tools, the experimental method and its tools	**====**	**====**
12	**2**	knowledge	Statistical method, case study method, comparative method	**====**	**====**
13	**2**	knowledge	Writing down the scientific research title, formulating the research title	**====**	**====**
14	**2**	knowledge	Writing down the main paragraphs of the research, the introduction, and ways to refer to references, writing down the materials paragraph and working methods	**====**	**====**
15	**2**	knowledge	Collect sources or references	**====**	**====**
16	**2**	knowledge	Style of writing sources	**====**	**====**
17	**2**	knowledge	Preparing a list of references, methods of writing them down, books written and translated, research and reports	====	**====**
18	**2**	knowledge	Research writing structure	**====**	**====**
19	**2**	knowledge	Measurement	**====**	**====**
20	**2**	knowledge	Data collection tools (questionnaire)	**====**	**====**
21	**2**	knowledge	the interview	**====**	**====**
22	**2**	knowledge	Note	====	**====**
23	**2**	knowledge	Samples	====	**====**
24	**2**	knowledge	Types of samples	====	**====**
25	**2**	knowledge	Sample selection methods	**====**	**====**
26	**2**	knowledge	Sample selection conditions	**====**	**====**
27	**2**	knowledge	How to write reports and their types	**====**	**====**
28	**2**	knowledge	Meaning of quotation and notation	**====**	**====**
29	**2**	knowledge	Quotation terms	**====**	**====**

30	**2**	knowledge	The final output of the research	**====**	**====**

11. Course Evaluation
Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc 40 marks (5 marks for the first monthly exam + 5 marks for the second monthly exam + 15 marks for the midterm exam) + 5 marks for daily preparation and daily tests) 60 marks (40 marks final theoretical exam)

12. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	not available
Main references (sources)	Curricula and lectures in scientific research
Recommended books and references (scientific journals, reports…)	Curricula and lectures in scientific research
Electronic References, Websites	Websites available on Google Chrome

نموذج وصف المقرر

يوفر وصف المقرر هذا ايجازا مقتضيا لاهم خصائص المقرر ومخرجات المقرر ومخرجات التعلم المتوقعة من الطالب تحقيقها مبرهنا عما اذا كان قد حقق الاستفادة من فرص التعلم المتاحة . ولابد من الربط بينها وبين وصف البرنامج ؛	
١. المؤسسة التعليمية	كلية التربية ابن رشد للعلوم الانسانية
٢. القسم العلمي	علوم الحياة
٣. اسم / رمز المقرر	الارشاد والصحة النفسية
٤. اشكال الحضور المتاحة	يومية
٥. الفصل / السنة	٢٠٢٤/٢٠٢٥
٦. عدد الساعات الدراسية (الكلي)	/ساعتان اسبوعيا
٧. تاريخ اعداد هذا الوصف	٢٠٢٥/١/٢٨
٨. اسم مسؤول المقرر الدراسي	م. دعباس عذيب عبدالله
٩. اهداف المقرر	١- تعريف الطلبة بمفهوم الإرشاد ونشأته وتطوره ومناهجه
	٢- تعريف الطلبة بالمرشد التربوي وطرق اعداده
	٣- تعريف الطلبة بكيفية تحقيق التوافق الشخصي مع النفس والرضا عنها وأشبعا الدوافع والحاجات الداخلية والاولية والفطرية.
	٤- مساعدة الطلبة على تكيف مع نفسة ومع بيئته وعلى اختيار تخصص الدراسي الملائم له
	٥- تنمية الاتجاهات والميول الايجابية لدى الطلبة للقيام بمهنة المرشد التربوي

١٠- مخرجات المقرر وطرائق التعليم والتعلم والتقييم الأهداف المعرفية أ ١. تمكين الطلبة من معرفة مبادئ علم الارشاد والتوجيه والصحة النفسية أ٢. اعداد الطلبة نفسيا وتربويا لمهنة التدريس أ٣. وقاية الطلبة من الوقوع في المشكلات ومساعدتهم على اتخاذ قراراتهم بأنفسهم أ٤. مساعدة الطلبة على تحقيق الذات أ٥. جعل الطلبة قادرين على التعبير الذاتي وعن مشكلاتهم الاجتماعية والمدرسية أ٦. مساعدة الطلبة على التخلص من التوتر والقلق والخوف والتكيف مع المراحل العمرية المختلفة الأهداف المهاراتية الخاصة بالمقرر. ب١- خلق الدافعية لدى الطلبة للقيام بمهام المرشد التربوي ب٢- تنمية اتجاهات الطلبة نحو تكوين علاقات ايجابية في المجتمع ب٣.تنمية مهارة التوجيه لدى الطلبة وتدريبهم عليها
طرائق التعليم والتعلم
طريقة المحاضرة طريقة المناقشة طريقة الحور طرح الاسئلة
طرائق التقييم
مشاركة اليومية للطلاب المناقشة أثناء المحاضرات التقويم المستمر بالواجبات المطلوبة الاختبارات والأنشطة التعاونية
ج- الأهداف الوجدانية والقيمية ب١.تعليم الطلبة روح المبادرة والعمل بروح الفريق واحترام الاخرين والسلوك الاجتماعي. ب٢- أثارة دافعية الطلبة للدراسة وتنظيم أوقاته لذلك الغرض ب٣- تنمية اتجاهات وميول الطلبة وتطوير قابلياتهم في اتجاه مهنة التدريس والارشاد النفسي ج٤- تعليم الطلبة تحمل المسؤولية الشخصية
طرائق التعليم والتعلم
- طريقة الحور - المناقشة الفردية والجماعية - التعلم التعاوني
طرائق التقييم
مشاركة اليومية للطلاب تغذية الراجعة الفورية

المناقشة أثناء المحاضرات
التقويم المستمر بالواجبات المطلوبة
الاختبارات
الأنشطة التعاونية

١٠-المهارات العامة والتأهيلية المنقولة (المهارات الأخرى المتعلقة بقابلية التوظيف والتطور الشخصي).
د١- تعريفهم بطرائق التدريس الحديثة
د٢- تدريبهم على مهارات الارشاد التربوي
د٣- تعريفهم بالوسائل الارشادية الحديثة وكيفية استعمالها في الارشاد
د٤- اطلاع الطلبة على المستحدثات العلمية في الارشاد والصحة النفسية التنسيق مع الجهات المختصة

١١. بنية المقرر

الأسبوع	الساعات	مخرجات التعلم المطلوبة	اسم الوحدة أو الموضوع	طريقة التعليم	طريقة التقييم
الاسبوع الاول	٢	:مدخل لدراسة الارشاد النفسي	الفصل الاول :مدخل لدراسة الارشاد النفسي	الكتروني	امتحان
الاسبوع الثاني	٢	ما هو علم النفس	ما هو علم النفس	=	=
الاسبوع الثالث	٢	٢. مجالات علم النفس وفروعه	٢. مجالات علم النفس وفروعه	=	=
الاسبوع الرابع	٢	٣.نبذة مختصرة عن تطور الإرشاد النفسي	٣.نبذة مختصرة عن تطور الإرشاد النفسي	=	=
الاسبوع الخامس	٢	٤.اهمية الارشاد النفسي	٤.اهمية الارشاد النفسي	=	=
الاسبوع السادس	٢	٥. اهداف الارشاد النفسي والتوجية التربوي	٥. اهداف الارشاد النفسي والتوجية التربوي	=	=
الاسبوع السابع	٢	٦. مبررات الارشاد النفسي	٦. مبررات الارشاد النفسي	==	=
الاسبوع الثامن	٢	٧. لمحة تاريخية عن المرشد النفسي الطلابي	٧. لمحة تاريخية عن المرشد النفسي الطلابي	=	==
الاسبوع التاسع	٢	٨. أعداد المرشد وتدريبة	٨. أعداد المرشد وتدريبة	=	=

الاسبوع العاشر	٢	٩. اخلاقيات المرشد	٩. اخلاقيات المرشد	=	=
الاسبوع الحادي عشر		١٠. مهام المرشد الطلابي	١٠. مهام المرشد الطلابي	==	=
الاسبوع الثاني عشر	٢	الفصل الثاني :اساليب الارشادية	الفصل الثاني :اساليب الارشادية	==	=
الاسبوع الثالث عشر	٢	١. الإرشاد المباشر	٢. الإرشاد المباشر	=	=
الاسبوع الرابع عشر	٢	٣. الإرشاد غير مباشر	٤. الإرشاد غير مباشر	=	=
الاسبوع الخامس عشر	٢	٥. الإرشاد الفردي	٦. الإرشاد الفردي	=	=
الاسبوع السادس عشر	٢	٧. الإرشاد الجماعي	٨. الإرشاد الجماعي	=	=
الاسبوع السابع عشر	٢	٩. الإرشاد عن طريق اللعب للأطفال	١٠.الإرشاد عن طريق اللعب للأطفال	=	=
الاسبوع الثامن عشر	٢	١١.الإرشاد السلوكي	١٢.الإرشاد السلوكي	=	=
الاسبوع التاسع عشر	٢	الفصل الثالث: علاقة الإرشاد النفسي بالعلوم الاخرى	الفصل الثالث: علاقة الإرشاد النفسي بالعلوم الاخرى	=	=
الاسبوع العشرون	٢	الأسس العلمية للإرشاد النفسي والتربوي	الأسس العلمية للإرشاد النفسي والتربوي	=	=
الاسبوع الحادي والعشرون	٢	الفصل الرابع: نظريات الارشاد النفسي	الفصل الرابع: نظريات الارشاد النفسي	=	=
الاسبوع الثاني والعشرون	٢	.نظرية الذات	.نظرية الذات	=	=
الاسبوع الثالث والعشرون	٢	٢.نظرية الارشاد العقلاني	٢.نظرية الارشاد العقلاني	=	=
الاسبوع الرابع والعشرون	٢	٣.النظرية السلوكية	٣.النظرية السلوكية نظرية	=	=

		نظرية التحليل النفسي	التحليل النفسي		
الاسبوع الخامس والعشرون	٢	الفصل الخامس: وسائل جمع المعلومات	الفصل الخامس: وسائل جمع المعلومات	=	=
الاسبوع السادس والعشرون		١. الاختبارات والمقاييس	٢. الاختبارات والمقاييس	=	==
السابع والعشرون		٣. الاستبيان	٤. الاستبيان	=	=
السابع والعسرون		٥. المقابلة الارشادية	٦. المقابلة الارشادية	=	=
الاسبوع الثامن والعشرون		٧. دراسة الحالة	٨. دراسة الحالة	=	=
		٩. السجل التراكمي المجمع	١٠.السجل التراكمي المجمع	=	=
		١١.السيرة الشخصية	١٢.السيرة الشخصية	=	=
التاسع والعشرون	٢	الفصل السادس: الارشاد التربوي في المدرسة	الفصل السادس: الارشاد التربوي في المدرسة	=	=
الاسبوع الثلاثون		١.المدرس المرشد إعداده وأهميته وظائفه ٢.الاهداف العامة لمجلس الاباء والمدرسين ٣.دور مجالس الآباء في عملية الارشاد والتوجيه	١.المدرس المرشد إعداده وأهميته وظائفه ٢.الاهداف العامة لمجلس الاباء والمدرسين ٣.دور مجالس الآباء في عملية الارشاد والتوجيه	=	=

١٢- البنية التحتية	
١- الكتب المقررة المطلوبة	-الارشاد والصحة النفسية / د . حسن السيد د. صاحب مرزوك

٢- المراجع الرئيسية (المصادر)	كتاب الصحة النفسية والعلاج النفسى/د.حامد عبد السلام زهران
الكتب والمراجع التي يوصي بها (المجلات العلمية , التقارير)	مجلة الإرشاد النفسي
المراجع الالكترونية , مواقع الانترنيت ...	اكاديمية علم النفس / ويكبيديا / الموسوعة العربية للإرشاد والعلاج النفسي/ موقع مركز الإرشاد النفسي بمعهد الدراسات التربوية جامعة القاهرة/ شبكة العلوم النفسية العربية/ مركز الدراسات التربوية الأبحاث النفسية/ مركز البحوث والدراسات النفسية/

١٣- خطة تطوير المقرر الدراسي
١.جعل فترة اكبر للتطبيق العملي في المدارس ٢.اطلاع الطلبة على اخر المستحدثات في ميدان الارشاد والصحة النفسية ٣.تبادل الخبرات بين أعضاء هيئة التدريس. ٤.مواكبة التطورات في طبيعة العمل في مجال الإرشاد والتوجيه النفسي

Course Description Form

25. Course Name:
Parasitology
26. Course Code:
Bio 400
27. Semester / Year:
2024-2025
28. Description Preparation Date:
2024-2025
29.Available Attendance Forms
: Daily attendance
30.Number of Credit Hours (Total) / Number of Units (Total) :
٢hours (theoretical) + 2 hours (practical) / 6 units
31. Course administrator's name (mention all, if more than one name)
Name: Pro.dr. yassir dakheel kremsh alasadiy Email: dr.yassiralasadiy@mu.edu.iq
32. Course Objectives

Course Objectives	Give a general idea of parasites with clarifying the relationship of these organisms with other organisms from where be affected and effect and what are the most important diseases caused by these organisms
33. Teaching and Learning Strategies	
Strategy	1- Lecture, use of the blackboard and presentation 2- Demonstration (using graphs, pictures and educational films using a data projector) 3- Interactive discussion 4- Self-education

34. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	4	knowledge	**Introduction of parasitology Public relations between animals**	-Lecture, use of the blackboard and presentation -Demonstration (using graphs, pictures and educational films using a data projector) -Interactive discussion -Self-education - Open educational classes using the Classroom platform	Theoretical, practical/oral and written examinations (daily, monthly and midterm exam) and scientific reports
2	4	knowledge	**Advantages of parasitism A -**	**====**	**====**

			The benefits that parasites gain from their hosts - The harms that parasites gain from their hosts		
3	**4**	knowledge	**types of parasitism, types of parasites and hosts**	**====**	**====**
4	**4**	knowledge	**Parasitism in the animal kingdom, infectious stages, sources of infection**	**====**	**====**
5	**4**	knowledge	**Entrances and exits of infection, factors affecting the spread and density of parasites, and the stages that the parasite goes through**	**====**	**====**
6	**4**	knowledge	**Phylum: protozoa , characteristics and manifestations of the phylum (characteristics of the Phylum: protozoa, body composition) Life aspects of the Division (nutrition, movement, respiration, secretion, reproduction, secretion, growth, response to stimuli, ticking, classification of protozoa)**	**====**	**====**
7	**4**	knowledge	**Class: Sarcodina Entamoeba histolytica Entamoeba coli**	**====**	**====**
8	**4**	knowledge	**Endolimax nana Iodomoeba butschlii Dientamoeba fragilis Entamoeba gingivalis free living amoeba [Naegleria fowleri] [Acanthamoeba spp.]**	**====**	**====**
9	**4**	knowledge	**Class: Mastigophora 1- Giardia intestinalis**	**====**	**====**
10	**4**	knowledge	**2-Chiomastix mesnili 3-Trichomonas vaginalis 4-T.tenax 5-T. hominis 6-T. foetus**	**====**	**====**
11	**4**	knowledge	**Blood and tissue Mastigophora 2- Leishmania tropica 1- L.donovani**	**====**	**====**
12	**4**	Knowledge	**Trypanosoma gambianse T. cruzi Class: sporozoa Plasmodium vivax ,P. ovale ,P. malarae, P. falciparum)**	**====**	**====**
13	**4**	Knowledge	**Topxoplasma gondii**	**====**	**====**
14	**4**	knowledge	**Class: Ciliophora Blantidium coli All parasites mentioned above are studied in the form and composition of the parasite, life**	**====**	**====**

			cycle, pathology, epidemiology, diagnosis, prevention		
15	**4**	Knowledge	**Phylum: Platyhelminthes Characteristics of the Division of flatworms, body wall installation, gastrointestinal tract, urinary system, nervous system, reproductive system, life cycle**	**====**	**====**
16	**4**	Knowledge	***Class;Trematoda ((Characteristics of the class and Orders) 1-Liver fluckes Fasciola hepatic Clonorchis sinensis 2-Intestinal fluckes Fasciolopsis buski Heterophyes heterophye***	**====**	**====**
17	**4**	Knowledge	**Blood fluckes Schistosomatidae Scistosoma haematobium S.mansoni S. Jpanicum**	**====**	**====**
18	**4**	Knowledge	***Lung fluckes Paragonimus westermai***	**====**	**====**
19	**4**	Knowledge	***Class: Cestoda Characteristics of the class ,body wall installation, body system, life cycle***	**====**	**====**
20	**4**	Knowledge	***Pseudophyllidae Order: Diphllobothrium latum Order : Cyclophyllidae Taenia saginata T. solium Echinococcus granulosius Dipylidium caninum All parasites mentioned above are studied in the form and composition of the parasite, life cycle, pathology, epidemiology, diagnosis, prevention***	**====**	**====**
21	**4**	Knowledge	**Phyulum : Nematoda 1- Trichinella spiralis 2-Trichuris trichura**	**====**	**====**
22	**4**	Knowledge	***3-Ascaris lumbricoides 4-Ancylostoma duodnale 5-Strongyloides stercoralis All parasites mentioned above are studied in the form and composition of the parasite, life cycle, pathology, epidemiology, diagnosis, prevention***	**====**	**====**
23	**4**	Knowledge	**6-Wuchereria bancrofti 7-Dranculus medinesis All parasites mentioned above**	**====**	**====**

			are studied in the form and composition of the parasite, life cycle, pathology, epidemiology, diagnosis, prevention		
24	**4**	Knowledge	**Phylum : Arthropda Characteristics of the class ,body wall installation, body system, life cycle**	**====**	**====**
25	**4**	Knowledge	**Classification Class:Insect Musca domestica Stomoxys calcitrans Phlebotomus papata**	**====**	**====**
26	**4**	Knowledge	**Glossina Sarchophagidae Myiasis Mosquites**	**====**	**====**
27	**4**	Knowledge	**Lice A- Sucking lice (human lice, pubic lice) B- Biting lice 1- Poultry lice, Menopon Gallinae**	**====**	**====**
28	**4**	Knowledge	**Menacanthus stramineus Fleas) Pulex irritanus Ctenocephalides**	**====**	**====**
29	**4**	Knowledge	**1- Class: Arachnida Order:Acarina A-Ticks**	**====**	**====**
30	**4**	Knowledge	**B-Mites ١- Order: Scorpionoidea ٢- Order Arenea**	**====**	**====**

35. Course Evaluation

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

40 marks (5marks for the first monthly exam + 5 marks for the second monthly exam + 10 marks for the midterm exam) + 10 marks for daily preparation and daily tests + 5 marks for the first practical exam + 5 marks for the second monthly practical exam)
60 marks (20 marks final practical exam + 40 marks final theoretical exam)

36. Learning and Teaching Resources

Required textbooks (curricular books, if any)	not available
Main references (sources)	Atlas of medical Helminthology and protozoology-H.C.Jeffrey and R.M.Leach.third edition – 1993 Parasitology - v- medical microbiology-2005 Parasitology –Ismail AL-Hadithi and A.H.Awad – 2015 Paniker's Textbook of Medical Parasitology, seventh edition, Ck Jayaram Paniker,2013
Recommended books and references	Parasitology –Ismail AL-Hadithi and A.H.Awad – 2015

(scientific journals, reports…)	
Electronic References, Websites	Websites available on Google Chrome (CDC)

Course Description Form

1. Course Name:
Animal physiology
2. Course Code:
Bio 402
3. Semester / Year:
2024−2025
4. Description Preparation Date:
2024−2025
5. Available Attendance Forms
: Daily attendance
6. Number of Credit Hours (Total) / Number of Units (Total) :
7. Course administrator's name (mention all, if more than one name)
Name: **Assist. Prof. Eqbal Awadh Gatea** Email: eq_bio2013@mu.edu.i
8. Course Objectives

Course Objectives	Introducing the student to physiology and its importance, as physiology is concerned with studying the physiology and various body systems and their mechanisms of action, the relationship between the body systems, and the functional and physiological adaptations that help the living organism to survive.
9. Teaching and Learning Strategies	
Strategy	1- Lecture, use of the blackboard, and delivery 2- Demonstration (using diagrams and educational pictures using datashows, videos) 3- Teaching through exploratory lecture 4- Interactive discussion 5- Practical tests used in laboratories 6- E-learning using Google Classroom platforms

10. Course Structure					
Week					
1	**2**	knowledge	Introduction to Physiology, its Principles and Applications	Lecture, use of the blackboard, and delivery , Demonstration (using diagrams and educational pictures using	Theoretical, practical/oral and written examinations (daily, monthly and midterm

				datashows, videos), Teaching through exploratory lecture, Interactive discussion, Practical tests used in laboratories, E-learning using Google Classroom platforms	exam) and scientific reports
2	2	knowledge	Physiological Effect of Heat	====	====
3	2	knowledge	Physiology of the Urinary System	====	====
4	2	knowledge	Body fluids, kidney structure and function	====	====
5	2	knowledge	Water and ions balance	====	====
6	2	knowledge	Desert animals	====	====
7	2	knowledge	Physiology of nervous systems	====	====
8	2	knowledge	Generation of nervous impulses	====	====
9	2	knowledge	Electrical conduction	====	====
10	2	knowledge	Neuron cell interconnection	====	====
11	2	knowledge	Physiology of the Muscular System	====	====
12	2	knowledge	Types of Muscles	====	====
13	2	knowledge	Filamentary Sliding Theory	====	====
14	2	knowledge	Control of Contraction	====	====
15	2	knowledge	Physiology of the Respiratory System	====	====
16	2	knowledge	First Semester Exam	====	====
17	2	knowledge	Breathing and Pulmonary Ventilation	====	====
18	2	knowledge	Oxygen transport and gas exchange	====	====
19	2	knowledge	Circulatory systems	====	====
20	2	knowledge	Blood, blood composition and plasma	====	====
21	2	knowledge	Blood clotting and Rh factor	====	====
22	2	knowledge	Lymphatic system	====	====
23	2	knowledge	Physiology of the digestive system	====	====
24	2	knowledge	Salivary glands Components of saliva	====	====
25	2	knowledge	Digestion in the stomach	====	====
26	2	knowledge	Digestion in the intestines	====	====

27	**2**	knowledge	Absorption process in the digestive system	====	====
28	**2**	knowledge	Control of intestinal and stomach digestion	====	====
29	**2**	knowledge	Water balance and factors affecting it	====	====
30	**2**	knowledge	second-semester exam	====	====

11. Course Evaluation

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

40 marks (5 marks for the first monthly exam + 5 marks for the second monthly exam + 15 marks for the midterm exam) + 5 marks for daily preparation and daily tests)
60 marks (40 marks final theoretical exam)

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	General Basics in Physiology Dr. Rushdi Fattouh Animal Physiology Dr. Youssef Mohan Arab and others
Main references (sources)	Guyton and Hall Textbook of Medical Physiology
Recommended books and references (scientific journals, reports…)	Animal anatomy and physiology
Electronic References, Websites	Websites available on internet

Course Description Form

37.	Course Name: Plant Physiology
38.	Course Code:
39.	Semester / Year: 2024/2025
40.	Description Preparation Date: ٢٠/١/2025
41.	Available Attendance Forms:
42.	Number of Credit Hours (30h) / Number of Units (6)
43.	Course administrator's name
Name: Asst. Prof. Dr. Arshad Naji Alhasnawi Email: arshad@mu.edu.iq	
44.	Course Objectives

Course Objectives	• The student learns about the principles of plant physiology • Explaining plant physiology • Filtering the basic structure of physiological processes and vital viruses
45.	Teaching and Learning Strategies
Strategy	• Presentation strategy • Brainstorming strategy • Teamwork strategy • Discussion strategy • Blended learning strategy • Training and application strategy • Interactive lesson strategy
46.	Course Structure

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

١	٢	1. Introduction to the concept of plant physiology, its importance, and its relationship to the branches of science, its properties, and the reasons for acquiring those properties, solutions, and the colloidal system.	1. Plant physiology	Use learning strategies	• View questions and answers • Presenting and interpreting educational situations • The student is assigned to write a report • Tasks and duties of Kozat • Monthly exams
٢	٢	2. Water relations of the plant cell	2. Water relations of the plant cell		
٣	٢	3. Diffusion: the concept, the diffusion of gases and their properties, and osmosis: the concept, ideal conditions, semi-mature and selective membranes (plant membranes)	3. Diffusion		
٤	٢	4. Osmotic and water potential, pressure and the relationship between them, plasma contraction (plasma, methods of measuring types of potential)	4. Water potential		
٥	٢	5. Phloem transport, water absorption and transport in plants: concept, mechanisms and influencing factors	5. Phloem transport		
٦	٢	6 Transpiration: the concept, stomata and their distribution, the mechanism of opening and closing stomata, factors affecting transpiration	6. Transpiration		
٧	٢	7. Mineral nutrition for plants: mineral plant components, methods of studying them, basic elements (macro, micro, and beneficial nutrients), passive absorption and its mechanisms.	7. Mineral nutrition of the plant		
٨	٢	8. Effective absorption: concept, evidence, mechanism, functions or physiological importance of the essential elements	8. Effective absorption		
٩	٢	9. Photosynthesis: overview, pigments, absorption spectrum and action spectrum, light and visible spectrum	9. Photosynthesis		

١٠	٢	10. Light reactions: the origin of oxygen and evidence, electron transfer, the Emberson effect, the two photosystems, and photophosphorylation. 11. Darkness reactions: C3 and C4 plants Calvin Wahagh Slack and CAM, photorespiration. 12. Factors affecting photosynthesis and phloem transport: general overview, features, and mechanism 13. Respiration: glycosylation and the Cres cycle, the pentose pathway (the fourth week of phosphorylation and glyoxylate, the respiratory factor). 14. Plant growth and formation: the concept of growth, formation and development, places (the first week of growth and types of meristems, growth kinetics) 15. Exam 16. Growth regulators and plant hormones: definitions, auxins (discovery, distribution in plants, transport, plant biosynthesis. 17. Effects, physiological, sensitivity of plant organs, decay 18. Gibberellins and cytokines: discovery and physiological effects 19. Acidic acid and ethylene: discovery and physiological effects 20. Photoperiod and flowering, panicle 21. Discussing reports 22. Phytochrome: concept, conditions and physiological effects 23. Plant movements: affiliative and positional movements (Nasties) 24. Seed germination	10. Light reactions 11. Dark interactions 12. Phloem transport 13. Breathing 14. Plant growth and formation 15. Exam 16. Growth regulators and plant hormones 17. Physiological effects 18. Gibberellins and cytokines 19. Acidic acid and ethylene 20. Photoperiod 21. Discussing reports 22. Phytochrome 23. Plant movements 24. Germination 25. Exam		
١١	٢				
١٢	٢				
١٣	٢				
١٤	٢				
١٥	٢				
١٦	٢				
١٧	٢				
١٨	٢				
١٩	٢				
٢٠	٢				

٢١ ٢٢ ٢٣ ٢٤ ٢٥	٢ ٢ ٢ ٢ ٢	and latency 25. Exam			

٧. Course Evaluation

The grade is distributed out of 100 according to the tasks assigned to the student, such as daily preparation, daily, oral, monthly and written exams, reports, etc. The annual effort is calculated as follows: [Theoretical 27% (10% first semester + 10% second semester + 7% activities, assignments, attendance, reports, etc.)] + [Practical 13% (5% first semester + 5% second semester + 3% activities, assignments, attendance, reports, etc.)] = 40% annual effort
40% annual effort + 60% final exam = 100%

48. Learning and Teaching Resources

Required textbooks (curricular books, if any)	
Main references (sources)	Dr. Bassam Taha Yassin (2001). Basics of Plant Physiology. Qatar University. Dr. Faisal Abdul Qader, Dr. Fahima Abdul Latif, Dr. Ahmed Shawqi, Dr. Abbas Abu Tabih, Dr. Ghassan Al-Khatib (1982), Plant Physiology, Ministry of Higher Education and Scientific Research
Recommended books and references (scientific journals, reports…)	Subhi Darhab. Plant Physiology, pp. 219-232. The content of the book is from the Encyclopedia of Plants, Suzanne Mubarak Scientific Exploration Center. Preparation and scientific supervision by Professor Dr. Muhammad Hamid Idris. Basics of Plant Biochemistry and Physiology. Taiz, L., Zeiger, E., Møller, I. M., & Murphy, A. (2015). Plant physiology and development (No. Ed. 6). Sinauer Associates Incorporated. Lambers, H., Chapin, F. S., & Pons, T. L. (2008). Plant physiological ecology (Vol. 2, pp. 11-99). New York: Springer. Lazar, T. (2003). Taiz, L. and Zeiger, E. Plant physiology. 3rd edn. Bhatla, S. C., & Lal, M. A. (2023). Plant physiology, development and metabolism. Springer Nature. Vince Ördög (2011). Plant physiology. Az Agrármérnöki MSc szak tananyagfejlesztése TÁMOP-4.1.2-08/1/A-2009-0010 projekt
Electronic References, Websites	Yes

Course Description Form

49. Course Name:
Microbiology
50. Course Code:
Bio 401
51. Semester / Year:
202٤-202٥
52. Description Preparation Date:
202٤-202٥
53.Available Attendance Forms
: Daily attendance
54.Number of Credit Hours (Total) / Number of Units (Total) :
٢hours (theoretical) + 2 hours (practical) / 6 units
55. Course administrator's name (mention all, if more than one name)
Name: Lecturer Dr. Fouad Qasim Jubair Al-Zayadi Email: fouad.qasim@mu.edu.iq
56. Course Objectives

Course Objectives	Give a complete idea of living organisms that cannot be seen with the naked eye (bacteria, fungi, viruses, algae, protozoa)
57. Teaching and Learning Strategies	
Strategy	1- Lecture, use of the blackboard and presentation 2- Demonstration (using graphs, pictures and educational films using a data projector) 3- Interactive discussion 4- Self-education

58. Course Structure					
Week	**Hours**	**Required Learning Outcomes**	**Unit or subject name**	**Learning method**	**Evaluation method**

1	**4**	knowledge	**Introduction of Microbiology**	-Lecture, use of the blackboard and presentation -Demonstration (using graphs, pictures and educational films using a data projector) -Interactive discussion -Self-education - Open educational classes using the Classroom platform	Theoretical, practical/oral and written examinations (daily, monthly and midterm exam) and scientific reports
2	**4**	knowledge	**Important of microbiology**	**====**	**====**
3	**4**	knowledge	**Evolution of microbiology**	**====**	**====**
4	**4**	knowledge	**Classification of microbiology**	**====**	**====**
5	**4**	knowledge	**Nomenclature of microbiology**	**====**	**====**
6	**4**	knowledge	**Characteristics of bacteria - their locations - shapes of bacteria**	**====**	**====**
7	**4**	knowledge	**Anatomy of bacteria - cell wall**	**====**	**====**
8	**4**	knowledge	**Some components of Gram-negative bacteria that lie outside the peptidoglycan**	**====**	**====**
9	**4**	knowledge	Cytoplasmic membrane	====	**====**
10	**4**	knowledge	**Nutrition of microorganisms**	====	**====**
11	**4**	knowledge	**Organic growth factors**	**====**	**====**
12	**4**	knowledge	**Microorganism growth - cell division**	**====**	**====**
13	**4**	knowledge	**Bacterial growth curves and stages**	**====**	**====**
14	**4**	knowledge	**Direct and indirect bacterial counting**	**====**	**====**
15	**4**	knowledge	Stages of bacterial growth	**====**	**====**
16	**4**	knowledge	Microbiology physiology	**====**	**====**
17	**4**	knowledge	Microbiology control	====	**====**
18	**4**	knowledge	Antibiotics	**====**	**====**
19	**4**	knowledge	Microbial genetics	**====**	**====**
20	**4**	knowledge	Genetic exchange mechanism	**====**	**====**
21	**4**	knowledge	Pathogenic microorganisms	**====**	**====**
22	**4**	knowledge	Pathogenic bacteria 1	====	**====**
23	**4**	knowledge	Pathogenic bacteria 2	====	**====**
24	**4**	knowledge	Pathogenic bacteria 3	====	**====**
25	**4**	knowledge	Viruses	**====**	**====**
26	**4**	knowledge	Properties of viruses	**====**	**====**
27	**4**	knowledge	Microorganisms found in soil	**====**	**====**

28	**4**	knowledge	Microorganisms of water and wastewater	**====**	**====**
29	**4**	knowledge	Revitalization of industrial foods and dairy products	**====**	**====**
30	**4**	knowledge	Microorganisms found in soil	**====**	**====**

59. Course Evaluation

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

40 marks (5 marks for the first monthly exam + 5 marks for the second monthly exam + 15 marks for the midterm exam) + 5 marks for daily preparation and daily tests + 5 marks for the first practical exam + 5 marks for the second monthly practical exam)
60 marks (20 marks final practical exam + 40 marks final theoretical exam)

60. Learning and Teaching Resources

Required textbooks (curricular books, if any)	not available
Main references (sources)	Diagnostic Microbiology .Forbes, Betty A Sahm, Daniel F, 2007 Jawetz Melnick and Adelbergs Medical Microbiology 27 E, Carroll, Karen C Butel, Janet Morse, Stephen ,2015
Electronic References, Websites	Websites available on Google Chrome

Course Description Form

1. Course Name:
Measurement and evaluation / fourth stage
2. Course Code:
CREQ 401
3. Semester / Year:
2024-2025
4. Description Preparation Date:
٢٠٢٥٢٧/١/
5. Available Attendance Forms:
My presence
6. Number of Credit Hours (Total) / Number of Units (Total)
2 hours / number of units 4
7. Course administrator's name (mention all, if more than one name)
Name: Duaa Raheem Katun Email: duaa.raheem@mu.edu.iq
8. Course Objectives

Course Objectives	**• Identify the concept of measurement and evaluation, types and applications.** **• Spreading the culture of developing measurement and evaluation systems for students.** **• Raising awareness of the importance of assessment in all aspects of the student's personality (cognitive, Skillful, emotional)** **• Preparing questionnaires and opinion poll**

	for the student's evaluation of the professo and the course And the exam. **• Training students to perform course evaluations.** **• Knowing how to prepare a test for studen as well as how to measure its importance Test and formulate it appropriately.**

9. Teaching and Learning Strategies

Strategy	• Direct oral delivery • Writing on the blackboard, and adopting a visual, educational-guided writing to confirm the information. • PowerPoint presentation • Discussion • Cooperative learning

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
The first week	2		Defining concepts, evaluating and testing And the relationship between them	PowerPoint presentat And discuss	Oral question And daily exams
second week	2		Types of evaluation - Curriculum evaluation	PowerPoint presentation And discuss	Oral question And daily exams
the third week	2		Preparing the achievement test	PowerPoint presentation And discuss	Oral question And daily exams
fourth week	2		Achievement tests and their types	PowerPoint presentation And discus	Oral question And daily exams
The fifth week	2		Oral tests and their areas of use	PowerPoint presentation And discuss	Oral question And daily exams
the sixth week	2		Advantages and disadvantages of oral tests	PowerPoint presentation And discuss	Oral question And daily exams
Seventh week	2		Performance tests (rules for drafting - types) Written tests	PowerPoint presentation And discuss	Oral question And daily exams
The eighth we	2			PowerPoint	Oral question

				presentation And discuss	And daily exams
Week nine	2		Tests based on giving the student an answer - their types	PowerPoint presentation And discuss	Oral question And daily exams
The tenth wee	2		Non-scheduled essay tests – examples	PowerPoint presentation And discuss	Oral question And daily exams
Week eleven	2		Choice-based tests - their types	PowerPoint presentation And discuss	Oral question And daily exams
The twelfth w	2		True-false test - multiple choice – examples	PowerPoint presentation And discuss	Oral question And daily exams
The th irt ee nt h w ee k	2		Conformity testing – examples	PowerPoint presentation And discuss	Oral question And daily exams
	2		The law of correcting objective tests from the effect of guesswork	PowerPoint presentation And discuss	Oral question And daily exams
	2		Steps of the achievement test - conditions Good testing and its specifications	PowerPoint presentation And discuss	Oral question And daily exams
The fourteent week	2		Application	PowerPoint presentation And discuss	Oral question And daily exams
The fifteenth week	2		Application	PowerPoint presentation And discuss	Oral question And daily exams
Sixteenth wee	2		Application	PowerPoint presentation And discuss	Oral question And daily exams
Seventeenth week	2		Application	PowerPoint presentation And discuss	Oral question And daily exams
Eighteenth we	2		Application	PowerPoint presentation And discuss	Oral question And daily exams
Week ninetee	2		Application	PowerPoint presentation And discuss	Oral question And daily exams
The twentieth week	2		Application	PowerPoint presentation And discuss	Oral question And daily exams

Twenty-first week			Educational objectives - Bloom's taxonomy of objectives Table of specifications - its contents	PowerPoint presentation And discuss	Oral question And daily exams
Twenty-secon week	2		Standardized achievement tests - types of achievement tests		
Twenty-third week	2		Building achievement tests	PowerPoint presentation And discuss	Oral question And daily exams
	2		Statistical analysis of paragraphs - ease and difficulty of paragraphs	PowerPoint presentation And discuss	Oral question And daily exams
Twenty-fourth week	2		Discrimination-effectiveness of false alternatives	PowerPoint presentation And discuss	Oral question And daily exams
	2		Honesty and its types - how to calculate each type	PowerPoint presentation And discuss	Oral question And daily exams
Twenty-fifth week	2		Reliability - methods of calculating it - its objective types - comprehensiveness	PowerPoint presentation And discuss	Oral question And daily exams
Twenty-sixth week	2			PowerPoint presentation And discuss	PowerPoint presentation And discuss
Twenty-seventh week					
Twenty-eighth week					
Twenty-ninth week					
the third week					

11. Course Evaluation

Distribution is as follows: 25 marks for monthly and daily exams for the first semester. 25 marks for monthly and daily exams for the second semester. 50 marks for final exams

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Modern trends in science teaching Principles of measurement and evaluation
Main references (sources)	Education evaluation ducational measurement and evaluation
Recommended books and references (scientific journals, reports…)	• Basics of educational measurement and evaluati • Measurement and evaluation in univer education
Electronic References, Websites	Borsippa Library https://cdn.fbsbx.com Al Noor Library

Course Description Form

٦١. Course name : Viewing and application	
٦٢. The course Symbol：CREQ 402	
٦٣. It is 2024/2025. and .and	
٦٤. and .. and :٢٠٢٥/١/١٩	
٦٥. Available attendance options and .	
. and	
٦٦. Total number of study hours / Total number of credit hours 3 hours weekly / 4 units	
٦٧. Name of the course coordinator(If more than one name is mentioned)	
me:Mr. Shakir Musafir Nebras / Email: nibrasmosafr@mu. edu.	
٦٨. Goals and .	
. study material and Objectives of the r the application stage and preparing em psychologically and educationally for this stage.	. and . and . and. and
٦٩. and .	
. and A large and diverse set of learning and observation and application material in familiar with it and with what pertains to the modern curriculum.	aching strategies is used in the der for students to become

					. and .٧٠
Evaluation	learning Method of	. and	. and	. and	The
and .Questions and .Evaluation	Method The dialogue	. and	Knowledge of the te practical education, importance, and its foundations.	Th re e	١
	Application	. and practically in every stage Students	and.		nd٢
	Dialogue method d the discussion . and	The importance of this stage for the practicing student, its foundations, and its .stages	and.		٣
	pplication	Types of study plans and. and .- The study unit -Unit elements -Importance of the daily plan	The concept of planning and its importance **and.**		is ٤
	. and	and . .- Its classifications	Behavioral		is ٥
	Method he lecture	and .Water	GoalsBehavioral		is ٦
		and .and. Moral values and principles - The r of the educator in Confronting the challenges of the 2 century Examples of professional ethics	and.		is ٧
		Objectives of classroo questions- Agarand .- Principles of formulation - Skills - Teachin guidelinesand.	and.		is ٨
		Its concept- Its importance - it dimensions - its patterns- Elements - factors that contribu to the emergence and .Managementclassroom and.	The administratior nd.		is ٩

		Why does he teach - What does he teach - How does he teach	The good lesson		١٠
		Practical lessons	and.		١١
		and.	and.		١٢
		Practical lessons	Microteaching		hirt een
		Practical lessons	and.		١٤
		and.	and.		١٥
					١٦
					١٧
					١٨
					١٩
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					٢٤
					٢٥
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					٢٩
					٣٠

Course evaluation .٧١

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

- .and .The first10 points
- .Central exam — 10 degrees
- and .Weekly5 isScores
- and .10 is

. and

- is ٣٠
- .application stage worth 20 points Scientific supervisor - Field visit in the
- the application phase, a student is School Management Evaluation — 10 points (after (handed a evaluation form)Management

. and .٧٢

(and .(The methodology, if found	. and
. and	. and
. . Books and referencesThe supportand	hmoud Curricula and Teaching Methods / Mohamed Al–Heela
. and	. and

Course Description Form

1. Course Name:
Psychological counseling
2. Course Code:
This course description provides a concise summary of the main characteristics of t course, the course outcomes, and the learning outcomes expected of the stude demonstrating whether he has benefited from the available learning opportunities.
3. Semester / Year:
2024−2025
4. Description Preparation Date:
2024−2025
5. Available Attendance Forms
: Daily attendance
6. Number of Credit Hours (Total) / Number of Units (Total):
2 hours per week
7. Course administrator's name (mention all, if more than one name)
Name: Dabas Atheeb Abdullah
8. Course Objectives
Course Objectives 1- Introducing students to the concept of guidance, its origin, development and methods 2- Introducing students to the educational counselor and methods of preparing him 3- Introducing students to how to achieve personal harmony with ones and satisfaction with it and satisfy internal, primary and innate motiv and needs. 4- Helping students adapt to themselves and their environment and to

choose the appropriate academic specialization for them 5- Developing positive trends and tendencies among students undertake the profession of educational counselor	

9. Teaching and Learning Strategies	
Strategy	1 . Enabling students to know the principles of counselling, guidance ar mental health A2. Preparing students psychologically and educationally for the teaching profession A3. Preventing students from getting into problems and helping the make their own decisions

10. Course Structure					
Week					
1		**The first week**	**An introduction to the study of psychological counselling**	**The first chapter: An introduction to the study of psychological counselling**	
2			**What is psychology**	**What is psychology**	
3			**Fields of psychology and its branches**	**Fields of psychology and its branches**	
4			**A brief overview of the development of psychological counselling**	**A brief overview of the development of psychological counselling**	
5			**The importance of psychological guidance**	**The importance of psychological guidance**	
6			**Objectives of psychological counseling and educational guidance**	**Objectives of psychological counseling and educational guidance**	
7			**Justifications for psychological counselling**	**Justifications for psychological counselling**	
8			**A historical overview of the student psychological counselor**	**A historical overview of the student psychological counselor**	
9			**Guide preparation and training**	***Guide preparation and training***	
10			Counselor ethics	Counselor ethics	
11			**Student advisor tasks**	**Student advisor**	

				tasks	
12			altiqniaat alarshadia	altiqniaat alarshadia	
13			daewat wadiha	daewat wadiha	
14			. daewat ghayr mubashira	. daewat ghayr mubashira	
15			Individual counseling	Individual counseling	
16			*Group counseling*	*Group counseling*	
17			Guidance through play for children	Guidance through play for children	
18			*. Behavioral counseling*	*. Behavioral counseling*	
19			Chapter Three: The relationship of psychological counseling to other science	*Chapter Three: The relationship of psychological counseling to other science*	
20			Scientific foundations of psychological and educational counseling	Scientific foundations of psychological and educational counseling	
21			: Psychological counseling theories	: Psychological counseling theories	
22			Self theory	*Self theory*	
23			The theory of rational guidance	The theory of rational guidance	
24			Behavioral theory psychoanalytic theory	Behavioral theory psychoanalytic theory	
25			Chapter Five: Methods of collecting information	Chapter Five: Methods of collecting information	
26			. Tests and standards	. Tests and standards	
27			The counseling interview	The counseling interview	
28			Educational guidance in school	Educational guidance in school	
29			Educational guidance in school	Educational guidance in school	
30			The guiding teacher course, the importance of its preparation	The guiding teacher course, the importance of its preparation	

11. Course Evaluation

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

40 marks (5 marks for the first monthly exam + 5 marks for the second monthly exam + 15 marks for the midterm exam) + 5 marks for daily

preparation and daily tests) 60 marks (40 marks final theoretical exam)

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	
Main references (sources)	
Recommended books and references (scientific journals, reports…)	Make a greater period for practical application in schools 2. Informing students about the latest developments in the field of counseling and mental health 3.Exchanging experiences between faculty members. 4. Keeping pace with developments in the nature of work in the field of psychological counseling and guidance
Electronic References, Websites	Academy of Psychology / Wikipedia / The A Encyclopedia of Counseling and Psychotherapy / Websit the Psychological Counseling Center at the Institute Educational Studies, Cairo University / Arab Psycholog Sciences Network / Center for Educational Stu Psychological Research / Center for Psychological Rese and Studies/