



جَامِعَةُ الْبَتَايَا



Academic Program Description

Al-Bayan University College of Health & Medical Techniques

2026 - 2025

Department of Medical Lab Techniques
September 10, 2025

University	Al-Bayan University
Faculty/Institute	College of Health and Medical Techniques
Scientific Department	Medical Laboratory Techniques
Academic/Professional Program Name	Academic Program Description
Final Certificate Name	Bachelor in Medical Laboratory Techniques
Academic System	Morning/ Evening
Description Preparation Date	10-09-2025
File Completion Date	19-09-2025

Head of Department

Signe

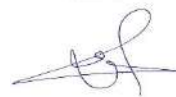


Name Prof. Dr. Waleed Hameed Yousif

Date 21-09-2025

Scientific Associate

Signe



Name Lec. Dr. Mytham Jabouri
Abdullhussein

Date 21-09-2025

This File has been checked by Quality Assurance and University Performance
Director of Quality Assurance and University Performance Department

Head of Quality Assurance Section

Signe



Name Lect. Sarah Abdullatif Kadhim

Date 21-09-2025



Approval of the Dean
Prof. Dr. Gaith Ali Jasim

1. Program Vision

Building a scientific, medical and technical institution that supports health, medical and educational institutions by preparing medical technical cadres in the fields of medical laboratories that will advance their role in developing health institutions and participating in applied medical studies on solid scientific foundations that are in line with developments in the relevant medical fields.

2. The Message of the Academic Program

Choosing the best modern scientific methods in preparing technical cadres by providing qualified faculty members to deliver knowledge, information and keeping pace with modern scientific developments in addition to providing students with scientific expertise through practical and applied training in college laboratories, and opening horizons of scientific corporations with relevant corresponding departments.

3. Program Objectives

Preparing specialized technical staff to serve various medical specialties (medicine , dentistry , pharmacy and nursing) .

Contributing to the development of society through developing health services in cooperation with health and national institutions, and preparing and implementing health programs and plans, benefiting from the expertise of specialties and Providing the necessary equipment to improve the quality of health services.

Encouraging medical and health research in the fields of medical laboratory technique and other medical specialties.

Supporting hospitals and health centers with medical staff specialized in medical laboratories techniques as well as filling the needs of health institutions, official and private hospitals, and private pathological analysis laboratories.

4. The Program Accreditation

Currently being obtained, following the submission of the formal application along with all supporting evidence.

5. Other External Influences

N/A

6. Program Structure

Course Structure	Number of Courses	Credit Units	(%)	Reviews
Institutional Requirements	11	20	12	-
College Requirements	8	15	9	-
Department Requirements	41	132	79	-
Summer Training	-	-	-	Satisfied
Other	-	-	-	-

7. Program Description

Year / Level	Course Code	Course Name	Credit Hours	
			Theoretical	Practical
1 st	02011101	General chemistry 1	2 Hours	1.5 Hour
	02011102	Medical Terminology	2 Hours	-
	02011103	Human Biology 1	2 Hours	1.5 Hour
	02011104	Laboratory Instruments 1	2 Hours	1.5 Hour
	02011105	Medical Ethics	2 Hours	
	02011106	Human Rights and Democracy	2 Hours	1.5 Hour
	02011201	General chemistry 2	2 Hours	-
	02011202	Anatomy	2 Hours	-
	02011203	Human Biology 2	2 Hours	1.5 Hour
	02011204	Laboratory Instruments 2	2 Hours	1.5 Hour
	02011205	Arabic language	2 Hours	1.5 Hour
	02011206	Computer application	2 Hours	1.5 Hour
2 nd 1 st	02012101	Medical Bacteriology 1	2 Hours	1.5 Hour
	02012102	Biochemistry 1	2 Hours	1.5 Hour
	02012103	Human Physiology 1	2 Hours	1.5 Hour

2nd	02012104	Histology 1	2 Hours	1.5 Hour
	02012105	Medical Parasitology 1	2 Hours	1.5 Hour
	02012106	Descriptive Biostatistics	2 Hours	1.5 Hour
	02012107	Crimes of baath regime in Iraq	2 Hours	
	02012108	Computer applications	2 Hours	1.5 Hour
	02012201	medical bacteriology2	2 Hours	1.5 Hour
	02012202	Biochemistry 2	2 Hours	1.5 Hour
	02012203	Human Physiology 2	2 Hours	1.5 Hour
	02012204	Histology 2	2 Hours	1.5 Hour
	02012205	Medical Parasitology & Entomology 2	2 Hours	1.5 Hour
	02012206	Molecular Biology	2 Hours	1.5 Hour
	02012207	Arabic language	2 Hours	-
	02013101	Histopathology1	2 Hours	1.5 Hour
	02013102	Haematology1	2 Hours	1.5 Hour
	02013103	Medical Virology	2 Hours	1.5 Hour
	02013104	Clinical Endocrinology	2 Hours	1.5 Hour
	02013105	Medical Genetics1	2 Hours	1.5 Hour
	02013106	Immunology1	2 Hours	1.5 Hour
	02013107	Computer application 1	2 Hours	1.5 Hour
	02013108	Advanced Laboratory Techniques	2 Hours	1.5 Hour
1st	02013201	Histopathology2	2 Hours	1.5 Hour
	02013202	Haematology2	2 Hours	1.5 Hour
3rd	02013203	Medical Mycology	2 Hours	1.5 Hour
	02013204	Metabolic Disorders	2 Hours	1.5 Hour
2nd	02013205	Medical Genetics2	2 Hours	1.5 Hour
	02013206	Immunology2	2 Hours	1.5 Hour
	02013207	Computer applications 2	2 Hours	1.5 Hour
	02013208	Analytical Biostatistics	2 Hours	1.5 Hour
	02013209	Summer Training	Satisfied	-

4 th	1 st	02014101	Clinical Immunology 1	2 Hours	1.5 Hour
		02014102	Diagnostic Bacteriology1	2 Hours	1.5 Hour
		02014103	Clinical Enzymology	2 Hours	1.5 Hour
		02014104	Diagnostic Parasitology 1	2 Hours	1.5 Hour
		02014105	Blood Transfusion	2 Hours	1.5 Hour
		02014106	Pathology	2 Hours	1.5 Hour
	2 nd	02014107	Professional Ethics	2 Hours	-
		02014108	Research Methods	2 Hours	-
		02014201	Clinical Immunology 2	2 Hours	1.5 Hour
		02014202	Diagnostic Bacteriology 2	2 Hours	1.5 Hour
		02014203	Stem cells & Embryology	2 Hours	1.5 Hour
		02014204	Diagnostic Parasitology 2	2 Hours	1.5 Hour
		02014205	Clinical Chemistry	2 Hours	1.5 Hour
		02014206	Antibiotic Resistant & infection control	2 Hours	1.5 Hour
		02014207	Laboratory Management	2 Hours	-
		02014208	Graduation Project	-	-

8. Expected learning outcomes of the program

➔ Knowledge

- Outcome Learning 1** *The student should be able to identify all types of laboratory equipment*
- Outcome Learning 2** *The student should be aware of how laboratory equipment works and how tests can be performed on it*
- Outcome Learning 3** The student will know how to manage the laboratory correctly and accurately
- Outcome Learning 4** The student will know how to read laboratory results correctly and without error

→ Skills

- Outcome Learning 1** *The student will be able to conduct analyzes on various devices in a professional manner*
- Outcome Learning 2** *The student must be able to perform the blood drawing process smoothly and with sufficient skill*
- Outcome Learning 3** *The student will be able to perform bacterial culture operations to be able to diagnose the correct bacterial type*
- Outcome Learning 4** *the student will be able to perform the tissue biopsy process successfully and professionally*

→ Values

- Outcome Learning 1** *The student should be able to understand the importance of this department and what possibilities it provides to the community and medical personnel*
- Outcome Learning 2** *That the student will be able to develop medical laboratories and access better methods to obtain faster and easier results for patients*
- Outcome Learning 3** *The student should be able to create new laboratories with modern and rare equipment to carry out new and rare tests in the country*
- Outcome Learning 4** *The student will be able to maintain laboratory equipment and plan regular maintenance at close intervals on a routine basis*

9. Teaching and Learning Strategies

<i>Theoretical Lessons</i>	<i>Laboratory training</i>	<i>Conduct laboratory experiments</i>
<i>Practical Lessons</i>	<i>Conduct scientific discussions with students</i>	<i>Show video clips of laboratory experiments</i>
<i>Sending students to hospitals for training</i>	<i>Holding seminars and conferences</i>	<i>Assistance in supervising</i>

graduation
research

10. Evaluation Methods

<i>Oral exams</i>	<i>Weekly exams</i>	Monthly exams
<i>Quick quiz</i>	Presenting Seminars	Midterm exam
<i>Making scientific reports and essays</i>	Practical exams	Final exam

11. Faculty Members

Titles	Specialization		Staff	Numbers
	General	Special		
Prof	<i>Veterinary medicine</i>	<i>Cell Physiology</i>	3	0
Prof	<i>Biology</i>	<i>Animal Physiology</i>		
Prof	<i>Biology</i>	<i>Animal Physiology</i>		
Prof	Medicine	<i>Anatomy</i>	3	0
Asst. Prof	<i>Genetics</i>	<i>Microbial Genetics</i>		
Asst. Prof	<i>Biology</i>	Microbiology		
Asst. Prof	<i>Veterinary medicine</i>	<i>Parasitology/ Hematology</i>	6	0
Lecturers	<i>Veterinary medicine</i>	Parasite		
Lecturer	Microbiology	<i>Immunology</i>		
Lecturer	Biology	Microbiology/Bacteriology	6	0
Lecturer	Veterinary medicine	<i>Physiology</i>		
Lecturer	General medicine and surgery	Kidney and urinary tract surgery		
Lecturer	<i>Biotechnology</i>	<i>Biotechnology</i>	22	0
Asst. Lecturers	Chemistry science	<i>Biochemistry</i>		
Asst. Lecturers	science	Life science		
Asst. Lecturers	Biology	<i>Microbiology</i>		
Asst. Lecturers	Biology	Microbiology		
Asst. Lecturers	Biology	Microbiology		

Asst. Lecturers	<i>Veterinary medicine</i>	Parasite
Asst. Lecturers	<i>Veterinary medicine</i>	<i>Common diseases</i>
Asst. Lecturers	<i>Medical Microbiology</i>	<i>Molecular Virology</i>
Asst. Lecturers	<i>Veterinary medicine</i>	<i>Histology</i>
Asst. Lecturers	<i>Veterinary medicine</i>	<i>Histology and embryology</i>
Asst. Lecturers	<i>Veterinary medicine</i>	Parasite
Asst. Lecturers	<i>Electrical Engineering</i>	Computer Science/ Data Security
Asst. Lecturers	<i>Chemistry</i>	Clinical Biochemistry
Asst. Lecturers	<i>Chemistry</i>	<i>Biochemistry</i>
Asst. Lecturers	<i>Veterinary medicine</i>	Parasite
Asst. Lecturers	<i>Biology</i>	<i>Microbiology</i>
Asst. Lecturers	<i>Biology</i>	<i>Microbiology</i>
Asst. Lecturers	<i>Veterinary medicine</i>	<i>Histology and Anatomy</i>
Asst. Lecturers	<i>Biology</i>	<i>Microbiology</i>
Asst. Lecturers	Life science	<i>Animal Science</i>
Asst. Lecturers	<i>Veterinary medicine</i>	<i>Physiology</i>
Asst. Lecturers	<i>Veterinary medicine</i>	<i>Physiology</i>
Teaching Asst.	Pathological Analytics Techniques	

Professional Development

Mentoring New Faculty Members

Guidance and directing are provided to new recruits in the Department of Industrial Kidney Techniques by engaging those concerned in training workshops and holding specialized seminars in their work, as well as development courses.

Professional Development for Faculty Members

Creating developmental sessions by involving them in teaching and then making an evaluation through a referendum by the stages they taught.

12. Admission Criteria

The target group for admission to the department of Medical Laboratory Techniques is graduates of secondary school in the scientific section only with a grade point average of no less than 70 percent.

The application mechanism to study in the department will be after the announcement of the high school results and the opening of the gate for admission by the registration department at the presidency of Al Bayan university.

13. Key Sources of Information about the Program

- 1- The university's website and other websites
- 2- Prescribed scientific references, including books and magazines related to the academic curriculum
- 3- Lectures presented by faculty members in the department

14. Program Development Plan

Today, the healthcare sector stands on the threshold of a rapid technological revolution, placing Medical Laboratory Techniques departments before the responsibility of shifting from classical educational methods to embracing comprehensive innovation. Developing this department at the College of Health and Medical Technologies requires a smart integration of advanced technology and early practical experience to graduate professionals capable of leading the diagnostic laboratories of the future.

This transformation begins with updating the academic core, as it has become essential to include modern educational tracks focusing on Artificial Intelligence in medical diagnostics. By training students to use algorithms for tissue analysis and reading blood smears, we grant them an exceptional competitive edge in the labor market. This coincides with intensifying molecular and genetic diagnostic programs, such as third-generation PCR and advanced gene sequencing, in response to the global demand for personalized medicine. To ensure the realism of education, graduation projects must be directed towards addressing actual challenges faced by local hospitals, turning scientific research into applied solutions that directly serve the healthcare sector.

On an infrastructure level, establishing Virtual Reality Labs (VR Labs) represents a qualitative leap that allows students to simulate complex experiments and handle hazardous samples in a completely safe environment, thereby reducing chemical waste and increasing learning efficiency. Alongside this, implementing a Laboratory Information Management System (LIMS) within the college is a crucial step in training students on full automation—from registering fictitious patient data and logging samples to extracting barcode-based results. Additionally, creating a mini-biobank is vital for preserving biological samples for academic research.

This development remains incomplete without a genuine connection to the labor market and the cultivation of community skills. This can be achieved by launching a community laboratory clinic on campus, managed by final-year students under the supervision of professors, to provide basic tests at a nominal fee for the local community and to develop public interaction skills. Moreover, requiring students to obtain supplementary professional licenses prior to graduation, such as quality management certificates (ISO 15189), is a step that ensures their complete readiness. Strategic partnerships with major medical equipment companies reinforce this direction through training workshops that bring students face-to-face with the latest global technologies.

Implementing this vision through gradual stages—starting with digitization and curriculum updates, and culminating in securing international accreditations—will make the department an exemplary model. It will transform the graduate from a mere laboratory technician into a researcher and innovator who contributes to saving lives.

Program Skills															
Year/Level	Course Code	Course Title	Primary or Optional	Learning Outcomes Required from the Program											
				Knowledge				Skills				Values			
				A1	A2	A3	A4	B1	B2	B3	B4	C1	C2	C3	C4
1 st	02011101	General chemistry 1	Primary	✓	✓	✓		✓	✓	✓		✓	✓	✓	
	02011102	Medical Terminology	Primary	✓	✓	✓		✓	✓	✓		✓	✓		
	02011103	Human Biology 1	Primary	✓	✓	✓		✓	✓	✓		✓	✓	✓	
	02011104	Laboratory Instruments 1	Primary	✓	✓	✓		✓	✓	✓		✓	✓		
	02011105	Medical Ethics	Optional	✓	✓			✓	✓	✓		✓	✓	✓	
	02011106	Human Rights and Democracy	Optional	✓	✓	✓		✓	✓	✓		✓	✓		
	02011201	General chemistry 2	Primary	✓	✓			✓	✓			✓	✓	✓	
	02011202	Anatomy	Primary	✓	✓			✓	✓			✓	✓		
	02011203	Human Biology 2	Primary	✓	✓	✓		✓	✓	✓		✓	✓	✓	
	02011204	Laboratory Instruments 2	Primary	✓	✓			✓	✓	✓		✓	✓		
	02011205	Arabic language	Optional	✓	✓	✓		✓	✓	✓		✓	✓	✓	
	02011206	Computer application	Optional	✓	✓	✓		✓	✓	✓		✓	✓		
2 nd	02012101	Medical Bacteriology 1	Primary	✓	✓	✓		✓	✓	✓		✓	✓		
	02012102	Biochemistry 1	Primary	✓	✓			✓	✓			✓	✓		
	02012103	Human Physiology 1	Primary	✓	✓	✓		✓	✓	✓		✓	✓	✓	

[illegible]

2nd

02014104	Diagnostic Parasitology 1	Primary	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
02014105	Blood Transfusion	Primary	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
02014106	Pathology	Primary	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
02014107	Professional Ethics	Optional	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
02014108	Research Methods	Optional	✓	✓	✓		✓	✓			✓	✓	✓	
02014201	Clinical Immunology 2	Primary	✓	✓	✓		✓	✓	✓		✓	✓	✓	
02014202	Diagnostic Bacteriology 2	Primary	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
02014203	Stem cells & Embryology	Primary	✓	✓	✓		✓	✓	✓		✓	✓	✓	✓
02014204	Diagnostic Parasitology 2	Primary	✓	✓	✓		✓	✓	✓		✓	✓	✓	✓
02014205	Clinical Chemistry	Primary	✓	✓	✓		✓	✓	✓		✓	✓	✓	✓
02014206	Antibiotic Resistant & infection control	Primary	✓	✓	✓		✓	✓	✓		✓	✓	✓	✓
02014207	Laboratory Management	Optional	✓	✓	✓		✓	✓	✓		✓	✓	✓	✓
02014208	Graduation Project	Primary	✓	✓	✓		✓	✓	✓		✓	✓	✓	✓

Course Description (General chemistry 1)

1. Course Title		General chemistry 1	
2. Course Code		02011101	
3. Semester/Year		Semester	
4. Description Preparation Date		2025/9/4	
5. Available Attendance Form		Official attendance time (morning and evening)	
6. No. of Hours (Total)		30 hours for the theoretical aspect and 30 hours for the practical aspect	
7. No. of Credits (Total)		4 units	
8. Course Administrator Name		Dr.Mustafa Saleem Shareef Lec.Yousif Nadim Abbas	
9. E-mail		Mustafa.s@albayan.edu.iq Yosif.n@albayan.edu.iq	
10. Course Objectives			
Knowledge	A1	Teaching students basic scientific concepts of general chemistry topics with focusing on chemical reactions principles.	
	A2	Studying analytical chemistry, standard solutions, and acid base titrations with various techniques.	
	A3	Teaching general organic chemistry topics and classifications	
	A4	Teaching major application of spectroscopy in field of health techniques.	
Skills	B1	Scientific discussion	
	B2	Weekly exams	
	B3	Monthly tests	
	B4	Practical examinations	
Values	C1	Participation in the classroom	
	C2	Provide activities	
	C3	Semester and final tests and activities	
	C4	Self-learning, discussion panels	
11. Teaching and Learning Strategies			
1.	Active participation in the classroom is evidence of the student's commitment and responsibility		4. Developing the student's ability to deal with multiple tasks.

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2.	Adherence to the specified deadline for submitting assignments and research.	5.	Active participation in the classroom is evidence of the student's commitment and responsibility
3.	Semester and final exams express commitment and cognitive and theoretical understanding.	6.	Developing the student's ability to deal with technical means

12. The Structure of the Course

Week	Hours	RLOs	Topic/Subject Name	Learning Method	Evaluation Method
1	2 theory 2 practi.	The way out in theory The way out in practice	Introduction to chemistry Laboratory instructions, safety rule, equipment	presence	Daily, monthly and annual written exam
2	2 theory 2 practi.	The way out in theory The way out in practice	Analytical chemistry Preparation of different types of solution, percentage sol, ppm	presence	Daily, monthly and annual written exam
3	2 theory 2 practi.	The way out in theory The way out in practice	Molar mass Normal solution, molar solution, dilution	presence	Daily, monthly and annual written exam
4	2 theory 2 practi.	The way out in theory The way out in practice	Acid base theory Neutralization reaction	presence	Daily, monthly and annual written exam
5	2 theory 2 practi.	The way out in theory The way out in practice	Periodic table Redox titration	presence	Daily, monthly and annual written exam
6	2 theory 2 practi.	The way out in theory The way out in practice	Acid base titration Buffer solution preparation and pH determination	presence	Daily, monthly and annual written exam
7	2 theory 2 practi.	The way out in theory The way out in practice	Spectroscopy Identification of some common inorganic cation	presence	Daily, monthly and annual written exam
8	2 theory 2 practi.	The way out in theory The way out in practice	Review and exam Identification of some common inorganic anion	presence	Daily, monthly and annual written exam
9	2 theory 2 practi.	The way out in theory The way out in practice	General organic chemistry Determination of melting point	presence	Daily, monthly and annual written exam

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10	2 theory 2 practi.	The way out in theory The way out in practice	Reactions of organic chemistry Determination of boiling point	presence	Daily, monthly and annual written exam
11	2 theory 2 practi.	The way out in theory The way out in practice	Alcohols classifications Reaction of some organic compounds	presence	Daily, monthly and annual written exam
12	2 theory 2 practi.	The way out in theory The way out in practice	Aldehydes and ketones Scheme for identification	presence	Daily, monthly and annual written exam
13	2 theory 2 practi.	The way out in theory The way out in practice	Carboxylic acids Scheme for identification of solid organic compounds	presence	Daily, monthly and annual written exam
14	2 theory 2 practi.	The way out in theory The way out in practice	Aromatics compounds Identification of alcohols	presence	Daily, monthly and annual written exam
15	2 theory 2 practi.	The way out in theory The way out in practice	Amines properties Aliphatic and aromatic carboxylic acids	presence	Daily, monthly and annual written exam

13. Course Evaluation

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

14. Learning & Teaching Resources

Required textbooks (curricular if any)	General Chemistry principal book
Main References (sources)	Articles
Recommended Books & References (Scientific Journals, Reports ...)	Organic chemistry, Jonathan, 2022.
Websites or Electronic References	Wikipedia, research gate, Google Scholar, and many

Course Description (Medical Terminology)

1. Course Title		Medical Terminology	
2. Course Code		02011102	
3. Semester/Year		Semester	
4. Description Preparation Date		2025/9/5	
5. Available Attendance Form		Students' attendance	
6.No. of Hours (Total)		2	
7.No. of Credits (Total)		2	
8. Course Administrator Name		Prof.Dr. Ghaith Ali Jasim	
9. E-mail		Ghaith.a@albayan.edu.iq	
10. Course Objectives			
Knowledge	A1	Introducing medical terminology concept to students	
	A2	Knowing how medical terms is formed	
	A3	Understanding of the formulation of medical terms	
	A4	Fluency in describing patient's conditions	
Skills	B1	build medical linguistic skills	
	B2	Standardize documentation	
	B3	Improve communication skills with medical staff	
	B4	Ability to describe health status with patient in the common language	
Values	C1	Promoting accuracy, safety, and efficacy in patient's care	
	C2	Providing patient's with treatment plan with same common goals	
	C3		
	C4		
11. Teaching and Learning Strategies			
1.	Lecture based instructions	4.	Inquiry based instruction
2.	Technology based learning	5.	Summative learning
3.	Cooperative learning	6.	Differentiation

12. The Structure of the Course

Week	Hours	RLOs	Topic/Subject Name	Learning Method	Evaluation Method
1	2		Introduction to Medical Terminology,	Student attendance	quiz
2	2		Body organizations, & anatomical positions	Student attendance	quiz
3	2		Body regions, cavities, planes	Student attendance	Quiz
4	2		Directional terms, tissues, and membranes	Student attendance	Quiz
5	2		Cardiovascular system	Student attendance	Quiz
6	2		Digestive system	Student attendance	Quiz
7	2		Musculo-skeletal system	Student attendance	Quiz
8	2		Endocrine system	Student attendance	quiz
9	2		Respiratory system	Student attendance	Quiz
10	2		Urinary system	Student attendance	Quiz
11	2		Abdomen	Student attendance	Quiz
12	2		Blood	Student attendance	Quiz
13	2		Immune system	Student attendance	Quiz
14	2		Head & Neck	Student attendance	Quiz
15	2		Reproductive system	Student attendance	Quiz

13. Course Evaluation

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

14. Learning & Teaching Resources

Required textbooks (curricular if any)	Collins, C. Edward: A Short Course in Medical Terminology
Main References (sources)	Collins, C. Edward: A Short Course in Medical Terminology
Recommended Books & References (Scientific Journals, Reports ...)	Collins, C. Edward: A Short Course in Medical Terminology
Websites or Electronic References	Collins, C. Edward: A Short Course in Medical Terminology

Course Description (Human Biology1)

1. Course Title		Human Biology1	
2. Course Code		02011103	
3. Semester/Year		Semester	
4. Description Preparation Date		2025/9/3	
5. Available Attendance Form		Theoretical + Practical	
6. No. of Hours (Total)		(30) Theoretical + (30) Practical	
7. No. of Credits (Total)		4	
8. Course Administrator Name		Prof. Dr.Kadhim Abdulameer Muhsin Miss Abeer Saad	
9. E-mail		Kahdm.a@albayan.edu.iq Abeer.a@albayan.edu.iq	
10. Course Objectives			
Knowledge	A1	Know the properties of living organisms	
	A2	Classification of living organisms	
	A3	Cellular studies	
	A4	Study of the genetic code	
Skills	B1	Recognizing the basic unit of life	
	B2	Learn about the cell life cycle	
	B3	Identify the body systems	
	B4	Identify bacteria and viruses	
Values	C1	Studies on parts of the human body	
	C2	Studies on the chemistry of life	
	C3	Studies on the properties of living organisms	
	C4	Study of cell divisions	
11. Teaching and Learning Strategies			
1.	Attempting practical application of theoretical studies	4.	Many short-term scientific missions
2.	Continuously developing the curriculum	5.	More tests to develop students' level
3.	Continuous review of international educational systems	6.	Continuous interaction with other universities to identify differences in teaching methods

12. The Structure of the Course

Week	Hours	RLOs	Topic/Subject Name	Learning Method	Evaluation Method
1	2Th+2p	The student must be aware of information provided to him and extent of its application to reality	Cell divisions (meiosis and meiosis)	Theoretical study and practical applications	Conduct quick exams
2	2Th+2p	The student must be aware of information provided to him and extent of its application to reality	Cell divisions (meiosis and meiosis)	Theoretical study and practical applications	Conduct quick exams
3	2Th+2p	The student must be aware of information provided to him and extent of its application to reality	Cell divisions (meiosis and meiosis)	Theoretical study and practical applications	Conduct quick exams
4	2Th+2p	The student must be aware of information provided to him and extent of its application to reality	Different body systems	Theoretical study and practical applications	Conduct quick exams
5	2Th+2p	The student must be aware of information provided to him and extent of its application to reality	Different body systems	Theoretical study and practical applications	Conduct quick exams
6	2Th+2p	The student must be aware of information provided to him and extent of its application to reality	Different body systems	Theoretical study and practical application	Conduct quick exams
7	2Th+2p	The student must be aware of information provided to him and extent of its application to reality	Different body systems	Theoretical study and practical application	Conduct quick exams
8	2Th+2p	The student must be aware of information provided to him and extent of its application to reality	Cell chemistry	Theoretical study and practical application	Conduct quick exams
9	2Th+2p	The student must be aware of information provided to him and extent of its application to reality	Cell chemistry	Theoretical study and practical application	Conduct quick exams
10	2Th+2p	The student must be aware of information provided to him and extent of its application to reality	Cell organelles	Theoretical study and practical application	Conduct quick exams

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11	2Th+2p	The student must be aware of information provided to him and extent of its application to reality	Cell organelles	Theoretical study and practical application	Conduct quick exams
12	2Th+2p	The student must be aware of information provided to him and extent of its application to reality	Bacteria	Theoretical study and practical application	Conduct quick exams
13	2Th+2p	The student must be aware of information provided to him and extent of its application to reality	viruses	Theoretical study and practical application	Conduct quick exams
14	2Th+2p	The student must be aware of information provided to him and extent of its application to reality	Fungi	Theoretical study and practical application	Conduct quick exams
15	2Th+2p	The student must be aware of information provided to him and extent of its application to reality	Principles of genetics (End of first semester)	Theoretical study and practical application	Conduct quick exams

13. Course Evaluation

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

14. Learning & Teaching Resources

Required textbooks (curricular if any)	Basics of human biology
Main References (sources)	General references
Recommended Books & References (Scientific Journals, Reports ...)	International references and scientific journals
Websites or Electronic References	(Human biology) website

Course Description (Laboratory Instruments1)

1. Course Title		Laboratory Instruments1	
2. Course Code		02011104	
3. Semester/Year		Semester	
4. Description Preparation Date		2025/9/1	
5. Available Attendance Form		Face-to-face lectures	
6. No. of Hours (Total)		30 Theoretical + 30 Practical	
7. No. of Credits (Total)		4	
8. Course Administrator Name		Asst. Lect. Suhaib raad qasim Miss Abeer Saad	
9. E-mail		Suhaib.s@albayan.edu.iq Abeer.s@albayan.edu.iq	
10. Course Objectives			
Knowledge	A1	Providing students with scientific knowledge about most laboratory equipment	
	A2	The student should know the correct ways to use laboratory equipment and mechanism of work of each device	
Skills	B1	The student applies the correct use of devices according to what he has learned	
	B2	Providing the student with sufficient experience to use laboratory equipment with high skill	
Values	C1	The student wants to practice scientific and logical thinking to use any laboratory device	
	C2	Tends to participate in teamwork as a unified team to succeed in his career	
11. Teaching and Learning Strategies			
1.	The use of modern educational models in teaching		4.
2.	Allocating a percentage of the grade for activities and participations		5.
3.	Managing the lecture in a way that the student feels the importance of time		6.

12. The Structure of the Course

Week	Hours	RLOs	Topic/Subject Name	Learning Method	Evaluation Method
1	2Th+2p	Students' knowledge of the subject	General introduction	Face-to-face learning	Class assessment And assignments
2	2Th+2p	Teach students how to use optical microscope and the study of its parts	optical microscope	Face-to-face learning	Class assessment And assignments
3	2Th+2p	supplementary	optical microscope	Face-to-face learning	Class assessment And assignments
4	2Th+2p	supplementary	optical microscope	Face-to-face learning	Class assessment And assignments
5	2Th+2p	Teaching students the components of the Electronic microscope and its work principle	Electron microscope	Face-to-face learning	Lecture evaluation and test
6	2Th+2p	supplementary	Electron microscope	Face-to-face learning	Lecture evaluation and test
7	2Th+2p	Parts, principle of action and uses of photometer and spectrometer	photometer and spectrometer	Face-to-face learning	Lecture evaluation and test
8	2Th+2p	Spectrophotometer parts and principle, uses and care	spectrophotometer	Face-to-face learning	Lecture evaluation and test
9	2Th+2p	overview	Separation equipment	Face-to-face learning	Lecture evaluation and test
	2Th+2p				

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10		Centrifuge parts, working principle, Types and methods care	centrifuge	Face-to-face learning	Lecture evaluation and test
11	2Th+2p	supplementary	centrifuge	Face-to-face learning	Lecture evaluation and test
12	2Th+2p	working principle, uses and methods of care	electrophoresis	Face-to-face learning	Lecture evaluation and test
13	2Th+2p	supplementary	electrophoresis	Face-to-face learning	Lecture evaluation and test
14		Final exam			

13. Course Evaluation

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

14. Learning & Teaching Resources

Required textbooks (curricular if any)	
Main References (sources)	
Recommended Books & References (Scientific Journals, Reports ...)	1. M.T. Postek, K.S. Howard, A.H. Johnson and K.L. McMichael, Scanning Electron Microscopy: A Student's Handbook, (Ladd Research Ind., Inc Williston, VT., 1980). 2 I.M. Watt, The Principles and Practice of Electron Microscopy, (Cambridge Univ. Press. Cambridge, England, 1985). 3- C.E. Lyman, D.E. Newbury, J.I. Goldstein, D.B. Williams, A.D. Romig, J.T. Armstrong, P. Echlin, C.E. Fiori, D.C. Joy, E. Lifshin and Klaus-Ruediger Peters, Scanning Electron Microscopy, X-Ray Microanalysis and Analytical Electron Microscopy: A Laboratory Workbook, (Plenum Press. New York, N.Y., 1990). 4- Ferrier D. R. (2017). Lippincott illustrated reviews : biochemistry (Seventh). Wolters Kluwer. 5- Westermeier, R. (2014). Electrophoresis. In: Kreysa, G., Ota, Ki., Savinell, R.F. (eds) Encyclopedia of Applied Electrochemistry. Springer, New York, NY. 6- Wellsandt, T.; Stanisch, B.; Strube, J. Development of Micro Separation Technology Modules. Part 1:Liquid-Liquid Extraction. Chem. Ing. Tech. 2015,87, 1198–1206. 7- Birdwell, J.; McFarlane, J.; Hunt, R.; Luo, H.; DePaoli, D. Separation of Ionic Liquid Dispersions in CentrifugalSolvent Extraction Contactors. Sep. Sci. Technol. 2005,41, 2205–2223.
Websites or Electronic References	Display by electronic means

Course Description (Medical Ethics)

1. Course Title		Medical Ethics	
2. Course Code		0201105	
3. Semester/Year		Semester	
4. Description Preparation Date		2025/9/2	
5. Available Attendance Form		In-person lecture	
6. No. of Hours (Total)		30 Theoretical	
7. No. of Credits (Total)		2	
8. Course Administrator Name		Miss Sarah Luay Subhi	
9. E-mail		Sarah.l@albayan.edu.iq	
10. Course Objectives			
Knowledge	A1	Provide the student with the appropriate method for dealing with patients, devices and equipment in the of work	
	A2		
	A3		
	A4		
Skills	B1	Teaching how to deal with patients or anyone with flexibility and avoid disagreements	
	B2		
	B3		
	B4		
Values	C1	Participation in seminars and conferences held inside and outside the college	
	C2	Motivating students to expand their thinking by making posters and scientific research	
	C3	Develop skills to solve problems that hinder student understanding	
	C4	Holding periodic seminars for students to exchange information, raise the level thinking, and enhance self-confidence	
11. Teaching and Learning Strategies			
1.	Education through pictures presentation	4.	
2.		5.	
3.		6.	

12. The Structure of the Course					
Week	Hours	RLOs	Topic/Subject Name	Learning Method	Evaluation Method
1	2	Principles of professional conduct	Principles of professional ethics in stages of cultural developments	Theoretical 2	-Through questions during the lecture -The student participation in explaining a topic - The Quiz - Monthly exam.
2	2	Principles of professional conduct	Professional behavior, its concept Its practical applications	Theoretical 2	-Through questions during the lecture -The student participation in explaining a topic - The Quiz - Monthly exam.
3	2	Principles of professional conduct	Types of employees and ways to deal with each type	Theoretical 2	-Through questions during the lecture -The student participation in explaining a topic - The Quiz - Monthly exam.
4	2	The basics of professional dealing	Methods that the manager must follow it to encourage the employee, motivate him to work, and increase his productivity	Theoretical 2	-Through questions during the lecture -The student participation in explaining a topic - The Quiz

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					- Monthly exam.
5	2	The basics of professional dealing	Basic etiquette of the profession How to employ professional ethics from the position of guiding the individual's behavior, emotions, and ability to make the appropriate decision	Theoretical 2	-Through questions during the lecture -The student participate in explaining a topic - The Quiz - Monthly exam.
6	2	The basics of professional dealing	Characteristics and qualities of health workers Appearance, behavior and commitment	Theoretical 2	-Through questions during the lecture -The student participate in explaining a topic - The Quiz - Monthly exam.
7	2	The art of artistic and behavioral dealing	For behavioral pattern, characteristics of behavioral pattern	Theoretical 2	-Through questions during the lecture -The student participate in explaining a topic - The Quiz - Monthly exam.
8	2	The art of artistic and behavioral dealing	Communication methods/linguistic and non-linguistic their definition and types	Theoretical 2	-Through questions during the lecture -The student participate in explaining a topic - The Quiz - Monthly exam.

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9	2	The art of artistic and behavioral dealing	Exam	Theoretical 2	-Through questions during the lecture -The student participate in explaining a topic - The Quiz - Monthly exam.
10	2	Professional conduct in medical fields	The art of listening and listening	Theoretical 2	-Through questions during the lecture -The student participate in explaining a topic - The Quiz - Monthly exam.
11	2	Professional conduct in medical fields	Behavioral trends and tendencies Values, customs and traditions	Theoretical 2	-Through questions during the lecture -The student participate in explaining a topic - The Quiz - Monthly exam.
12	2	Professional conduct in medical fields	Dealing with the patient: Receiving and dealing with the patient, maintaining professional secrets	Theoretical 2	-Through questions during the lecture -The student participate in explaining a topic - The Quiz - Monthly exam.
13	2	Maintaining professional behavior in crisis	Determine and maintain appointments and requirements on the patients needs	Theoretical 2	-Through questions during the lecture -The student participate in explaining a topic

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					- The Quiz - Monthly exam.
14	2	Maintaining professional behavior in crisis	Behavioral handling of medical devices and equipment	Theoretical 2	-Through questions during the lecture -The student participation in explaining a topic - The Quiz - Monthly exam.
15	2	Maintaining professional behavior in crisis	Occupational safety and prevention of work risks	Theoretical 2	-Through questions during the lecture -The student participation in explaining a topic - The Quiz - Monthly exam.

13. Course Evaluation

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

14. Learning & Teaching Resources

Required textbooks (curricular if any)	Medical Ethics
Main References (sources)	
Recommended Books & References (Scientific Journals, Reports ...)	
Websites or Electronic References	Any good research and good websites

Course Description (Human Rights and Democracy)

1. Course Title		Human Rights and Democracy
2. Course Code		02011106
3. Semester/Year		First Semester
4. Description Preparation Date		2025/9/7
5. Available Attendance Form		Theoretical
6. No. of Hours (Total)		30 hours (Theoretical)
7. No. of Credits (Total)		2
8. Course Administrator Name		Prof.Dr. Hussam Hameed Husham
9. E-mail		
10. Course Objectives		
Knowledge	A1	Learn about human rights and justice and resist all forms of abuse and exploitation
	A2	At the international level, democracy and human rights are an important topic, which is why conferences are held The agreements were concluded to protect human rights
	A3	
	A4	
Skills	B1	The student will be familiar with the concepts of freedom, justice, and equality in rights and duties
	B2	Practicing peaceful social life thanks to the rule of law and equality of citizens rights and practices
	B3	
	B4	
Values	C1	Motivating the positive impact of applying democracy in its correct form, as applied to peoples who have practiced democracy for decades
	C2	That the human being is the ultimate goal of the ruling regimes and the sense of this through dealing with Various official institutions
	C3	
	C4	
11. Teaching and Learning Strategies		
1.	Traditional lectures using a projector	4.

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2.	Establishing dialogues with students	5.	
3.		6.	

12. The Structure of the Course

Week	Hours	RLOs	Topic/Subject Name	Learning Method	Evaluation Method
1	2	Cognitive and qualifying	Learn about human democracy In general	Lectures and discussions	Theoretical exams
2	2	Cognitive and qualifying	Definition of right, right and man, elements of right Pillars of truth	Lectures and discussions	Theoretical exams
3	2	Cognitive and qualifying	The difference between right and freedom, the difference between rights Human and public freedoms	Lectures and discussions	Theoretical exams
4	2	Cognitive and qualifying	Stages of human rights Development Human rights in Mesopotamia Civilization	Lectures and discussions	Theoretical exams
5	2	Cognitive and qualifying	Human rights resources International source for human rights	Lectures and discussions	Theoretical exams
6	2	Cognitive and qualifying	National Source for Human Rights	Lectures and discussions	Theoretical exams
7	2	Cognitive and qualifying	Causes of human rights violations	Lectures and discussions	Theoretical exams
8	2	Cognitive and qualifying	Mechanisms for international human rights protection	Lectures and discussions	Theoretical exams
9	2	Cognitive and qualifying	Introduction to the concept of democracy	Lectures and discussions	Theoretical exams
10	2	Cognitive and qualifying	Definition of democracy and the idea of its historical development	Lectures and discussions	Theoretical exams
11	2	Cognitive and qualifying	Democracy in Mesopotamia civilization	Lectures and discussions	Theoretical exams

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			The difference between freedom democracy		
12	2	Cognitive and qualifying	Forms and images of democracy	Lectures and discussions	Theoretical exams
13	2	Cognitive and qualifying	Popular referendum, its types, democracy Consociationalism, liberal democracy	Lectures and discussions	Theoretical exams
14	2	Cognitive and qualifying	Conditions and components of the democratic system, components Key elements of democracy	Lectures and discussions	Theoretical exams
15	2	Cognitive and qualifying	General Review	Lectures and discussions	Theoretical exams

13. Course Evaluation

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

14. Learning & Teaching Resources

Required textbooks (curricular if any)	Curriculum in human rights and democracy
Main References (sources)	None
Recommended Books & References (Scientific Journals, Reports ...)	Magazines and books on the concept of human rights and democracy
Websites or Electronic References	Visual and audio awareness programs

Course Description (General chemistry 2)

1. Course Title		General chemistry2	
2. Course Code		02011201	
3. Semester/Year		Semester	
4. Description Preparation Date		2025/9/8	
5. Available Attendance Form		Official attendance time (morning and evening)	
6. No. of Hours (Total)		60 hours for the theoretical aspect and 60 hours for the practical aspect	
7. No. of Credits (Total)		4 units	
8. Course Administrator Name		Dr.Mustafa Saleem Shareef Lec.Yousif Nadim Abbas	
9. E-mail		Mustafa.s@albayan.edu.iq Yosif.n@albayan.edu.iq	
10. Course Objectives			
Knowledge	A1	Teaching students basic scientific concepts of general chemistry topics with focusing on chemical reactions principles.	
	A2	Studying analytical chemistry, standard solutions, acid base titrations with various techniques.	
	A3	Teaching general organic chemistry topics and classifications	
	A4	Teaching major application of spectroscopy in field of health techniques.	
Skills	B1	Scientific discussion	
	B2	Weekly exams	
	B3	Monthly tests	
	B4	Practical examinations	
Values	C1	Participation in the classroom	
	C2	Provide activities	
	C3	Semester and final tests and activities	
	C4	Self-learning, discussion panels	
11. Teaching and Learning Strategies			
1.	Active participation in the classroom is evidence of the student's commitment and responsibility	4.	Developing the student's ability to deal with multiple tasks.
2.	Adherence to the specified deadline	5.	Active participation in the

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	for submitting assignments and research.		classroom is evidence of the student's commitment and responsibility
3.	Semester and final exams express commitment and cognitive and theoretical understanding.	6.	Developing the student's ability to deal with technical means

12. The Structure of the Course

Week	Hours	RLOs	Topic/Subject Name	Learning Method	Evaluation Method
1	2 theory 2 practi.	The way out in theory The way out in practice	Carbohydrates	presence	Daily, monthly and annual written exam
2	2 theory 2 practi.	The way out in theory The way out in practice	Lipids	presence	Daily, monthly and annual written exam
3	2 theory 2 practi.	The way out in theory The way out in practice	Amino acids and proteins	presence	Daily, monthly and annual written exam
4	2 theory 2 practi.	The way out in theory The way out in practice	Review and exam	presence	Daily, monthly and annual written exam
5	2 theory 2 practi.	The way out in theory The way out in practice	Nucleotide and nucleic acid	presence	Daily, monthly and annual written exam
6	2 theory 2 practi.	The way out in theory The way out in practice	Enzymes	presence	Daily, monthly and annual written exam
7	2 theory 2 practi.	The way out in theory The way out in practice	Vitamins	presence	Daily, monthly and annual written exam
8	2 theory	The way out in theory The way out in practice	DNA	presence	Daily, monthly and annual written exam

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	2 practi.				
9	2 theory 2 practi.	The way out in theory The way out in practice	RNA	presence	Daily, monthly and annual written exam
10	2 theory 2 practi.	The way out in theory The way out in practice	Enzymes reactions	presence	Daily, monthly and annual written exam
11	2 theory 2 practi.	The way out in theory The way out in practice	Reactions factors	presence	Daily, monthly and annual written exam
12	2 theory 2 practi.	The way out in theory The way out in practice	Water Soluble vitamins	presence	Daily, monthly and annual written exam
13	2 theory 2 practi.	The way out in theory The way out in practice	Fat soluble enzymes	presence	Daily, monthly and annual written exam
14	2 theory 2 practi.	The way out in theory The way out in practice	Human needs of vitamins	presence	Daily, monthly and annual written exam
15	2 theory 2 practi.	The way out in theory The way out in practice	Review	presence	Daily, monthly and annual written exam

13. Course Evaluation

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

14. Learning & Teaching Resources

Required textbooks (curricular if any)	General chemistry principal book
Main References (sources)	Articles
Recommended Books & References (Scientific Journals, Reports ...)	Organic chemistry , Jonathan , 2022.
Websites or Electronic References	Wikipedia, research gate, google scholar, and many

Course Description (Anatomy)

1. Course Title		Anatomy	
2. Course Code		02011202	
3. Semester/Year		Semester	
4. Description Preparation Date		2025/9/5	
5. Available Attendance Form		Students’ attendance system	
6. No. of Hours (Total)		60 hrs. (30 Theoretical + 30 Practical)	
7. No. of Credits (Total)		4	
8. Course Administrator Name		Prof.Dr.Bahaa Faghri Hussein Lec.Rusul Adnan	
9. E-mail		Bahaa.f@albayan.edu.iq Rusul.a@albayan.edu.iq	
10. Course Objectives			
Knowledge	A1	understanding of human anatomy at the macroscopic level	
	A2	Acquire knowledge of systems-based and regional anatomy	
	A3	Explain structures of body organs	
	A4	Define the basic anatomical characteristics of the kidney and renal system	
Skills	B1	Gain familiarity to human body and organs	
	B2	Apply medical terminology knowledge	
	B3	Train the eye on surface anatomy	
	B4	Build a base for clinical examination and basic interventions skills	
Values	C1	Pave the way for students to involve with patients	
	C2	Appreciate human live, health and wellbeing in a scientific way	
	C3	Provide the bases for future dialysis therapeutic practices	
	C4	Professional interaction with staff and colleges	
11. Teaching and Learning Strategies			
1.	Technology based learning		4. Summative learning
2.	Modules lab training		5. Response to intervention
3.	Cadaveric observational learning		6. Student led teaching

12. The Structure of the Course

Week	Hours	RLOs	Topic/Subject Name	Learning Method	Evaluation Method
1	2th+2p	Gain familiarity to human body	Introduction to anatomy, body organizations anatomical positions	Students attendance	Quiz
2	2th+2p	understanding basic body divisions	Body regions, cavities, planes and sections	Students attendance	Quiz
3	2th+2p	Understanding anatomical term	Directional terms, tissues and membranes	Students attendance	Quiz
4	2th+2p	Systematic anatomy understanding	Upper limb	Students attendance	Group task
5	2th+2p	Systematic anatomy understanding	Lower limb	Students attendance	Quiz
6	2th+2p	Systematic anatomy understanding	Thorax	Students attendance	Quiz
7	2th+2p	Systematic anatomy understanding	Abdomen	Students attendance	Quiz
8	2th+2p	Systematic anatomy understanding	Pelvis	Students attendance	Group task

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9	2th+2p	Systematic anatomy understanding	Head & Neck	Students attendance	Quiz
10	2th+2p	Systematic anatomy understanding	Musculo-skeletal system	Students attendance	Quiz
11	2th+2p	Systematic anatomy understanding	Digestive system	Students attendance	Quiz
12	2th+2p	Systematic anatomy understanding	Cardiovascular system	Students attendance	Group task
13	2th+2p	Systematic anatomy understanding	Respiratory system	Students attendance	Quiz
14	2th+2p	Systematic anatomy understanding	Urinary system	Students attendance	Quiz
15	2th+2p	Systematic anatomy understanding	Reproductive system	Students attendance	Quiz

13. Course Evaluation

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

14. Learning & Teaching Resources

Required textbooks (curricular if any)	Netter's atlas of human anatomy
Main References (sources)	Netter's atlas of human anatomy
Recommended Books & References (Scientific Journals, Reports ...)	Netter's atlas of human anatomy
Websites or Electronic References	Mobile free app's on human anatomy

Course Description (Human Biology2)

1. Course Title		Human Biology2	
2. Course Code		02011203	
3. Semester/Year		Semester	
4. Description Preparation Date		2025/9/7	
5. Available Attendance Form		Theoretical + Practical	
6. No. of Hours (Total)		(30) Theoretical + (30) Practical	
7. No. of Credits (Total)		4	
8. Course Administrator Name		Prof. Dr.Kadhim Abdulameer Muhsin Miss Abeer Saad	
9. E-mail		Kahdm.a@albayan.edu.iq Abeer.a@albayan.edu.iq	
10. Course Objectives			
Knowledge	A1	Know the properties of living organisms	
	A2	Classification of living organisms	
	A3	Cellular studies	
	A4	Study of the genetic code	
Skills	B1	Recognizing the basic unit of life	
	B2	Learn about the cell life cycle	
	B3	Identify the body systems	
	B4	Identify bacteria and viruses	
Values	C1	Studies on parts of the human body	
	C2	Studies on the chemistry of life	
	C3	Studies on the properties of living organisms	
	C4	Study of cell divisions	
11. Teaching and Learning Strategies			
1.	Attempting practical application of theoretical studies	4.	Many short-term scientific missions
2.	Continuously developing the curriculum	5.	More tests to develop students' level
3.	Continuous review of international educational systems	6.	Continuous interaction with other universities to identify differences in teaching methods

12. The Structure of the Course

Week	Hours	RLOs	Topic/Subject Name	Learning Method	Evaluation Method
1	2Th+2p	The student must be aware of information provided to him and extent of its application to reality	Harmful bacterial activities	Theoretical study and practical application	Conduct quick exams
2	2Th+2p	The student must be aware of information provided to him and extent of its application to reality	Harmful bacterial activities	Theoretical study and practical application	Conduct quick exams
3	2Th+2p	The student must be aware of information provided to him and extent of its application to reality	Algae	Theoretical study and practical application	Conduct quick exams
4	2Th+2p	The student must be aware of information provided to him and extent of its application to reality	Primitive animals	Theoretical study and practical application	Conduct quick exams
5	2Th+2p	The student must be aware of information provided to him and extent of its application to reality	amoeba	Theoretical study and practical application	Conduct quick exams
6	2Th+2p	The student must be aware of information provided to him and extent of its application to reality	Fungi and their harmful effects	Theoretical study and practical application	Conduct quick exams
7	2Th+2p	The student must be aware of information provided to him and extent of its application to reality	Fungi and their harmful effects	Theoretical study and practical application	Conduct quick exams
8	2Th+2p	The student must be aware of information provided to him and extent of its application to reality	Yeasts	Theoretical study and practical application	Conduct quick exams
9	2Th+2p	The student must be aware of information provided to him and extent of its application to reality	Vertebrates and invertebrates	Theoretical study and practical application	Conduct quick exams
10	2Th+2p	The student must be aware of information provided to him and extent of its application to reality	Vertebrates and invertebrates	Theoretical study and practical application	Conduct quick exams

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11	2Th+2p	The student must be aware of information provided to him and extent of its application to reality	The human body's own defenses	Theoretical study and practical application	Conduct quick exams
12	2Th+2p	The student must be aware of information provided to him and extent of its application to reality	The human body's own defenses	Theoretical study and practical application	Conduct quick exams
13	2Th+2p	The student must be aware of information provided to him and extent of its application to reality	Worms	Theoretical study and practical application	Conduct quick exams
14	2Th+2p	The student must be aware of information provided to him and extent of its application to reality	Worms	Theoretical study and practical application	Conduct quick exams
15	2Th+2p	The student must be aware of information provided to him and extent of its application to reality	Scientific steps	Theoretical study and practical application	Conduct quick exams

13. Course Evaluation

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

14. Learning & Teaching Resources

Required textbooks (curricular if any)	Basics of human biology
Main References (sources)	General references
Recommended Books & References (Scientific Journals, Reports ...)	International references and scientific journals
Websites or Electronic References	(Human biology) website

Course Description (Laboratory Instruments2)

1. Course Title		Laboratory Instruments2	
2. Course Code		02011204	
3. Semester/Year		Semester	
4. Description Preparation Date		2025/9/10	
5. Available Attendance Form		Face-to-face lectures	
6. No. of Hours (Total)		30 Theoretical + 30 Practical	
7. No. of Credits (Total)		4	
8. Course Administrator Name		Asst. Lect. Suhaib raad qasim Miss Abeer Saad	
9. E-mail		Suhaib.s@albayan.edu.iq Abeer.s@albayan.edu.iq	
10. Course Objectives			
Knowledge	A1	Providing students with scientific knowledge about most laboratory equipment	
	A2	The student should know the correct ways to use laboratory equipment and mechanism of work of each device	
Skills	B1	The student applies the correct use of devices according to what he has learned	
	B2	Providing the student with sufficient experience to use laboratory equipment with high skill	
Values	C1	The student wants to practice scientific and logical thinking to use any laboratory device	
	C2	Tends to participate in teamwork as a unified team to succeed in his career	
11. Teaching and Learning Strategies			
1.	The use of modern educational models in teaching		4.
2.	Allocating a percentage of the grade for activities and participations		5.
3.	Managing the lecture in a way that the student feels the importance of time		6.

12. The Structure of the Course

Week	Hours	RLOs	Topic/Subject Name	Learning Method	Evaluation Method
1	2Th+2p	Educating the student to provide free local work environment From dust and sterile	Microbial safety cabinet, Type of safety cabinet, Principle and uses	Face-to-face learning	Class assessment And assignments
2	2Th+2p	Teach students how to use a device that maintains ideal conditions such as temperature, humidity, carbon dioxide and oxygen content in the atmosphere inside	Incubator, types, principle and uses	Face-to-face learning	Class assessment And assignments
3	2Th+2p	Teaching the student how to use pipette as a tool Important medical laboratories because allows the measurement and transport of liquids with high accuracy, as well as the role the burner in facilitating the combustion process, producing many specifics chemical reactions, in addition to Sterilization of laboratory instruments	Pipettes, Bunsen burner	Face-to-face learning	Class assessment And assignments

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4	2Th+2p	Study of the devices used to incubate samples in water at constant temperature for a period time Long and sterilization of glass and metal equipment Used the laboratory	Water bath and dry oven	Face-to-face learning	Class assessment And assignments
5	2Th+2p	Teach students a special device For sterilizing water-containing materials, which cannot be Sterilized Using dry heat	Autoclave, principle and uses, care and safety	Face-to-face learning	Lecture evaluation and test
6	2Th+2p	supplementary	Autoclave, principle and uses, care and safety	Face-to-face learning	Lecture evaluation and test
7	2Th+2p	Detection of bacterial and viral diseases and knowledge of the sequence of nitrogenous bases, mutations, identification Genetic identity and proof of paternity	Polymerase Chain Reaction Machine	Face-to-face learning	Lecture evaluation and test
8	2Th+2p	Study of the analysis of sequences acid base sequences nuclear detect the presence of any gene mutations or Defect in the sequences	DNA sequencing machine	Face-to-face learning	Lecture evaluation and test
9	2Th+2p	Used to know DNA bands	UV trans illuminator	Face-to-face learning	Lecture evaluation and test
	2Th+2p				

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10		Knowing the weights of the materials to be prepared addition to preparing the text sections to study the damage In that fabric.	Balances, microtomes And principle and uses	Face-to-face learning	Lecture evaluation and test
11	2Th+2p	supplementary	supplementary	Face-to-face learning	Lecture evaluation and test
12	2Th+2p	supplementary	supplementary	Face-to-face learning	Lecture evaluation and test
13		Final exam		Face-to-face learning	Lecture evaluation and test

13. Course Evaluation

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

14. Learning & Teaching Resources

Required textbooks (curricular if any)	
Main References (sources)	
Recommended Books & References (Scientific Journals, Reports ...)	1. Braybrook, Julian H. "Biocompatibility: Assessment of Medical Devices and Materials. " Biocompatibility: Assessment of Medical Devices and Materials, by Julian H. Braybrook (Editor), ISBN 0-471-96597-9. Wiley-VCH, December 1996. (1996): 246. 2 I.M. Watt, The Principles and Practice of Electron Microscopy, (Cambridge Univ. Press. Cambridge, England, 1985). 3- C.E. Lyman, D.E. Newbury, J.I. Goldstein, D.B. Williams, A.D. Romig, J.T. Armstrong, P. Echlin, C.E. Fiori, D.C. Joy, E. Lifshin and Klaus-Ruediger Peters, Scanning Electron Microscopy, X-Ray Microanalysis and Analytical Electron Microscopy: A Laboratory Workbook, (Plenum Press. New York, N.Y., 1990). 4- Ferrier D. R. (2017). Lippincott illustrated reviews : biochemistry (Seventh). Wolters Kluwer. 5- Westermeier, R. (2014). Electrophoresis. In: Kreysa, G., Ota, Ki., Savinell, R.F. (eds) Encyclopedia of Applied Electrochemistry. Springer, New York, NY.
Websites or Electronic References	Display by electronic means

Course Description (Computer Applications)

1. Course Title			Computer Applications		
2. Course Code			02011206		
3. Semester/Year			Semester		
4. Description Preparation Date			2025/9/3		
5. Available Attendance Form			On-Site		
6. No. of Hours (Total)			60 hours (30 Theoretical + 30 Practical)		
7. No. of Credits (Total)			2		
8. Course Administrator Name			Asst. Lect. Mustafa Mohammed Hammoodi		
9. E-mail			tuhafi.1989@gmail.com		
10. Course Objectives					
Knowledge	A1	MS Word Application			
	A2	MS Excel Application			
	A3	MS PowerPoint Application			
	A4				
Skills	B1	Working on MS Word Application			
	B2	Working on MS Excel Application			
	B3	Working on MS PowerPoint Application			
	B4				
Values	C1	Documenting Importance			
	C2	Data Processing Importance			
	C3	Data Presentation Importance			
	C4				
11. Teaching and Learning Strategies					
1.	Interactive Lecture		4.	Documented Lecture	
2.	Practical Demonstration		5.	Questionnaire Bank	
3.	Practical Practice		6.		

12. The Structure of the Course

Week	Hours	RLOs	Topic/Subject Name	Learning Method	Evaluation Method
1	2th+2p	Projector Slides	Starting MS Word	Visual, Auditory, and Kinesthetic	Summative
2	2th+2p	Projector Slides	Writing and Formatting	Visual, Auditory, and Kinesthetic	Summative
3	2th+2p	Projector Slides	Page Layout	Visual, Auditory, and Kinesthetic	Summative
4	2th+2p	Projector Slides	Pictures and Graphics	Visual, Auditory, and Kinesthetic	Summative
5	2th+2p	Projector Slides	Tables	Visual, Auditory, and Kinesthetic	Summative
6	2th+2p	Projector Slides	Starting MS Excel	Visual, Auditory, and Kinesthetic	Summative
7	2th+2p	Projector Slides	Data	Visual, Auditory, and Kinesthetic	Summative
8	2th+2p	Projector Slides	Tables	Visual, Auditory, and Kinesthetic	Summative
9	2th+2p	Projector Slides	Formatting	Visual, Auditory, and Kinesthetic	Summative
10	2th+2p	Projector Slides	Templates	Visual, Auditory, and Kinesthetic	Summative
11	2th+2p	Projector Slides	Formulas and Functions	Visual, Auditory, and Kinesthetic	Summative
12	2th+2p	Projector Slides	Charts and Graphics	Visual, Auditory, and Kinesthetic	Summative
13	2th+2p	Projector Slides	Data Sharing	Visual, Auditory, and Kinesthetic	Summative
14	2th+2p	Projector Slides	Starting MS PowerPoint	Visual, Auditory, and Kinesthetic	Summative
15	2th+2p	Projector Slides	Presentation Slides	Visual, Auditory, and Kinesthetic	Summative

13. Course Evaluation

60% Theoretical
40% Practical (Lab.)

14. Learning & Teaching Resources

Required textbooks (curricular if any)	
Main References (sources)	
Recommended Books & References (Scientific Journals, Reports ...)	
Websites or Electronic References	www.microsoft.com

Course Description (Medical Bacteriology 1)

1. Course Title		Medical Bacteriology 1
2. Course Code		02012101
3. Semester/Year		Semester
4. Description Preparation Date		2025/9/5
5. Available Attendance Form		Lectures (Theory , Lab Practicle)
6.No. of Hours (Total)		60 hours (30 Theretical + 30 Practical)
7.No. of Credits (Total)		4
8. Course Administrator Name		Lecture.Dr. Mytham Jabouri Abdull Hussein Dalal Arif Salman
9. E-mail		mytham.j@albayan.edu.iq dalal.a@albayn.edu.iq
10. Course Objectives		
Knowledge	A1	The student understands the meaning of medical bacteria
	A2	The student should know the importance of clinical diagnosis of medical bacteria
	A3	The student will understand how to stain bacteria using the Gram stain technique so that their appearance can be seen under an optical microscope.
	A4	The student should realize the importance of performing various biochemical tests that help in diagnosing bacteria
Skills	B1	The student will be able to use modern laboratory methods to count colonies and growing bacterial cells
	B2	The student will understand how to use modern technologies to identify bacteria and determine the optimal treatment against the bacteria
	B3	The student can distinguish between visual and microscopic diagnosis of bacterial cells.
	B4	The student can use the compound light microscope and how to use each of its parts in detail
Values	C1	The student can distinguish between the main forms of bacteria through the staining techniques used
	C2	The student can differentiate between ancient and modern methods for identifying the bacteria or disease-causing agent.
	C3	The student can explain how to read the results of sensitivity or resistance of bacteria to antibiotics.
	C4	The student can determine the optimal method for counting live bacterial cells

	growing on agricultural media.		
11. Teaching and Learning Strategies			
1.	The student can know the type of bacteria by seeing the shape and appearance of the bacterial colony.	4.	cells The student is able to choose the best method to determine the most appropriate antibiotic against bacteria
2.	The student can perform tests to diagnose each type of medical bacteria.	5.	Student groups, scientific trips, and holding workshops, seminars, and courses.
3.	The student can name bacteria by identifying the type and gender of bacteria	6.	Scientific reports, oral exams, surprise written exams, and direct questions.

12. The Structure of the Course

Week	Hours		RLOs	Topic/Subject Name	Learning Method	Evaluation Method
	Theory	Lab				
1	2	2	Provides an introductory overview of medical bacteria	Introduction of Bacteria	Method of giving lectures The practical side	Written tests Oral exams
2	2	2	Knowledge of sterilization and disinfection methods	Sterilization and Disinfection	Method of giving lectures The practical side	Written tests
3	2	2	Knowledge of the structures and functions of bacterial components	Structure and function of bacterial components	Method of giving lectures The practical side	Oral exams
4	2	2	Bacteria cultivation and types of agricultural media	Culturing of bacteria and media types	Method of giving lectures The practical side	Written tests
5	2	2	Knowledge of bacterial physiology and cellular metabolism	Bacterial Physiology (Bacterial metabolism).	Method of giving lectures The practical side	Oral exams
6	2	2	Bacterial genetics	Bacterial genetics.	E-Learning Discussion method	Written tests
7	2	2	Virulence factors of	Microbial virulence	Method of giving	Oral exams

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			bacteria, pathogenicity and infection	factors and pathogenesis of bacterial infection.	lectures Discussion method	
8	2	2	Chemotherapy and antibiotic resistance	Chemotherapy and antibiotic resistance.	Method of giving lectures The practical side	Written tests
9	2	2	Vaccination and vaccination	Vaccination.	Method of giving lectures The practical side	Oral exams
10	2	2	Gram-positive spherical bacteria	Gram positive cocci	Method of giving lectures The practical side	Written tests
11	2	2	Study of Staphylococcus aureus, Streptococcus streptococci and Enterococcus	Staphylococcus, Streptococcus and enterococcus.	Method of giving lectures The practical side	Oral exams
12	2	2	Study of spore-forming Gram-positive bacillus bacteria	Gram positive spore forming bacilli	Method of giving lectures The practical side	Written tests Oral exams
13	2	2	Conduct a bacterial sensitivity test to antibiotics	Microbial sensitivity to antibiotic.	Method of giving lectures The practical side	Written tests Oral exams
14	2	2	Study of non-spore- forming Gram-positive bacillus bacteria	Gram positive non spore forming bacilli	Method of giving lectures The practical side	Written tests Oral exams
15	2	2	Study of aerobic bacteria such as listeria and diphtheria	Listeria and Corynebacterium	Method of giving lectures The practical side	Written tests Oral exams

13. Course Evaluation

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

14. Learning & Teaching Resources

Required textbooks (curricular if any)	Foundations in Microbiology 4th Edition, Todar's Online Textbook of Bacteriology Dedication to Hans Zinsser 2005.
Main References (sources)	Bailey & Scott's Diagnostic Microbiology and Jawetz.
Recommended Books & References (Scientific Journals, Reports ...)	Melnick, & Adelberg's 2019 Medical Microbiology/ Twenty-Eighth Edition. Scientific journals in the field.
Websites or Electronic References	Researchgate Google scholar



Course Description (Biochemistry1)

1. Course Title	Biochemistry1	
2. Course Code	02012102	
3. Semester/Year	Semester	
4. Description Preparation Date	2025/9/7	
5. Available Attendance Form	Official attendance time (morning and evening).	
6. No. of Hours (Total)	30 hours for the theoretical aspect and 30 hours for the practical aspect	
7. No. of Credits (Total)	4 units	
8. Course Administrator Name	Dr.Mustafa Saleem Shareef Lec.Hiba Khalid	
9. E-mail	Mustafa.s@albayan.edu.iq Hiba.k@albayan.edu.iq	
10. Course Objectives		
Knowledge	A1	Teaching students basic scientific concepts of Biochemistry topics with focus on clinical chemistry and metabolisms.
	A2	Studying biochemistry, metabolisms in illness and recovery
	A3	Teaching metabolisms and obesity and stress and exercises.
	A4	Teaching biochemistry of nutrition's and dietary.
Skills	B1	Scientific discussion
	B2	Weekly exams
	B3	Monthly tests
	B4	Practical examinations
Values	C1	Participation in the classroom
	C2	Provide activities

	C3	Semester and final tests and activities	
	C4	Self-learning, discussion panels	
11. Teaching and Learning Strategies			
1.	Active participation in the classroom is evidence of the student's commitment and responsibility		4. Developing the student's ability to deal with multiple tasks.
2.	Adherence to the specified deadline for submitting assignments and research.		5. Active participation in the classroom is evidence of the student's commitment and responsibility
3.	Semester and final exams express commitment and cognitive and theoretical understanding.		6. Developing the student's ability to deal with technical means

12. The Structure of the Course

Week	Hours	RLOs	Topic/Subject Name	Learning Method	Evaluation Method
1	2 theory 2 practi.	The way out in theory The way out in practice	-Introduction to Biochemistry -Specimen Collection [blood, urine, CSF]	Presence presence	Daily, monthly and annual written exam
2	2 theory 2 practi.	The way out in theory The way out in practice	-General Metabolisms -Specimen Collection [blood, urine, CSF]	presence	Daily, monthly and annual written exam
3	2 theory 2 practi.	The way out in theory The way out in practice	-Metabolisms in illness, recovery -Specimen Transport and Specimen Processing	presence	Daily, monthly and annual written exam
4	2 theory 2 practi.	The way out in theory The way out in practice	-Nutrition biochemistry, dietary -Specimen Transport and Specimen Processing	presence	Daily, monthly and annual written exam
5	2 theory 2 practi.	The way out in theory The way out in practice	-Biochemistry, prevention medicine -Blood collection techniques, Anticoagulant, Separation of serum	presence	Daily, monthly and annual written exam
6	2 theory 2 practi.	The way out in theory The way out in practice	-Biochemical bases in disease -Principle of instrumentation [photometer, colorimetry and spectrophotometry]	presence	Daily, monthly and annual written exam
7	2	The way out in theory	-Biochemistry at water pH	presence	Daily, monthly and

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	theory 2 practi.	The way out in practice	-Carbohydrates tests		annual written exam
8	2 theory 2 practi.	The way out in theory The way out in practice	-Review and exam -Molish test, Iodin test, Benedicts test and Barfoed test	presence	Daily, monthly and annual written exam
9	2 theory 2 practi.	The way out in theory The way out in practice	-Biochemistry and electrolytes -Seliwanoffs test, Osazone test, Athrone and Dinitrosalicylic acid method	presence	Daily, monthly and annual written exam
10	2 theory 2 practi.	The way out in theory The way out in practice	-Metabolism of carbohydrates -Roes method, Fehling test, Somogyi-Nelson method and Mucic acid test	presence	Daily, monthly and annual written exam
11	2 theory 2 practi.	The way out in theory The way out in practice	-Metabolisms pathways -Amino acid tests	presence	Daily, monthly and annual written exam
12	2 theory 2 practi.	The way out in theory The way out in practice	-ATP synthesis -Ninhydrin test, Isatin test and Xanthoprotic test	presence	Daily, monthly and annual written exam
13	2 theory 2 practi.	The way out in theory The way out in practice	-Lipids biosynthesis -Paulys diazo test, Sakaguchi test Millon test	presence	Daily, monthly and annual written exam
14	2 theory 2 practi.	The way out in theory The way out in practice	-Lipids oxidations -Paulys diazo test, Sakaguchi test Millon test	presence	Daily, monthly and annual written exam
15	2 theory 2 practi.	The way out in theory The way out in practice	-Metabolisms of glycerol -Hopkins-Cole test, Lead acetate test	presence	Daily, monthly and annual written exam

13. Course Evaluation

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

14. Learning & Teaching Resources

Required textbooks (curricular if any)	General biochemistry Geoffrey Beckett Text book of biochemistry, 2016
Main References (sources)	Articles
Recommended Books & References (Scientific Journals, Reports ...)	Hepers illustrated. Biochemistry, medical book.
Websites or Electronic References	Wikipedia, research gate, google scholar, and many

Course Description (Human physiology 1)

1. Course Title		Human physiology 1
2. Course Code		02012103
3. Semester/Year		Semester
4. Description Preparation Date		2025/9/1
5. Available Attendance Form		attendance
6. No. of Hours (Total)		60 (30 Theoretical + 30 Practical)
7. No. of Credits (Total)		4
8. Course Administrator Name		prof.dr.shallal murad Duaa Abdulaziz Sobhi
9. E-mail		Shallal.murad@albayan.edu.iq Duaa.a@albayan.edu.iq
10. Course Objectives		
Knowledge	A1	The student will be familiar with the functions of the human body's organs and how to perform laboratory tests for that
	A2	
	A3	
	A4	
Skills	B1	Teaching the function of organs in the human body and the mechanism of each function Teaching the student how to perform laboratory tests and how to read ...the results. These tests help Maintaining human health
	B2	
	B3	
	B4	
Values	C1	Encouraging the student to spread health culture and awareness about the human body and how to care for and maintain it Every function of every organ
	C2	
	C3	
	C4	
11. Teaching and Learning Strategies		

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1.	data show presentation	4.	
2.	lab work	5.	
3.		6.	

12. The Structure of the Course

Week	Hours	RLOs	Topic/Subject Name	Learning Method	Evaluation Method
1	2th+2p	Human physiology 1	General Introduction to Physiology	theoretical and practical	exam and quiz and report and home work
2	2th+2p	Human physiology 1	Cell Physiology: General Functions, Membrane Transport/lab: Introduction: Characteristics of good technician.	theoretical and practical	exam and quiz and report and home work
3	2th+2p	Human physiology 1	How To avoid contamination of Specimen Technician	theoretical and practical	exam and quiz and report and home work
4	2th+2p	Human physiology 1	General Idea about Body fluids: Ty Composition, and Functions. Unit Measurement, Conversion and Conversion factor/ lab: Specimen: Type, Collection, and Preparation.	theoretical and practical	exam and quiz and report and home work
5	2th+2p	Human physiology 1	Specimen identification	theoretical and practical	exam and quiz and report and home work
6	2th+2p	Human physiology 1	Lab Reports: Types and righting.	theoretical and practical	exam and quiz and report and home work
7	2th+2p	Human physiology 1	Blood: Composition, Specific Functions each Compartment. Plasma and Se Differences and Separation/ lab: Basic s for drawing a blood specimen venipuncture. Complications of venipuncture.	theoretical and practical	exam and quiz and report and home work
8	2th+2p	Human physiology 1	Blood collection by skin punctures (Capillary Blood).	theoretical and practical	exam and quiz and report and home work
9	2th+2p	Human physiology 1	Types of Syringes used in blood collection	theoretical and practical	exam and quiz and report and home work
10	2th+2p	Human physiology 1	RBCs: Definition, Structure, and Nor Value; Hb Definition, Structure, and Nor Value; Blood Groups/ lab: Repeat: Blood drawing.	theoretical and practical	exam and quiz and report and home work
11	2th+2p	Human physiology 1	Erythropoiesis, Homeostasis, Death Disposal/lab: Blood sample Hemoly	theoretical and practical	exam and quiz and report and home work

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			Reasons and how to avoid.		
12	2th+2p	Human physiology 1	Blood Coagulants: Types and Uses. (ED Citrate, Oxalate, Heparin, sodium fluoride.	theoretical and practical	exam and quiz and report and home work
13	2th+2p	Human physiology 1	White Blood Cells: Classification, Spec Function, Normal Value/ lab: Specimen rejection: Reason and How avoid.	theoretical and practical	exam and quiz and report and home work
14	2th+2p	Human physiology 1	Type of anticoagulant used and their effect Blood Cell Morphology.	theoretical and practical	exam and quiz and report and home work
15	2th+2p	Human physiology 1	Platelet: Definition, Function, Normal Value Thrombopoiesis and Hemostasis/lab: Blood separation to Cells, plasma, and serum	theoretical and practical	exam and quiz and report and home work

13. Course Evaluation

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

14. Learning & Teaching Resources

Required textbooks (curricular if any)	text books
Main References (sources)	Ganong of medical physiology
Recommended Books & References (Scientific Journals, Reports ...)	Guyton and hall textbook of medical physiology
Websites or Electronic References	Vander renal physiology

Course Description (Histology 1)

1. Course Title		Histology 1	
2. Course Code		02012104	
3. Semester/Year		Semester	
4. Description Preparation Date		2025/9/7	
5. Available Attendance Form		Lectures and laboratory	
6. No. of Hours (Total)		30 hours (theory) 30 hours (practical)	
7. No. of Credits (Total)		4	
8. Course Administrator Name		Prof.Dr. Baha Fakhri Hussain, lec. Raghda Nasser, lec. Sarah Karim	
9. E-mail		bahaafakhri1961@yahoo.com raghdanaser.m@gmail.com	
10. Course Objectives			
Knowledge	A1	Provide the students with basic knowledge about the structure of the human cells, tissues and the extracellular matrices surrounding them: epithelium, connective tissues, including blood, bone and cartilage, muscles, and nerves.	
	A2	Learn the student the microscopic structure of the different human tissues.	
	A3	Facilitate the integration of Histology with gross Anatomy, Physiology and Biochemistry	
	A4	Acquire student the skills of using the microscope and identifying the normal structures.	
Skills	B1	Describe the normal ultra-structure of the cell.	
	B2	Describe the organization and components of the human body.	
	B3	Correlate between the predominance of a cell organelle and the function of the cell.	
	B4	Correlate between histological structure & function of different organs of all systems.	
Values	C1	Describe the normal ultra-structure of the cell.	
	C2	Describe the organization and components of the human body.	
	C3	Correlate between the predominance of a cell organelle and the function of the cell.	
	C4	Correlate between histological structure & function of different organs of all systems.	
11. Teaching and Learning Strategies			
1.	Use professionally the light microscope to obtain information from histological slides in the laboratory.	4.	
2.	Identify and select various types of special stains for various tissues.	5.	
3.	Work constructively in a group sharing his/her colleagues in the resources available.	6.	

12. The Structure of the Course

Week	Hours	RLOs	Topic/Subject Name	Learning Method	Evaluation Method
1	2th+2p	The student's knowledge of the scientific subject and the realization of scientific, mental and professional skills	Introduction and overview methods used in histology, Classification Histology, Tissue preparation	Data show and white board	Quiz/homework
2	2th+2p	The student's knowledge of the scientific subject and the realization of scientific, mental and professional skills	Overview of Cell structure types	Data show and white board	Quiz/homework
3	2th+2p	The student's knowledge of the scientific subject and the realization of scientific, mental and professional skills	Tissues: Concept and classifications of primary tissues	Data show and white board	Quiz/homework
4	2th+2p	The student's knowledge of the scientific subject and the realization of scientific, mental and professional skills	Epithelial tissue: Simple Ep. Compound Ep. T.	Data show and white board	Quiz/homework
5	2th+2p	The student's knowledge of the scientific subject and the realization of scientific, mental and professional skills	The glandular Tissues (The Glands)	Data show and white board	Quiz/homework
6	2th+2p	The student's knowledge of the scientific subject and the realization of scientific, mental and professional skills	Connective and Supportive Tissue: Embryonic and adult C.T.	Data show and white board	Quiz/homework
7	2th+2p	The student's knowledge of the scientific subject and the realization of scientific, mental and professional skills	Connective Tissue proper (General C.T.)	Data show and white board	Quiz/homework
8	2th+2p	The student's knowledge of the scientific subject and the realization of scientific, mental and professional skills	Cartilage, Histogenesis, Growth and repair of cartilage	Data show and white board	Quiz/homework
9	2th+2p	The student's knowledge of the scientific subject and the realization of scientific, mental and professional skills	Bone & Histogenesis of Bone	Data show and white board	Quiz/homework

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10	2th+2p	The student's knowledge of the scientific subject and the realization of scientific, mental and professional skills	The Blood	Data show and white board	Quiz/homework
11	2th+2p	The student's knowledge of the scientific subject and the realization of scientific, mental and professional skills	The haemopoietic organ (bone marrow), Formation blood cells.	Data show and white board	Quiz/homework
12	2th+2p	The student's knowledge of the scientific subject and the realization of scientific, mental and professional skills	Muscular tissue	Data show and white board	Quiz/homework
13	2th+2p	The student's knowledge of the scientific subject and the realization of scientific, mental and professional skills	Nervous tissue: Overview nervous system (CNS & PNS)	Data show and white board	Quiz/homework
14	2th+2p	The student's knowledge of the scientific subject and the realization of scientific, mental and professional skills	Nervous system: the Nerve cells (neurons) and their classification	Data show and white board	Quiz/homework
15	2th+2p	The student's knowledge of the scientific subject and the realization of scientific, mental and professional skills	Supporting cells of nervous system	Data show and white board	Quiz/homework

13. Course Evaluation

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

14. Learning & Teaching Resources

Required textbooks (curricular if any)	
Main References (sources)	
Recommended Books & References (Scientific Journals, Reports ...)	
Websites or Electronic References	

Course Description (Descriptive biostatistics)

1. Course Title		Descriptive biostatistics
2. Course Code		02012105
3. Semester/Year		Semester
4. Description Preparation Date		2025/9/2
5. Available Attendance Form		Attendance
6. No. of Hours (Total)		60
7. No. of Credits (Total)		2
8. Course Administrator Name		Assist. Prof. Dr. Arshed Hameed Yaseen
9. E-mail		Arshed.h87@uosamarra.edu.iq
10. Course Objectives		
Knowledge	A1	To use statistical techniques or methods to collect data and information from different sources and summarize in different ways, classify data into different classes and groups, analyze data by different statistical methods, and interpret the results to make decisions.
	A2	To use statistical tools or methods to measure the chance or likelihood scientifically that a particular event will occur.
	A3	To have the fundamental concepts of probability.
	A4	To use statistical techniques or methods to collect data in different classes and groups, analyze data by different statistical methods, and interpret the results to make decisions.
Skills	B1	Identify the meaning of Statistics, Apply Summation Notation and understand its properties.
	B2	Describe the Population and Sample.
	B3	Use graphical methods.
	B4	Identify the measures of tendency, Identify the measures of variation, Measure the relationship between two variables, and Identify the types of probability.
Values	C1	
	C2	
	C3	
	C4	

11. Teaching and Learning Strategies

1.

The main strategy that will be adopted in delivering this module is to encourage student's participation in the exercises, while at the same time refining and expanding their critical thinking skills. This will be achieved through classes, interactive tutorials, and by considering types of simple experiments involving some sampling activities that are interesting to the students like some simple and clear exercises. Different teaching techniques will be used to reach the objectives of this course. Firstly: The English language will be used during the lecture. Secondly: There will be classroom discussion and the lecturer will give enough time to solve, analyze, and evaluate problem sets throughout the semester. Thirdly: Worksheets will be designed to give students a chance to practice several aspects of the course in the classroom.

12. The Structure of the Course

Week	Hours	RLOs	Topic/Subject Name	Learning Method	Evaluation Method
1	2th+2pr	Definitions: Statistics, Population Sample, Elements, Variables Data Sources: Types of Data:	Introduction to biostatistics	Data show projector	Homework exercise
2	2th+2pr	Displaying grouped Frequency distribution	Strategies for Understanding Meaning of Data	Data show projector	Homework exercise
3	2th+2pr	The Histogram The Frequency Polygon	Graphs	Data show projector	Homework exercise
4	2th+2pr	Measures of central of tendency or measures of Location: 1-The Mean, Examples, Exercises 2-The Median, Examples, and Exercises. 3-The Mode, Examples, Exercises	Measures of Central Tendency	Data show projector	Homework exercise
5	2th+2pr	Measures of Dispersion: 1-The Range 2-The Sample Variance (S ²): a- Examples, b-Exercises 3-The Standard Deviation (S): a- Examples, b-Exercises 4-The Coefficient of Variation (C.V.), Examples, Exercises.	Measures of Dispersion (Measures of Variation)	Data show projector	Homework exercise
6	2th+2pr		Midterm exam		

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7	2th+2pr	Box plot: display of distribution Coefficient of Correlation Scatter plot Regression	Coefficient of Correlation	Data show projector	Homework exercise
8	2th+2pr	Probability Experiments, Outcomes, Sample Space, Events Probability Roles	Probability	Data show projector	Homework exercise
9	2th+2pr	Combination and binomial probability distribution	Binomial probability	Data show projector	Homework exercise
10	2th+2pr	Test and hypothesis (t-test, z-score), application in R	Test and hypothesis	Data show projector	Homework exercise
11			Final exam		

13. Course Evaluation

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

14. Learning & Teaching Resources

Required textbooks (curricular if any)	1. Statistics for Business and Economics- 2000, Anderson, Sweeny 2. Schaum's Outline of Theory and Problems of Probability, Random Variables, and Random Processes, Hwei P. Hsu, McGraw-Hill, 1997. Schaum's Easy Outlines Probability and Statistics, Murray R. Spiegel, McGraw-Hill, 2001.
Main References (sources)	
Recommended Books & References (Scientific Journals, Reports ...)	1. Statistics for Management and Economics 2003 –Gerald Keller & Brian Warrak. Statistics for Economics, Accounting, and Business Studies, Michael Barrow.
Websites or Electronic References	

Course Description (Medical Parasitology 1)

1. Course Title		Medical Parasitology 1	
2. Course Code		02012106	
3. Semester/Year		Semester	
4. Description Preparation Date		2025/9/10	
5. Available Attendance Form		In-person lecture+ online	
6. No. of Hours (Total)		60 (30 Theoretical + 30 Practical)	
7. No. of Credits (Total)		4	
8. Course Administrator Name		Dr. safa tawfeeq whqeeb Hyder Mussaed Mohammed	
9. E-mail		safa.tawfeeq@albaya.edu.iq	
10. Course Objectives			
Knowledge	A1	Knowledge of the parasite's appearance, life cycle, and pathogenesis.	
	A2	Diagnose all parasites of medical importance.	
	A3	Identify the epidemiology of parasites with special reference to those endemic to Iraq.	
	A4	Control and prevent the spread of disease	
Skills	B1	Teaching the use of a microscope and diagnosing the stages of parasites	
	B2	Teaching modern techniques in diagnosis	
	B3		
	B4		
Values	C1	Participation in seminars and conferences held inside and outside the college	
	C2	Motivating students to expand their thinking by making posters and scientific research	
	C3	Develop skills to solve problems that hinder student understanding	
	C4	Holding periodic seminars for students to exchange information, raise the level thinking, and enhance self-confidence	
11. Teaching and Learning Strategies			
1.	Education through pictures presentation	4.	
2.	Education through video presentation	5.	
3.	Education via online	6.	

12. The Structure of the Course

Week	Hours	RLOs	Topic/Subject Name	Learning Method	Evaluation Method
1	2th+2p	Medical Parasitology 1	General Introduction: Introduction; Parasite Host; Zoonosis; Host-parasite Relationships; Life Cycle of Parasites; Sources of Infection; Modes of Infection; Pathogenesis; Immunity; Parasitic Infection; Laboratory Diagnosis	Theoretical and practical	-Through questions during the lecture -The student participate in explaining a topic - The Quiz - Monthly exam.
2	2th+2p	Medical Parasitology 1	Protozoa General Features ; Structure and Reproduction ; Life Cycle ; Classification of Protozoa ; Phylum Sarcomastigophora; Phylum Apicomplexa; Phylum Ciliophora; Phylum Microspora	Theoretical and practical	-Through questions during the lecture -The student participate in explaining a topic - The Quiz - Monthly exam.
3	2th+2p	Medical Parasitology 1	Sacodina, (Amoebae) Entamoeba histolytica; History and Distribution; Morphology; Life Cycle; Pathogenesis; Clinical Features; Extraintestinal Amoebiasis; Laboratory Diagnosis; Immunity; Treatment	Theoretical and practical	-Through questions during the lecture -The student participate in explaining a topic - The Quiz - Monthly exam.
4	2th+2p	Medical Parasitology 1	Entamoeba Coli , Entamoeba Gingivae, Endolimax nana 24;; Pathogenic Free-Living Amoebae; naegleria Fowleri; History and Distribution 26; Morphology; Life Cycle; Pathogenicity and Clinical Features; Laboratory Diagnosis; Treatment	Theoretical and practical	-Through questions during the lecture -The student participate in explaining a topic - The Quiz

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					- Monthly exam.
5	2th+2p	Medical Parasitology 1	Intestinal, Oral, and Genital Flagellates Giardia Lamblia; History and Distribution Habitat; Morphology; Life Cycle; Pathogenicity Clinical Features; Laboratory Diagnosis; Treatment	Theoretical and practical	-Through questions during the lecture -The student participate in explaining a topic - The Quiz - Monthly exam.
6	2th+2p	Medical Parasitology 1	Genus Trichomonas. T. vaginalis/ urogenital flagellate. T. hominis T. tenax Biology , medical importance and Lab. Diagnosis of each species	Theoretical and practical	-Through questions during the lecture -The student participate in explaining a topic - The Quiz - Monthly exam.
7	2th+2p	Medical Parasitology 1	Heamo- flagellates(blood& tissue flagellates),general characters. Developmental stages in the vertebrate & invertebrate hosts	Theoretical and practical	-Through questions during the lecture -The student participate in explaining a topic - The Quiz - Monthly exam.
8	2th+2p	Medical Parasitology 1	. Genus leishmania ,species of leishmania biology, vector, medical importance of each species, types of leishmaniasis , life cycle ,Lab. Diagnosis, including immunological tests	Theoretical and practical	-Through questions during the lecture -The student participate in explaining a topic - The Quiz - Monthly exam.
9	2th+2p	Medical Parasitology 1	Genus Trypanosoma, species of trypanosomes biology , vector, medical importance of each species, forms of parasite, life cycle,Lab. Diagnosis	Theoretical and practical	-Through questions during the lecture

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					-The student participate in explaining a topic - The Quiz - Monthly exam.
10	2th+2p	Medical Parasitology 1	Ciliophora: <i>Blantidium coli</i>, Biology, medical importance, Lab. Diagnosis. Apicomplexans: General character. Genus <i>Toxoplasma</i>, <i>T. gondii</i>, Biology, medical importance, acquired and congenital toxoplasmosis. Life cycle, role of domestic animals in the transmission of disease. Lab. Diagnosis.	Theoretical and practical	-Through questions during the lecture -The student participate in explaining a topic - The Quiz - Monthly exam.
11	2th+2p	Medical Parasitology 1	Genus <i>Plasmodium</i>. Introduction to malarial parasites, malarial paroxysm, general life cycle of the <i>Plasmodium</i>, species of <i>Plasmodium</i>.	Theoretical and practical	-Through questions during the lecture -The student participate in explaining a topic - The Quiz - Monthly exam.
12	2th+2p	Medical Parasitology 1	<i>P. falciparum</i>, <i>P. vivax</i>, Disease, pathology, medical importance, distribution, main differences during life cycle.	Theoretical and practical	-Through questions during the lecture -The student participate in explaining a topic - The Quiz - Monthly exam.
13	2th+2p	Medical Parasitology 1	, <i>P. ovale</i>, <i>P. malariae</i> Disease, pathology, medical importance, distribution, main differences during life cycle.	Theoretical and practical	-Through questions during the lecture -The student participate in explaining a topic - The Quiz - Monthly exam.

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14	2th+2p	Medical Parasitology 1	General discussion on malarial para, epidemiology, methods of diagnosis. Tim take clinical samples. Blood films	Theoretical and practical	-Through questions during the lecture -The student participat in explaining a topic - The Quiz - Monthly exam.
15	2th+2p	Medical Parasitology 1	Isopora, pathology, med importance, Lab. Dianosis. Sarcocystis spec pathology , medical importance, Lab diagno 14 Cryptosporidiadse Genus cryptosporidi species belong the genus, biology, patholo epidemiology, Lab. diagnosis.	Theoretical and practical	-Through questions during the lecture -The student participat in explaining a topic - The Quiz - Monthly exam.

13. Course Evaluation

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

14. Learning & Teaching Resources

Required textbooks (curricular if any)	Paniker's Textbook of Medical Parasitology
Main References (sources)	Paniker's Textbook of Medical Parasitology
Recommended Books & References (Scientific Journals, Reports ...)	Evolutionary Parasitology Textbook of Medical Parasitology
Websites or Electronic References	Any good research and good websites

Course Description (Computer Applications)

1. Course Title			Computer Applications		
2. Course Code			02012108		
3. Semester/Year			Semester		
4. Description Preparation Date			2025/9/3		
5. Available Attendance Form			On-Site		
6. No. of Hours (Total)			60 hours (30 Theoretical + 30 Practical)		
7. No. of Credits (Total)			2		
8. Course Administrator Name			Asst. Lect. Mustafa Mohammed Hammoodi		
9. E-mail			tuhafi.1989@gmail.com		
10. Course Objectives					
Knowledge	A1	MS Word Application			
	A2	MS Excel Application			
	A3	MS PowerPoint Application			
	A4				
Skills	B1	Working on MS Word Application			
	B2	Working on MS Excel Application			
	B3	Working on MS PowerPoint Application			
	B4				
Values	C1	Documenting Importance			
	C2	Data Processing Importance			
	C3	Data Presentation Importance			
	C4				
11. Teaching and Learning Strategies					
1.	Interactive Lecture		4.	Documented Lecture	
2.	Practical Demonstration		5.	Questionnaire Bank	
3.	Practical Practice		6.		

12. The Structure of the Course

Week	Hours	RLOs	Topic/Subject Name	Learning Method	Evaluation Method
1	2th+2p	Projector Slides	Starting MS Word	Visual, Auditory, and Kinesthetic	Summative
2	2th+2p	Projector Slides	Writing and Formatting	Visual, Auditory, and Kinesthetic	Summative
3	2th+2p	Projector Slides	Page Layout	Visual, Auditory, and Kinesthetic	Summative
4	2th+2p	Projector Slides	Pictures and Graphics	Visual, Auditory, and Kinesthetic	Summative
5	2th+2p	Projector Slides	Tables	Visual, Auditory, and Kinesthetic	Summative
6	2th+2p	Projector Slides	Starting MS Excel	Visual, Auditory, and Kinesthetic	Summative
7	2th+2p	Projector Slides	Data	Visual, Auditory, and Kinesthetic	Summative
8	2th+2p	Projector Slides	Tables	Visual, Auditory, and Kinesthetic	Summative
9	2th+2p	Projector Slides	Formatting	Visual, Auditory, and Kinesthetic	Summative
10	2th+2p	Projector Slides	Templates	Visual, Auditory, and Kinesthetic	Summative
11	2th+2p	Projector Slides	Formulas and Functions	Visual, Auditory, and Kinesthetic	Summative
12	2th+2p	Projector Slides	Charts and Graphics	Visual, Auditory, and Kinesthetic	Summative
13	2th+2p	Projector Slides	Data Sharing	Visual, Auditory, and Kinesthetic	Summative
14	2th+2p	Projector Slides	Starting MS PowerPoint	Visual, Auditory, and Kinesthetic	Summative
15	2th+2p	Projector Slides	Presentation Slides	Visual, Auditory, and Kinesthetic	Summative

13. Course Evaluation

60% Theoretical
40% Practical (Lab.)

14. Learning & Teaching Resources

Required textbooks
(curricular if any)

Main References
(sources)

Recommended Books & References
(Scientific Journals, Reports ...)

Websites or Electronic References

www.microsoft.com

Course Description (Medical Bacteriology 2)

1. Course Title		Medical Bacteriology 2
2. Course Code		02012201
3. Semester/Year		Semester
4. Description Preparation Date		2025/9/9
5. Available Attendance Form		Lectures (Theory , Lab Practicle)
6. No. of Hours (Total)		60 hours (30 Theoretical + 30 Practical)
7. No. of Credits (Total)		4
8. Course Administrator Name		Lecture.Dr. Mytham Jabouri Abdull Hussein Dalal Arif Salman
9. E-mail		mytham.j@albayan.edu.iq dalal.a@albayn.edu.iq
10. Course Objectives		
Knowledge	A1	The student understands the meaning of medical bacteria
	A2	The student should know the importance of clinical diagnosis of medical bacteria
	A3	The student will distinguish between different types of bacteria based on different diagnostic methods
	A4	The student learns how to grow bacteria on different agricultural media using cultivation techniques
Skills	B1	The student will understand how to stain bacteria using the Gram stain technique so that their appearance can be seen under an optical microscope
	B2	The student should realize the importance of performing various biochemical tests that help in diagnosing bacteria
	B3	The student will understand how to test the sensitivity of bacteria to antibiotics and choose the best treatment for bacteria
	B4	The student will learn the most important tests used to determine the minimum concentration of antibiotics to inhibit bacterial growth
Values	C1	The student will be able to use modern laboratory methods to count colonies and growing bacterial cells
	C2	The student will understand how to use modern technologies to identify bacteria and determine the optimal treatment against the bacteria
	C3	The student understands how to isolate bacteria individually and pure
	C4	The student should perform diagnostic tests and antibiotic sensitivity tests

		against bacteria	
11. Teaching and Learning Strategies			
1.	The student can distinguish between visual and microscopic diagnosis of bacterial	4.	cells The student is able to choose the best method to determine the most appropriate antibiotic against bacteria
2.	The student can differentiate between ancient and modern methods for identifying the bacteria or agent causing the disease	5.	Student groups, scientific trips, and holding workshops, seminars, and courses.
3.	The student can perform tests to diagnose each type of medical bacteria	6.	Scientific reports, oral exams, surprise written exams, and direct questions.

12. The Structure of the Course

Week	Hours		RLOs	Topic/Subject Name	Learning Method	Evaluation Method
	Theory	Lab				
1	2	2	Provides an overview of <i>Neisseria</i>	<i>Neisseria</i>	The method of giving lectures Method of discussion +practical application	Written tests Oral exams
2	2	2	Provides an overview of <i>Escherichia coli</i>	<i>Escherichia coli</i>	The method of giving lectures Method of discussion +practical application	Written tests
3	2	2	Provides an overview of <i>Klebsiella</i>	<i>Klebsiella</i>	The method of giving lectures Method of discussion +practical application	Oral exams
4	2	2	Provides an overview of <i>Pseudomonads and Acinetobacter</i>	<i>Pseudomonads and Acinetobacter</i>	The method of giving lectures Method of discussion	Written tests

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					+practical application	
5	2	2	Provides an overview of <i>Shigella</i> and <i>Salmonella</i>	<i>Shigella</i> and <i>Salmonella</i>	The method of giving lectures Method of discussion +practical application	Oral exams
6	2	2	Provides an overview of <i>Yersinia</i>	<i>Yersinia</i>	E-Learning Discussion method	Written tests
7	2	2	Provides an overview of <i>Vibrio</i>	<i>Vibrio</i>	The method of giving lectures Method of discussion +practical application	Oral exams
8	2	2	Provides an overview of <i>Campylobacter</i>	<i>Campylobacter</i>	The method of giving lectures Method of discussion +practical application	Written tests
9	2	2	Provides an overview of <i>Helicobacter pylori</i>	<i>Helicobacter pylori</i>	The method of giving lectures Method of discussion +practical application	Oral exams

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10	2	2	Provides an overview of <i>Haemophilus</i>	<i>Haemophilus</i>	Method of giving lectures Discussion method	Written tests
11	2	2	Provides an overview of <i>Bordetella</i> and <i>Brucella</i>	<i>Bordetella</i> and <i>Brucella</i>	The method of giving lectures Method of discussion +practical application	Oral exams
12	2	2	Provides an overview of <i>Chlamydia</i>	<i>Chlamydia</i>	The method of giving lectures Method of discussion +practical application	Written tests Oral exams
13	2	2	Provides an overview of <i>Spirochetes</i>	<i>Spirochetes</i>	The method of giving lectures Method of discussion +practical application	Written tests Oral exams
14	2	2	Provides an overview of <i>Mycobacterium</i>	<i>Mycobacterium</i>	The method of giving lectures Method of discussion +practical application	Written tests Oral exams
15	2	2	Provides an	<i>Mycoplasma</i> and	The method of	Written tests

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			overview of <i>Mycoplasma and Rickettsia</i>	<i>Rickettsia</i>	giving lectures Method of discussion +practical application	Oral exams
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13. Course Evaluation

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

14. Learning & Teaching Resources

Required textbooks (curricular if any)	Foundations in Microbiology 4th Edition, Todar's Online Textbook of Bacteriology Dedication to Hans Zinsser 2005.
Main References (sources)	Bailey & Scott's Diagnostic Microbiology and Jawetz.
Recommended Books & References (Scientific Journals, Reports ...)	Melnick, & Adelberg's 2019 Medical Microbiology/ Twenty-Eighth Edition. Scientific journals in the field.
Websites or Electronic References	Researchgate Google scholar



Course Description (Biochemistry2)

1. Course Title		Biochemistry2
2. Course Code		02012202
3. Semester/Year		Semester
4. Description Preparation Date		2025/9/8
5. Available Attendance Form		Official attendance time (morning and evening).
6. No. of Hours (Total)		30 hours for the theoretical aspect and 30 hours for the practical aspect
7. No. of Credits (Total)		4 units
8. Course Administrator Name		Dr.Mustafa Saleem Shareef Lec.Hiba Khalid
9. E-mail		Mustafa.s@albayan.edu.iq Hiba.k@albayan.edu.iq
10. Course Objectives		
Knowledge	A1	Teaching students basic scientific concepts of Biochemistry topics with focus on clinical chemistry and metabolisms.
	A2	Studying biochemistry, metabolisms in illness and recovery
	A3	Teaching metabolisms and obesity and stress and exercises.
	A4	Teaching biochemistry of nutrition's and dietary.
Skills	B1	Scientific discussion
	B2	Weekly exams
	B3	Monthly tests
	B4	Practical examinations
Values	C1	Participation in the classroom
	C2	Provide activities

	C3	Semester and final tests and activities
	C4	Self-learning, discussion panels
11. Teaching and Learning Strategies		
1.	Active participation in the classroom is evidence of the student's commitment and responsibility	4. Developing the student's ability to deal with multiple tasks.
2.	Adherence to the specified deadline for submitting assignments and research.	5. Active participation in the classroom is evidence of the student's commitment and responsibility
3.	Semester and final exams express commitment and cognitive and theoretical understanding.	6. Developing the student's ability to deal with technical means

12. The Structure of the Course

Week	Hours	RLOs	Topic/Subject Name	Learning Method	Evaluation Method
1	2 theory	The way out in theory The way out in practice	-Introduction to Hormones -Gerngross test and Amino acids Titration	presence	Daily, monthly and annual written exam
	2 practi.		Curve		
2	2 theory 2 practi.	The way out in theory The way out in practice	-Classification and functions -Lipids tests	presence	Daily, monthly and annual written exam
3	2 theory 2 practi.	The way out in theory The way out in practice	-Receptors and degradations -Ethanol emulsion test, Acrolein, sudan	presence	Daily, monthly and annual written exam
4	2 theory 2 practi.	The way out in theory The way out in practice	-Proteins structures , functions -Acid Value, peroxide Value and Saponification Value	presence	Daily, monthly and annual written exam
5	2 theory 2 practi.	The way out in theory The way out in practice	-Myoglobin and hemoglobin -Iodine Value and Libermann-Burchard Method	presence	Daily, monthly and annual written exam
6	2 theory 2 practi.	The way out in theory The way out in practice	-Metabolism of purine/ pyrimidine -Nucleic acids	presence	Daily, monthly and annual written exam
7	2 theory 2 practi.	The way out in theory The way out in practice	-Vitamins types and reactions --Diphenylamine Method, Fiske-Subbar Method	presence	Daily, monthly and annual written exam
8	2 theory 2 practi.	The way out in theory The way out in practice	-Introduction to Minerals -Bials orcinol Method and Quantitaion o DNA by A260 nm	presence	Daily, monthly and annual written exam

9	2 theory 2 practi.	The way out in theory The way out in practice	-Absorption and sources - Proteins	presence	Daily, monthly and annual written exam
10	2 theory 2 practi.	The way out in theory The way out in practice	-Metabolism of minerals -Biuret protein assay and Folin-Lowrys Method	presence	Daily, monthly and annual written exam
11	2 theory 2 practi.	The way out in theory The way out in practice	-Metabolism of nucleotides -Bradford Method and Microkjeldal Method	presence	Daily, monthly and annual written exam
12	2 theory 2 practi.	The way out in theory The way out in practice	-Purine nucleotide -Isoelectric Point (PI)	presence	Daily, monthly and annual written exam
13	2 theory 2 practi.	The way out in theory The way out in practice	-Salvage pathway of purine -Enzymology	presence	Daily, monthly and annual written exam
14	2 theory 2 practi.	The way out in theory The way out in practice	-Pyrimidine metabolism -Alkaline phosphatase assay and Acid phosphatase assay	presence	Daily, monthly and annual written exam
15	2 theory 2 practi.	The way out in theory The way out in practice	-Review - β -amylase assay and Urease assay	presence	Daily, monthly and annual written exam

13. Course Evaluation

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

14. Learning & Teaching Resources

Required textbooks (curricular if any)	General biochemistry Geoffrey Beckett Text book of biochemistry, 2016
Main References (sources)	Articles
Recommended Books & References (Scientific Journals, Reports ...)	Hepers illustrated. Biochemistry, medical book.
Websites or Electronic References	Wikipedia, research gate, google scholar, and many

Course Description (Human physiology 2)

1. Course Title		Human physiology 2
2. Course Code		02012203
3. Semester/Year		Semester
4. Description Preparation Date		2025/9/7
5. Available Attendance Form		attendance
6. No. of Hours (Total)		60 (30 Theoretical + 30 Practical)
7. No. of Credits (Total)		4
8. Course Administrator Name		prof.dr.shallal murad Duaa Abdulaziz Sobhi
9. E-mail		Shallal.murad@albayan.edu.iq Duaa.a@albayan.edu.iq
10. Course Objectives		
Knowledge	A1	The student will be familiar with the functions of the human body's organs and how to perform laboratory tests for that
	A2	
	A3	
	A4	
Skills	B1	Teaching the function of organs in the human body and the mechanism of each function Teaching the student how to perform laboratory tests and how to ...read the results. These tests help Maintaining human health
	B2	
	B3	
	B4	
Values	C1	Encouraging the student to spread health culture and awareness about the human body and how to care for and maintain it Every function of every organ
	C2	
	C3	
	C4	
11. Teaching and Learning Strategies		

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1.	data show presentation	4.	
2.	lab work	5.	
3.		6.	

12. The Structure of the Course

Week	Hours	RLOs	Topic/Subject Name	Learning Method	Evaluation Method
1	2th+2p	Human physiology 2	Digestive Physiology: GIT: Part General Function, Food Movement, and Control. Swallowing Reflex/ lab: Urine Sample: Importance, Method of Collection, Preparation, Transport and Storage Physical Examination of Urine Sample	theoretical and practical	exam and quiz and report and home work
2	2th+2p	Human physiology 2	Digestive Physiology: GIT Chem Digestion, Absorption, and Control. Defecation Reflex/ lab: Microscopic Examination of Urine: identification of Epithelial Cells, Blood Cells, crystals, casts	theoretical and practical	exam and quiz and report and home work
3	2th+2p	Human physiology 2	Digestive Physiology: Accessory Organs: Secretion and Their Role Digestion. Secretion Control	theoretical and practical	exam and quiz and report and home work
4	2th+2p	Human physiology 2	Urinary Physiology: General Functions of US. Urine: Definition and Normal Constituent. Physical and Chemical Property of Urine./ lab: Repeat	theoretical and practical	exam and quiz and report and home work
5	2th+2p	Human physiology 2	Role of Kidney in Urine Formation Maintenance of Body Fluids and The Role In Acid-Base Balance/ lab: Chemical Examination of Urine	theoretical and practical	exam and quiz and report and home work
6	2th+2p	Human physiology 2	Urinary Tract: Parts and Function. Urine Hemodynamic and Control Normal Urine Daily Volume and Factors Affecting/ lab: repeat	theoretical and practical	exam and quiz and report and home work
7	2th+2p	Human physiology 2	Endocrine Physiology: Endocrine Glands .Types and Secretion Hormone: Types, Normal Value, Function Control of Secretion/ lab	theoretical and practical	exam and quiz and report and home work
8	2th+2p	Human physiology 2	Reproductive Physiology	theoretical and practical	exam and quiz and report and

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			Sex Physiology: Function of Genital Organs Male Sex Hormones: Normal Value, Production, Control, and Their Role in Reproduction./lab: : Semen Analysis: Type of Collection & Physical Examination		home work
9	2th+2p	Human physiology 2	male Sex Physiology: Function of Genital Organs Normal Value of Female Sex Hormone, .Production, and Control Female Cycle, Pregnancy, Parturition, and Lactation: Hormonal Fluctuation and Control.	theoretical and practical	exam and quiz and report and home work
10	2th+2p	Human physiology 2	Muscles Physiology: Types and Function Generation of Action Potential, Contraction and Sliding-Filament theory.	theoretical and practical	exam and quiz and report and home work
11	2th+2p	Human physiology 2	Nervous Physiology: Neuroglia: Definition, Types, and Function .Neurons: Definition, Types, and Function CSF: Composition, Function, and Clinical Importance	theoretical and practical	exam and quiz and report and home work
12	2th+2p	Human physiology 2	Generation of Action Potential. Neuronal .Conduction: Types and Speed Synapsis: Types, and Function/ lab L blood pressure	theoretical and practical	exam and quiz and report and home work
13	2th+2p	Human physiology 2	CNS: Parts and Functions/ lab: repeat	theoretical and practical	exam and quiz and report and home work
14	2th+2p	Human physiology 2	Spinal Cord: Parts, General Functions, and .Spinal Reflexes PNS: Types and Function/ lab: ESC	theoretical and practical	exam and quiz and report and home work
15	2th+2p	Human physiology 2	Sensory System: Classification and General .Function Special Sense Organs: Types and General Function/ lab: Body Temperature	theoretical and practical	exam and quiz and report and home work

13. Course Evaluation

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

14. Learning & Teaching Resources

Required textbooks (curricular if any)	text books
Main References (sources)	Ganong of medical physiology
Recommended Books & References (Scientific Journals, Reports ...)	Guyton and hall textbook of medical physiology
Websites or Electronic References	Vander renal physiology

Course Description (Histology 2)

1. Course Title		Histology 2	
2. Course Code		02012204	
3. Semester/Year		Semester	
4. Description Preparation Date		2025/9/7	
5. Available Attendance Form		Lectures and laboratory	
6. No. of Hours (Total)		30 hours (theory) 30 hours (practical)	
7. No. of Credits (Total)		4	
8. Course Administrator Name		Prof.Dr. Baha Fakhri Hussain, lec. Raghda Nasser, lec. Sarah Karim	
9. E-mail		bahaafakhri1961@yahoo.com raghdanaser.m@gmail.com	
10. Course Objectives			
Knowledge	A1	Provide the students with basic knowledge about the structure of the human cells, tissues and extracellular matrices surrounding them: epithelium, connective tissues, including blood, bone cartilage, muscles, and nerves.	
	A2	Learn the student the microscopic structure of the different human tissues.	
	A3	Facilitate the integration of Histology with gross Anatomy, Physiology and Biochemistry.	
	A4	Acquire student the skills of using the microscope and identifying the normal structures.	
Skills	B1	Describe the normal ultra-structure of the cell.	
	B2	Describe the organization and components of the human body.	
	B3	Correlate between the predominance of a cell organelle and the function of the cell.	
	B4	Correlate between histological structure & function of different organs of all systems.	
Values	C1	Describe the normal ultra-structure of the cell.	
	C2	Describe the organization and components of the human body.	
	C3	Correlate between the predominance of a cell organelle and the function of the cell.	
	C4	Correlate between histological structure & function of different organs of all systems.	
11. Teaching and Learning Strategies			
1.	Use professionally the light microscope to obtain information from histological slides in the laboratory.	4.	
2.	Identify and select various types of special stains for various tissues.	5.	
3.	Work constructively in a group sharing his/her colleagues in the resources available.	6.	

12. The Structure of the Course

Week	Hours	RLOs	Topic/Subject Name	Learning Method	Evaluation Method
1	2th+2p	The student's knowledge of the scientific subject and the realization of scientific, mental and professional skills	Circulatory system	Data show and white board	Quiz/homework
2	2th+2p	The student's knowledge of the scientific subject and the realization of scientific, mental and professional skills	Lymphoid system- Lymphatic vessels- Lymph	Data show and white board	Quiz/homework
3	2th+2p	The student's knowledge of the scientific subject and the realization of scientific, mental and professional skills	Lymphoid organs	Data show and white board	Quiz/homework
4	2th+2p	The student's knowledge of the scientific subject and the realization of scientific, mental and professional skills	Respiratory system	Data show and white board	Quiz/homework
5	2th+2p	The student's knowledge of the scientific subject and the realization of scientific, mental and professional skills	Digestive system/ Part one- Oral cavity	Data show and white board	Quiz/homework
6	2th+2p	The student's knowledge of the scientific subject and the realization of scientific, mental and professional skills	Digestive system/ Part two- Gastrointestinal tracts	Data show and white board	Quiz/homework
7	2th+2p	The student's knowledge of the scientific subject and the realization of scientific, mental and professional skills	Digestive system/ Part three- Accessory Glands	Data show and white board	Quiz/homework
8	2th+2p	The student's knowledge of the scientific subject and the realization of scientific, mental and professional skills	Urinary system 1	Data show and white board	Quiz/homework
9	2th+2p	The student's knowledge of the scientific subject and the realization of scientific, mental and professional skills	Urinary system 2	Data show and white board	Quiz/homework
10	2th+2p	The student's knowledge of the scientific subject and the realization of scientific, mental and professional skills	Endocrine system 1	Data show and white board	Quiz/homework
11	2th+2p	The student's knowledge of the scientific subject and the realization of scientific, mental and professional skills	Endocrine system 2	Data show and white board	Quiz/homework

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12	2th+2p	The student's knowledge of the scientific subject and the realization of scientific, mental and professional skills	Male reproductive system	Data show and white board	Quiz/homework
13	2th+2p	The student's knowledge of the scientific subject and the realization of scientific, mental and professional skills	Female reproductive system	Data show and white board	Quiz/homework
14	2th+2p	The student's knowledge of the scientific subject and the realization of scientific, mental and professional skills	Sense organ	Data show and white board	Quiz/homework
15	2th+2p	The student's knowledge of the scientific subject and the realization of scientific, mental and professional skills	The integumentary system- Skin	Data show and white board	Quiz/homework

13. Course Evaluation

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

14. Learning & Teaching Resources

Required textbooks
(curricular if any)

Main References
(sources)

Recommended Books & References
(Scientific Journals, Reports ...)

Websites or Electronic References



Course Description (Medical Parasitology and Entomology 2)

1. Course Title		Medical Parasitology and Entomology 2	
2. Course Code		02012206	
3. Semester/Year		Semester	
4. Description Preparation Date		2025/9/5	
5. Available Attendance Form		In-person lecture+ online	
6. No. of Hours (Total)		60 (30 Theoretical + 30 Practical)	
7. No. of Credits (Total)		4	
8. Course Administrator Name		Dr. safa tawfeeq whqeeb	
9. E-mail		safa.tawfeeq@albaya.edu.iq	
10. Course Objectives			
Knowledge	A1	Knowledge of the parasite's appearance, life cycle, and pathogenesis.	
	A2	Diagnose all parasites of medical importance.	
	A3	Identify the epidemiology of parasites with special reference to those endemic to Iraq.	
	A4	Control and prevent the spread of disease	
Skills	B1	Teaching the use of a microscope and diagnosing the stages of parasites	
	B2	Teaching modern techniques in diagnosis	
	B3		
	B4		
Values	C1	Participation in seminars and conferences held inside and outside the college	
	C2	Motivating students to expand their thinking by making posters and scientific research	
	C3	Develop skills to solve problems that hinder student understanding	
	C4	Holding periodic seminars for students to exchange information, raise the level thinking, and enhance self-confidence	
11. Teaching and Learning Strategies			
1.	Education through pictures presentation	4.	
2.	Education through video presentation	5.	
3.	Education via online	6.	

12. The Structure of the Course

Week	Hours	RLOs	Topic/Subject Name	Learning Method	Evaluation Method
1	2th+2p	Medical Parasitology 2	Platyhelminth: General characters. Class cestoda: General characters. Teianiasaginata: Teianiasolium: Morphology & the adult worm and the larval stages of each species, biology, life cycle of each species, pathogenicity of each species, Lab. Diagn	Theoretical and practical	-Through questions during the lecture -The student participate in explaining a topic - The Quiz - Monthly exam.
2	2th+2p	Medical Parasitology 2	Hymenolepis nana, Hymenolepis diminuta. Dipylidium caninum, Diphylobathrium latum, Biology, morphology, pathogenicity of each species, Lab. Diagnosis	Theoretical and practical	-Through questions during the lecture -The student participate in explaining a topic - The Quiz - Monthly exam.
3	2th+2p	Medical Parasitology 2	Echinococcus granulosus. Echinococcus multilocularis. Biology, life cycle, pathogenicity, medical importance of hydatid cyst disease, Lab. Diagnosis.	Theoretical and practical	-Through questions during the lecture -The student participate in explaining a topic - The Quiz - Monthly exam.
4	2th+2p	Medical Parasitology 2	Class Trematoda: General characters. Genus Schistosoma. Species of human schistosoma, life cycle. Schistosoma hematobium. Schistosoma mansoni. Biology of adult worm, habitat, pathogenicity, Lab. diagnosis	Theoretical and practical	-Through questions during the lecture -The student participate in explaining a topic - The Quiz

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5	2th+2p	Medical Parasitology 2	Fasciola hepatica Biology , life cycle, pathogenicity, Lab diagnosis. Nematelminthis. ClssNemtoda, general characters.	Theoretical and practical	- Monthly exam. -Through questions during the lecture -The student participat in explaining a topic - The Quiz - Monthly exam.
6	2th+2p	Medical Parasitology 2	Ascaris lambricoides Enterobius vermicul Biology of adult worm,lifecycle, pathgenicity and medical importance of each species, Lab. Diagnosis of each species.	Theoretical and practical	-Through questions during the lecture -The student participat in explaining a topic - The Quiz - Monthly exam.
7	2th+2p	Medical Parasitology 2	Trichuris trichura. Trichenala spiralis. Biology , life cycle , pathogenicity, medical importanceof each species, Lab. Diagnosis of each species	Theoretical and practical	-Through questions during the lecture -The student participat in explaining a topic - The Quiz - Monthly exam.
8	2th+2p	Medical Parasitology 2	Strogyloidesstercoralis. Biology, life cy pathgenicity, medical importance, I Diagnosis.	Theoretical and practical	-Through questions during the lecture -The student participat in explaining a topic - The Quiz - Monthly exam.
9	2th+2p	Medical Parasitology 2	Ancylostomaduadenale , Necator Americans (Hooks worm) Biology, life cycle, pathogenicity, medical	Theoretical and practical	-Through questions during the lecture

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			importance of each species, Lab. Diagnosis		-The student participate in explaining a topic - The Quiz - Monthly exam.
10	2th+2p	Medical Parasitology 2	The filariae: Biology, pathogenicity and medical importance of each species, Lab. Diagnosis of each species. Visceral larvae migration, Cutaneous larvae migration	Theoretical and practical	-Through questions during the lecture -The student participate in explaining a topic - The Quiz - Monthly exam.
11	2th+2p	Medical Parasitology 2	Sand fly	Theoretical and practical	-Through questions during the lecture -The student participate in explaining a topic - The Quiz - Monthly exam.
12	2th+2p	Medical Parasitology 2	Black fly	Theoretical and practical	-Through questions during the lecture -The student participate in explaining a topic - The Quiz - Monthly exam.
13	2th+2p	Medical Parasitology 2	Mosquitoes	Theoretical and practical	-Through questions during the lecture -The student participate in explaining a topic - The Quiz - Monthly exam.

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14	2th+2p	Medical Parasitology 2	Ticks & Mites	Theoretical and practical	-Through questions during the lecture -The student participate in explaining a topic - The Quiz - Monthly exam.
15	2th+2p	Medical Parasitology 2	Fleas+ Revision	Theoretical and practical	-Through questions during the lecture -The student participate in explaining a topic - The Quiz - Monthly exam.

13. Course Evaluation

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

14. Learning & Teaching Resources

Required textbooks (curricular if any)	Paniker's Textbook of Medical Parasitology
Main References (sources)	Paniker's Textbook of Medical Parasitology
Recommended Books & References (Scientific Journals, Reports ...)	Evolutionary Parasitology Textbook of Medical Parasitology
Websites or Electronic References	Any good research and good websites

Course Description (Molecular biology)

1. Course Title		Molecular biology	
2. Course Code		02012205	
3. Semester/Year		Semester	
4. Description Preparation Date		2025/9/2	
5. Available Attendance Form		Face-to-face lectures	
6. No. of Hours (Total)		60 hours	
7. No. of Credits (Total)		4	
8. Course Administrator Name		Dr.Osama Abdulmunim ghari Suhaib raad qasim	
9. E-mail		Suhaib.s@albayan.edu.iq Osama.a@albayan.edu.iq	
10. Course Objectives			
Knowledge	A1	The student should know the interactions between molecules such as DNA, RNA and protein.	
	A2		
Skills	B1	The student has the logical thinking skills to study the living cell at the molecular level	
Values	C1	The student's discovery of what is happening in his environment and the necessary knowledge in the fields of agriculture, medicine and genetic engineering	
11. Teaching and Learning Strategies			
1.	The use of modern educational models in teaching		4.
2.	Allocating a percentage of the grade for activities and participations		5.
3.	Managing the lecture in a way that the student feels the importance of time		6.

12. The Structure of the Course					
Week	Hours	RLOs	Topic/Subject Name	Learning Method	Evaluation Method
1	2th+2 p	Introducing students to molecular biology	Molecular biology	Face-to-face learning	Class assessment And assignments
2	2th+2 p	Teaching the student all materials and tools And the devices to be used in the laboratory Molecular biology	Laboratory Instruments Materials	Face-to-face learning	Class assessment And assignments
3	2th+2 p	supplementary	Laboratory Instruments Materials	Face-to-face learning	Class assessment And assignments
4	2th+2 p	Introducing students to the approved methods In the preparation of solutions used in Biological Laboratories	Preparation solutions	Face-to-face learning	Class assessment And assignments
5	2th+2 p	supplementary	Preparation solutions	Face-to-face learning	Lecture evaluation and test
6	2th+2 p	Teaching the student physical and chemical methods To extract DNA from any kind of Cells	DNA Extraction	Face-to-face learning	Lecture evaluation and test
7	2th+2 p	supplementary	DNA Extraction	Face-to-face learning	Lecture evaluation and test

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8	2th+2 p	Study of methods of extracting plasmids from Bacterial cells	Plasmids extraction	Face-to-face learning	Lecture evaluation and test
9	2th+2 p	supplementary	Plasmids extraction	Face-to-face learning	Lecture evaluation and test
10	2th+2 p	working principle, uses and methods of care	electrophoresis	Face-to-face learning	Lecture evaluation and test
11	2th+2 p	supplementary	electrophoresis	Face-to-face learning	Lecture evaluation and test
12	2th+2 p	Introducing the student to the ways to multiply the DNA to facilitate the study grammar Nitrogen	Polymerase Chain Reaction	Face-to-face learning	Lecture evaluation and test
13	2th+2 p	supplementary	Polymerase Chain Reaction	Face-to-face learning	Lecture evaluation and test
14		Final exam			

13. Course Evaluation

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

14. Learning & Teaching Resources

Required textbooks
(curricular if any)

Main References
(sources)

Recommended Books
& References
(Scientific Journals,
Reports ...)

- 1- Clark DP, Pazdernik NJ. *Molecular Biology, Polymerase Chain Reaction*. 2nd ed. United States of America (USA): Elsevier BV; 2013. pp. 163–93. Chap. 6.
- 2- Lorenz TC. Polymerase chain reaction: Basic protocol plus troubleshooting and optimizing strategies. *J Vis Exp*. 2012;63:e3998.
- 3- Ratani SS, Siletzky RM, Dutta V, Yildirim S, Osborne JA, Lin W, Hitchins AD, Ward TJ, Kathariou S (2012) Heavy metal and disinfectant resistance of *Listeria monocytogenes* from foods and food processing plants. *Appl Environ Microbiol* 78:6938–6945
- 4- Harrison E, Brockhurst MA (2012) Plasmid-mediated horizontal gene transfer is a coevolutionary process. *Trends Microbiol* 20:262–267
- 5- Westermeier, R. (2014). Electrophoresis. In: Kreysa, G., Ota, Ki., Savinell, R.F. (eds) *Encyclopedia of Applied Electrochemistry*. Springer, New York, NY.
- 6- Jawdat N, Adnan F. Gaaib, et al Simple salting-out method for genomic DNA extraction from whole Blood. *Tikrit Journal of Pure Science* 2011;16(2 SRC - GoogleScholar):1813-662.

Websites or Electronic
References

Display by electronic means

Course Description (Histopathology 1)

1. Course Title		Histopathology 1		
2. Course Code		02013101		
3. Semester/Year		2025-2026		
4. Description Preparation Date		2025/9/5		
5. Available Attendance Form		Lectures and laboratory sessions		
6. No. of Hours (Total)		30 hours (theory) 30 hours (practical)		
7. No. of Credits (Total)		3 units for the first semester		
8. Course Administrator Name		Dr.Hamed Harata Lec.Rafal Yousif Salman		
9. E-mail		Rafal.y@albayan.edu.iq		
10. Course Objectives				
Knowledge	A1	Provides the students with the essential basic scientific knowledge required to understand in integrated manner the structure and functional deviations from the normal in the various body systems and organs.		
	A2	Familiarize students with the basic pathology.		
	A3	Understand the etiology, pathogenesis and pathologic manifestation of disease process.		
	A4	Provide the students with the skills of differentiation between normal and abnormal tissues.		
Skills	B1	Describe and contrast neoplasm and cysts.		
	B2	Identify pathological changes by the light microscope		
	B3	Describe the pathologic picture of a disorder based on gross or microscopic morphology		
	B4	Demonstrate the ability to identify the macroscopic and microscopic criteria of the altered structure and hence function of the tissue in disease process		
Values	C1	Explain terms and divisions in general pathology.		
	C2	Demonstrate an understanding of the etiology and pathogenesis of disease & its effects on the body		
	C3	Explain the salient principles of inflammation and repair		
	C4	Describe circulatory dysfunction		
11. Teaching and Learning Strategies				
1.	Presentations		4.	E-learning
2.	Panel discussions		5.	
3.	Practical exercises		6.	

12. The Structure of the Course

Week	Hours	RLOs	Topic/Subject Name	Learning Method	Evaluation Method
1	2th+2p	The student's knowledge of the scientific subject and the realization of scientific, mental and professional skills	Introduction, cell constituent	Data show and white board	Quiz and homework
2	2th+2p	The student's knowledge of the scientific subject and the realization of scientific, mental and professional skills	Inflammation, Repair & Degeneration Acute Inflammation	Data show and white board	Quiz and homework
3	2th+2p	The student's knowledge of the scientific subject and the realization of scientific, mental and professional skills	Chronic Inflammation	Data show and white board	Quiz and homework
4	2th+2p	The student's knowledge of the scientific subject and the realization of scientific, mental and professional skills	Repair, healing & Regeneration	Data show and white board	Quiz and homework
5	2th+2p	The student's knowledge of the scientific subject and the realization of scientific, mental and professional skills	Retrograde, changes, Degeneration	Data show and white board	Quiz and homework
6	2th+2p	The student's knowledge of the scientific subject and the realization of scientific, mental and professional skills	Atrophy Necrosis, cloudy swelling	Data show and white board	Quiz and homework
7	2th+2p	The student's knowledge of the scientific subject and the realization of scientific, mental and professional skills	Gangrene	Data show and white board	Quiz and homework
8	2th+2p	The student's knowledge of the scientific subject and the realization of scientific, mental and professional skills	Criteria used for cytopathological diagnosis of cancer	Data show and white board	Quiz and homework
9	2th+2p	The student's knowledge of the scientific subject and the realization of scientific, mental and professional skills	Changes in the cytoplasm malignancy, Changes in the nucleus in malignancy	Data show and white board	Quiz and homework

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10	2th+2p	The student's knowledge of the scientific subject and the realization of scientific, mental and professional skills	Changes in cell as a general malignancy	Data show and white board	Quiz and homework
11	2th+2p	The student's knowledge of the scientific subject and the realization of scientific, mental and professional skills	Nomenclature of tumors	Data show and white board	Quiz and homework
12	2th+2p	The student's knowledge of the scientific subject and the realization of scientific, mental and professional skills	Classification of tumors.	Data show and white board	Quiz and homework
13	2th+2p	The student's knowledge of the scientific subject and the realization of scientific, mental and professional skills	Fixation & Fixatives, Theoretical aspects of Fixation, Most common fixatives common use	Data show and white board	Quiz and homework
14	2th+2p	The student's knowledge of the scientific subject and the realization of scientific, mental and professional skills	Fixation for special substances Specializes Techniques individual tissue & fixation Arte fact	Data show and white board	Quiz and homework
15	2th+2p	The student's knowledge of the scientific subject and the realization of scientific, mental and professional skills	Tissue processing, Fixation, dehydration, clearing, embedding	Data show and white board	Quiz and homework

13. Course Evaluation

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

14. Learning & Teaching Resources

Required textbooks (curricular if any)	Robins Basic Pathology
Main References (sources)	
Recommended Books & References (Scientific Journals, Reports ...)	
Websites or Electronic References	

Course Description (Hematology1)

1. Course Title		Hematology1	
2. Course Code		02013102	
3. Semester/Year		2025-2026	
4. Description Preparation Date		7/9/2025	
5. Available Attendance Form		Theoretical + Practical	
6. No. of Hours (Total)		(30 Theoretical + 30 Practical)	
7. No. of Credits (Total)		3 units for the first semester	
8. Course Administrator Name		Fadaa Abdullah Mahmoud	
9. E-mail		fathaa.m@albayan.edu.iq	
10. Course Objectives			
Knowledge	A1	Giving the student expanded and recent idea about hematology and normal and abnormal ranges of blood components in addition to the changes that occur in infection with different diseases.	
	A2		
	A3		
	A4		
Skills	B1	Giving the student a good idea about important diagnostic characteristics of each hematological disease.	
	B2		
	B3		
	B4		
Values	C1	Setting a good information basis to enable the student to follow up with medical society with they dealing in hospitals.	
	C2		
	C3		
	C4		
11. Teaching and Learning Strategies			
1.	Practical doing of hematological tests	4.	
2.		5.	
3.		6.	

12. The Structure of the Course

Week	Hours	RLOs	Practical/Subject Name	Learning Method	Evaluation Method
1	2th+2p	Learning of blood collection	Blood collection	Theoretical + Practical	Quiz
2	2th+2p	Distinguish between Anticoagulant types	Anticoagulants	Theoretical + Practical	Quiz
3	2th+2p	Learning the normal values	Normal value of all blood components according to age	Theoretical + Practical	Quiz
4	2th+2p	Hb testing and anemia diagnosis	Hb estimation by different methods	Theoretical + Practical	Quiz
5	2th+2p	Blood viscosity testing	Packed cell volume PCV	Theoretical + Practical	Quiz
6	2th+2p	Knowing RBCs Count diagnose pathological conditions	RBCs count (manual) and automated RBCs count	Theoretical + Practical	Quiz
7	2th+2p	Testing of RBCs indices	Red cell indices MCV, MCH, MCHC	Theoretical + Practical	Quiz
8	2th+2p	Blood Picture microscopically	preparation of blood film	Theoretical + Practical	Quiz
9	2th+2p	Blood Picture microscopically	preparation of blood film	Theoretical + Practical	Quiz
10	2th+2p	Learning shape and size of RBCs	Study of red cell morphology in health and disease	Theoretical + Practical	Quiz
11	2th+2p	Distinguishing	Inclusion bodies in red blood cells	Theoretical +	Quiz

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		inclusion bodies inside RBCs		Practical	
12	2th+2p	RBCs testing	Osmotic fragility test and reticulocyte count	Theoretical + Practical	Quiz
13	2th+2p	Diagnosis of sikle cell anemia	Sickle cell test and electrophoresis	Theoretical + Practical	Quiz
14	2th+2p	Diagnosis of some pathological conditions	Erythrocyte sedimentation rate ESR	Theoretical + Practical	Quiz
15	2th+2p	Study the previous subjects	Study the previous subjects	Theoretical + Practical	Quiz

13. Course Evaluation

Daily preparation 10 Monthly exams 10 Monthly exams 20 Oral exams 10
Monthly exams 50

14. Learning & Teaching Resources

Required textbooks
(curricular if any)

Hematology Science book

Main References
(sources)

Recommended Books & References
(Scientific Journals, Reports ...)

Websites or Electronic References

Course Description (Medical Virology)

1. Course Title		Medical Virology	
2. Course Code		02013103	
3. Semester/Year		2025-2026	
4. Description Preparation Date		4/9/2025	
5. Available Attendance Form		Lectures(Theory &Practical)	
6. No. of Hours (Total)		60 (30 Theoretical + 30 Practical)	
7. No. of Credits (Total)		4 units for the second semester	
8. Course Administrator Name		Dr.Ghufran.h.Abed	
9. E-mail		Ghufran.h@albayan.edu.iq	
10. Course Objectives			
Knowledge	A1	Make the student known to medical viruses and fungi, and the causes of it diseases	
	A2		
	A3		
	A4		
Skills	B1	Make the student how diagnose the viral and fungal diseases and how to treatment	
	B2		
	B3		
	B4		
Values	C1	The student must have full knowledge of viral and fungal diseases and how to deal with them.	
	C2		
	C3		
	C4		
11. Teaching and Learning Strategies			
1.	Intellectual or mental education	4.	
2.	Collaborative co-education	5.	
3.	Blended learning	6.	

13. The Structure of the Course

12.

Week	Hours		RLOs	Topic/Subject Name	Learning Method	Evaluation Method
	Theory	Practical				
1	2	2	Theory: General properties of Virus	Introduction to medical virolo	Method of giving lectures Discussion method Cooperative education	Oral &written exam.
			Practice: Laboratory Safety &Vi Identification			
2	2	2	Structure, Classification and Nomenclature of the Viruses	Viral classification	Method of giving lectures Discussion method Cooperative education	Oral &written exam.
			Clinical Samples Collection&Preservation			
3	2	2	Atypical Virus-like agents (Prions, Defective viruses, Pseudovirion and Viriods).	Atypical virus	Method of giving lectures Discussion method Cooperative education	Oral &written exam.
			Direct Examination : Microscopical Examination Electron Microscopy Examination			
4	2	2	Viral Genetic and Molecular&Viral Replication.	Replication of viruses	Method of giving lectures Discussion method Cooperative education	Oral &written exam.
			Isolation and Cultivation of Viruses			
5	2	2	Viral Pathogenesis and Transmission	Viral Pathogenesis	Method of giving lectures Discussion method Cooperative education	Oral &written exam.
			Preservation and Titration of Viruse			
6	2	2	Immunity&Laboratory Diagnosis of Viruses	Laboratory Diagnosis of Viruses	Method of giving lectures Discussion method	Oral &written exam.

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			Practice:Immunological Techniques		Cooperative education	
7	2	2	Herpes virus	Herpes virus	Method of giving lectures Discussion method Cooperative education	Oral &written exam.
			ELISA test			
8	2	2	Hepatitis virus	Hepatitis virus	Method of giving lectures Discussion method Cooperative education	Oral &written exam.
			Complement fixation test			
9	2	2	Human Immune Deficiency virus	HIV	Method of giving lectures Discussion method Cooperative education	Oral &written exam.
			Insito ELA			
10	2	2	Orthomyxovirus	Orthomyxovirus	Method of giving lectures Discussion method Cooperative education	Oral &written exam.
			RIA			
11	2	2	Paramyxovirus	Paramyxovirus	Method of giving lectures Discussion method Cooperative education	Oral &written exam.
			Latex agglutination			
12	2	2	Enteric viruses (Rota, Polio and Reo viruses)	Enteric viruses	Method of giving lectures Discussion method Cooperative education	Oral &written exam.
			Neutralization test			
13	2	2	Rabies and other Neurotropic viruses	Rabies	Method of giving lectures	Oral &written exam.

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			Heamagglutination (HA) and Heamagglutination Inhibition tests		Discussion method Cooperative education	
14	2	2	Poxvirus	Poxvirus	Method of giving lectures Discussion method Cooperative education	Oral & written exam.
			Fluorescent Technique			
15	2	2	Coronavirus	Coronavirus	Method of giving lectures Discussion method Cooperative education	Oral & written exam.
			Flow Cytometry			
			Antifungal agents (Sensitivity tests). Mycotoxins isolation			

14. Course Evaluation

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

15. Learning & Teaching Resources

Required textbooks (curricular if any)	Jawetz, R., J.L. Melnick, and E.A. Adelberg,(2019). Review of Medical
Main References (sources)	Review of Medical Microbiology and Immunology. Warren Levinson, 12th May 2012. Mc Graw-Hill (Lange). Microbiology, Twenty-Eighth Edition Edition,. Christopher J. Burrell, ... Frederick A. Murphy, in Fenner and White's Medical Virology (Fifth Edition), 2017
Recommended Books & References (Scientific Journals, Reports ...)	
Websites or Electronic References	https://hmt.mtu.edu.iq/e-learning/

Course Description (Clinical Endocrinology)

1. Course Title		Clinical Endocrinology
2. Course Code		02013104
3. Semester/Year		2025-2026
4. Description Preparation Date		2/9/2025
5. Available Attendance Form		Attendance in the classroom in addition to e-learning
6. No. of Hours (Total)		(30 Theoretical + 30 Practical)
7. No. of Credits (Total)		4 units for the second semester
8. Course Administrator Name		Prof.Dr. Waleed Hameed Yousif
9. E-mail		Waleed.h@albayan.edu.iq
10. Course Objectives		
Knowledge	A1	Introducing the student to the basic principles related to pathologic analyzes regarding metabolism and Endocrinology
	A2	Introducing the student to the theoretical and practical foundations laboratory tests in metabolic disorders and endocrinology of various diseases
	A3	Special emphasis on the examinations of some organs, which are related to the compounds of Endocrinology
	A4	Introducing important experiments with modern technologies laboratory diagnostics to give the student a new opportunity to get acquainted with qualitative examinations
Skills	B1	The student should be able to acquire basic knowledge and skills Endocrinology and disorders
	B2	Teaching the student how to become able to think logically, analyze, and employ the prescribed curriculum vocabulary.
	B3	Developing the student's mental and personal ability in the specialty an important part of his field of specialization
	B4	Providing the student with communication skills and using modern educational technologies effectively.
Values	C1	The student should be able to work collectively, and work individually make clinical endocrinological analyzes
	C2	The student should be able to use information technology to search for information

	C3	The student should be able to communicate with the professor and colleagues
	C4	The student must be able to rely on himself
11. Teaching and Learning Strategies		
1.	Providing an appropriate educational climate for logical thinking through continuous guidance of students during lectures	4. Use the display screen to lecture and the blackboard.
2.	Opening the door for open and direct discussions with students	5. Visit the library
3.	Follow a cooperative learning strategy	6. Directing the student to websites to benefit from them

Week	Hours	RLOs	Topic/Subject Name	Learning Method	Evaluation Method
1	2	A1, A2, A3, A4, B1, B2, B3, B4, C1, C2, C4	Introduction to endocrinology and types of glands, definition of hormones, similarities and differences between hormones and enzymes. Classification of hormones, factors regulating the action of hormones and regulating the secretion of hormones	Gaining information about the mechanism of water balance in the human body and analyzing ions	Oral questions
2,3	2	A1, A2, A3, A4, B1, B2, B3, B4, C1, C2, C4	The mechanism of action of hormones:	Know how to calculate the concentration of iron and calcium	Conducting practical experiments
4	2	A1, A2, A3, A4, B1, B2, B3, B4, C1, C2, C4	1-interaction with nuclear chromatin (nuclear action).	How to balance acids and bases	Conducting practical experiments
5	2	A1, A2, A3, A4, B1, B2, B3, B4, C1, C2, C4	2-membrane receptors.	Know the causes and types of diabetes	Conducting practical experiments
6	2	A1, A2, A3, A4, B1, B2, B3, B4, C1, C2, C4	3-stimulation of enzyme synthesis in the ribosome.	Identify the functions of the liver and the diseases that affect it	Conducting practical experiments
7,8	2	A1, A2, A3, A4, B1, B2, B3, B4, C1, C2, C4	4-direct activation at the enzyme level.	Learn about the kidney, its functions, and the diseases that affect it	Conducting practical experiments
9	2	A1, A2, A3, A4, B1, B2, B3, B4, C1, C2, C4	5-c-AMP and the action of hormones.	Knowing the types of blood plasma fats and their tests	Conducting practical experiments
10	2	A1, A2, A3, A4, B1, B2, B3, B4, C1, C2, C4	6-the role of polyphosphoinositol and diacylglycerol in the action of hormones.	Knowing the diseases that affect the heart and its parameters	Conducting practical experiments
11,12	2	A1, A2, A3, A4, B1, B2, B3, B4, C1, C2, C4	7-the role of calcium in the work of hormones.	Identify the functions of the pancreas and its tests	Conducting practical experiments
13	2	A1, A2, A3, A4, B1, B2, B3, B4, C1, C2, C4	8-the role of c-GMP in the work of hormones.	Identifying blood plasma proteins and their usefulness in diagnosing diseases	Conducting practical experiments
14,15	2	A1, A2, A3, A4, B1, B2, B3, B4, C1, C2, C4	9-the role of phosphorylation of tyrosine kinase	Identify tumor parameters	Conducting practical experiments

12. Course Evaluation

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

13. Learning & Teaching Resources

Required textbooks (curricular if any)	Peter Rae - Clinical Endocrinology Lecture Notes (2018, John Wiley & Sons Ltd)
Main References (sources)	William Clarke PhD (editor), Mark Marzinke (editor) - Contemporary Practice in Clinical Endocrinology - Academic Press (2020)
Recommended Books & References (Scientific Journals, Reports ...)	Tietz Fundamentals of Clinical Endocrinology and Molecular Diagnostics, 9th Edition
Websites or Electronic References	https://www.sciencedirect.com/ https://pubmed.ncbi.nlm.nih.gov/

Course Description (Medical Genetics1)

1. Course Title		Medical Genetics1	
2. Course Code		02013105	
3. Semester/Year		2025-2026	
4. Description Preparation Date		1/9/2025	
5. Available Attendance Form		Theoretical + Practical	
6. No. of Hours (Total)		(30) Theoretical+ (30) Practical	
7. No. of Credits (Total)		4 units for the first semester	
8. Course Administrator Name		Asst.Prof.Riad Abdulhussien Delool	
9. E-mail		Riad.delool@albayan.edu.iq	
10. Course Objectives			
Knowledge	A1	Knowledge of inheritance systems	
	A2	Studying the effect of mutations on genetic traits	
	A3	Chromosomal changes and their effects	
	A4	Environmental changes and their relationship to genetic traits	
Skills	B1	Identify the effect of genetic mutations	
	B2	Identify genetic traits and acquired traits	
	B3	Identify the inheritance of genetic diseases	
	B4	Identify the characteristics that are related to the sex of the organism	
Values	C1	Trying to differentiate between scientific studies and social factors	
	C2	Respecting religious traditions and social norms in genetic studies	
	C3	Trying to explain how genetic changes are transmitted between generations	
	C4	In-depth studies of the family tree and how genetic traits are transmitted	
11. Teaching and Learning Strategies			
1.	Attempting practical application of theoretical studies	4.	Many short-term scientific missions
2.	Continuously developing the curriculum	5.	More tests to develop students' level
3.	Continuous review of international educational systems	6.	Continuous interaction with other universities to identify differences in teaching methods

12. The Structure of the Course

Week	Hours	RLOs	Topic/Subject Name	Learning Method	Evaluation Method
1	2Th+2p	The student must be aware of information provided to him and extent of its application to reality	Cell divisions	Theoretical study practical applications	Conduct quick exams
2	2Th+2p	The student must be aware of information provided to him and extent of its application to reality	Types of traits (hereditary and acquired)	Theoretical study practical applications	Conduct quick exams
3	2Th+2p	The student must be aware of information provided to him and extent of its application to reality	Types of traits (hereditary and acquired)	Theoretical study practical applications	Conduct quick exams
4	2Th+2p	The student must be aware of information provided to him and extent of its application to reality	Types of traits (hereditary and acquired)	Theoretical study practical applications	Conduct quick exams
5	2Th+2p	The student must be aware of information provided to him and extent of its application to reality	Genetic diseases and an attempt practical clarification	Theoretical study practical applications	Conduct quick exams
6	2Th+2p	The student must be aware of information provided to him and extent of its application to reality	Genetic diseases and an attempt practical clarification	Theoretical study practical applications	Conduct quick exams
7	2Th+2p	The student must be aware of information provided to him and extent of its application to reality	Genetic diseases and an attempt practical clarification	Theoretical study practical applications	Conduct quick exams
8	2Th+2p	The student must be aware of information provided to him and extent of its application to reality	Sovereignty, abdication, and other method inheritance	Theoretical study practical applications	Conduct quick exams
9	2Th+2p	The student must be aware of information provided to him and extent of its application to reality	Sovereignty, abdication, and other method inheritance	Theoretical study practical applications	Conduct quick exams
10	2Th+2p	The student must be aware of information provided to him and extent of its application to reality	Sovereignty, abdication, and other method inheritance	Theoretical study practical applications	Conduct quick exams

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11	2Th+2p	The student must be aware of information provided to him and extent of its application to reality	Sex-linked inheritance with examples explanations	Theoretical study practical applications	Conduct quick exams
12	2Th+2p	The student must be aware of information provided to him and extent of its application to reality	Sex-linked inheritance with examples explanations	Theoretical study practical applications	Conduct quick exams
13	2Th+2p	The student must be aware of information provided to him and extent of its application to reality	Sex-linked inheritance with examples explanations	Theoretical study practical applications	Conduct quick exams
14	2Th+2p	The student must be aware of information provided to him and extent of its application to reality	Sex-linked inheritance with examples explanations	Theoretical study practical applications	Conduct quick exams
15	2Th+2p	The student must be aware of information provided to him and extent of its application to reality	Mutagenic agents of all kinds	Theoretical study practical applications	Conduct quick exams

13. Course Evaluation

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

14. Learning & Teaching Resources

Required textbooks (curricular if any)	Basics of genetics
Main References (sources)	International scientific references
Recommended Books & References (Scientific Journals, Reports ...)	Specialized scientific journals and published scientific reports
Websites or Electronic References	Scientific references on the Internet, such as the (human genetics) website.

Course Description (Immunology 1)

1. Course Title		Immunology 1
2. Course Code		02013106
3. Semester/Year		2025-2026
4. Description Preparation Date		2/9/2025
5. Available Attendance Form		face to face learning
6. No. of Hours (Total)		(30 Theoretical + 30 Practical)
7. No. of Credits (Total)		4 units for the first semester
8. Course Administrator Name		Hayder Ahmed Kadhim
9. E-mail		Hayder.a@albayan.edu.iq
10. Course Objectives		
Knowledge	A1	Knowledge and Understanding
	A2	Gaining experience in performing immunoassays
	A3	Gaining experience in the work of modern equipment
	A4	Dealing with various advanced laboratory analyzes
Skills	B1	Subject-specific skills
	B2	Training to use the equipment
	B3	making reports
	B4	Research work
Values	C1	Develop the student's ability to work with devices
	C2	Develop the student's ability to use modern laboratory equipment and techniques
	C3	Develop the student's ability to dialogue and debate

	C4	Develop the student's ability to research	
11.Teaching and Learning Strategies			
1.	The discussion	4.	Field visits to educational laboratories
2.	daily exams	5.	
3.	Directing students to some websites related to the scientific subject	6.	

12. The Structure of the Course

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Week	Hours	RLOs	Topic/Subject Name	Learning Method	Evaluation Method
1	2th+2p	Introduction, cell constituents	Immunology: definition and classification of the divisions of immunity, natural and acquired immunity, factors and defenses of natural	theoretical & practical	Daily exam and direct questions
2	2th+2p	Inflammation, Repair & Degeneration Acute Inflammation	tissues and lymphocytes, their origin, receptors and stages of maturation .Primary and secondary lymphoid organs.	theoretical & practical	Daily exam and direct questions
3	2th+2p	Chronic Inflammation	mononuclear cells monocytes , phagocytic cells Phagocytosis Origin, maturation, receptors, types and antigen presenting cells APC Inflammation,	theoretical & practical	Daily exam and direct questions
4	2th+2p	Repair, healing & Regeneration	the immune response: primary and secondary, their characteristics and the differences between them, regulation of the immune response	theoretical & practical	Daily exam and direct questions
5	2th+2p	Retrograde, changes, Degeneration	Retrograde, changes, Degeneration	theoretical & practical	Daily exam and direct questions
6	2th+2p	Atrophy Necrosis, cloudy swelling	Atrophy Necrosis, cloudy swelling	theoretical & practical	Daily exam and direct questions
7	2th+2p	Gangrene	Gangrene	theoretical & practical	Daily exam and direct questions
8	2th+2p	Criteria used for cytopathological diagnosis of cancer	Criteria used for cytopathological diagnosis of cancer	theoretical & practical	Daily exam and direct questions
9	2th+2p	Changes in the cytoplasm in malignancy Changes in the nucleus in malignancy	Changes in the cytoplasm in malignancy Changes in the nucleus in malignancy	theoretical & practical	Daily exam and direct questions
10	2th+2p	Changes in cell as a general in malignancy	Changes in cell as a general in malignancy	theoretical & practical	Daily exam and direct questions
11	2th+2p	Nomenclature of tumors	Nomenclature of tumors	theoretical & practical	Daily exam and direct questions
12	2th+2p	Classification of tumors	Classification of tumors	theoretical & practical	Daily exam and direct questions

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13	2th+2p	Fixation&Fixatives Theoretical aspects of Fixation Most common fixatives in common use	Fixation & Fixatives Theoretical aspects of Fixation Most common fixatives in common use	theoretical & practical	Daily exam and direct questions
14	2th+2p	Fixation for special substances Specializes Techniques for individual tissue & fixation Arte fact	Fixation for special substances Specializes Techniques for individual tissue & fixation Arte fact	theoretical & practical	Daily exam and direct questions
15	2th+2p	Tissue processting Fixation ,dehydration ,clearing ,emb edding	Tissue processting Fixation ,dehydration ,clearing ,embe dding	theoretical & practical	Daily exam and direct questions

13. Course Evaluation

The score out of 100 is based on the tasks assigned to the student, such as daily preparation, daily, oral, monthly, written exams, reports, etc.

14. Learning & Teaching Resources

Required textbooks (curricular if any)	Kuby IMMUNOLOGY. Sixth Edition
Main References (sources)	Kuby IMMUNOLOGY. Sixth Edition
Recommended Books & References (Scientific Journals, Reports ...)	Lectures , field studies
Websites or Electronic References	Ncbi Research gate

Course Description (Computer applications1)

1. Course Title		Computer applications1		
2. Course Code		02013107		
3. Semester/Year		2025-2026		
4. Description Preparation Date		2025/9/6		
5. Available Attendance Form		Face to face attendance		
6. No. of Hours (Total)		(30 Theoretical + 30 Practical)		
7. No. of Credits (Total)		2 for the first semester		
8. Course Administrator Name		Asst. Lect. Mustafa Mohammed Hammoodi		
9. E-mail		tuhafi.1989@gmail.com		
10. Course Objectives				
Knowledge	A1	The student gets to know the Excel program -		
	A2	The student learns how to deal with the jobs raised by this program -		
	A3	The student learns about the most important mathematical operations that can be applied in this program		
	A4	The student learns how to copy data from multiple cells and the paste options available		
Skills	B1	The student acquires the skill of dealing with the most important functions provided by the Excel progra		
	B2	The student acquires the skill of controlling the display of cells and changing their style and format through tools -		
	B3	The student acquires the skill of descriptive analysis of data using the SPSS program		
	B4	The student acquires the skill of using ready-made functions provided by the Excel program to carry operations -		
Values	C1	Learn how to open calculator programs and deal with files, including storing, opening, editing, and loc data		
	C2	Learn how to use Excel & Power Point. Learn how to use the famous statistical program SPSS		
	C3	Learn how to open calculator programs and deal with files, including storing, opening, editing, and loc data		
	C4	The most important components of a computer and how to deal with them		
11. Teaching and Learning Strategies				
1.	Through lecture, clarification methods, giving electronic assignments, and interacting within the electronic platform		4.	Short exams, quizzes, quarterly and annual exams

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2.	Theoretical and practical lectures	5.	Apply, implement, and then evaluate the implementation
3.	- Applying the theoretical material in a practical manner electronically by using Google Sheet	6.	Short exams, quizzes, quarterly and annual exams

12. The Structure of the Course

Week	Hours	RLOs	Topic/Subject Name	Learning Method	Evaluation Method
1-15	45	excel	Excel program: Learn about the concept of the program, its benefits, specifications, features, and methods operation -Get to know the main screen and components, and how it contains various menus and effective tools -The concept of the cell, basic data types how to enter them -How to save the work sheet or work book, close the program, close the file. -Open the saved file, enter data and perform calculations, learn how to adjust or format data and structure it within a single cell or group of cells. -Learn about ways to collect data or group cells in their different forms, as well as how to sort data -Use some of the functions provided by the program such as max, min, sum, ave, sqrt, count and other useful related statistical functions. -Learning about the editing process provided by the program, how to copy data or transfer data, and learning about the concept of copying mathematical operations, as well as the concept of relative cells and absolute cells. -Control the cell width: change its style format by using formatting tools.	Lecture and other explanation	Quiz and exam

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			-Dealing with charts and how to convert digital and textual data into charts of various types through the chart wizard (chart wizard) and learning how to make the modifications and revisions provided by the program. -Learn how to add or delete rows or columns on a work page and how to print digital data or charts		
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13. Course Evaluation

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

14. Learning & Teaching Resources

Required textbooks (curricular if any)	There is no approved textbook for attending lectures and taking notes Illustrations and lectures prepared for this purpose
Main References (sources)	1- John Walkenbach," Microsoft Excel 2016 BIBLE", John Wily & sons, 2015. 2- Curtis Fry, " Microsoft Excel 2016 step by step", Microsoft press,
Recommended Books & References (Scientific Journals, Reports ...)	
Websites or Electronic References	https://courses.corporatefinanceinstitute.com/courses/free-excel-crash-course-for-finance?gclid=CjwKCAjwndCKBhAkEiwAgSDKQVbWDMZ3L4p6byNsvx9SXq00QovfoXfkBQdC9FkdOQOdV7pn3FdRlBoCufwQAvD_BwE

Course Description (Advanced laboratory techniques)

1. Course Title		Advanced laboratory techniques
2. Course Code		02013108
3. Semester/Year		2025-2026
4. Description Preparation Date		6/9/2025
5. Available Attendance Form		Attendance
6. No. of Hours (Total)		(30 Theoretical + 30 Practical)
7. No. of Credits (Total)		3
8. Course Administrator Name		Lec.Hayder Ahmed Kadhim
9. E-mail		Hayder.a@albayan.edu.iq
10. Course Objectives		
Knowledge	A1	Definition and introduction to the most important laboratory techniques
	A2	Practical application of diagnostic methods on modern devices
	A3	Identifying the most important diseases and the most common diseases in laboratories
	A4	Understanding the mechanism of development of diseases of the urinary system and digestive system semen examinations
Skills	B1	The student learns the skill of drawing blood, taking a urine sample and other bodily fluids, and how to Sa the sample and transporting it to the laboratory
	B2	The student learns the skill of conducting immunological examinations and other laboratory techniques Clinical diagnosis such as ASO, GUE, GSE and other examinations
	B3	The student acquires the skill of operating the ELISA device, programming the VIDAS & MINIVII device, and dealing with books. It is ready for the purpose of quick examinations.
	B4	Applying diagnostic criteria, comparing their types, and learning on the latest devices.
Values	C1	Learn about laboratory techniques
	C2	Identify the most important disorders and problems accompanying the digestive and urinary systems Semen in humans
	C3	Understanding diseases of the immune system and other diseases, their types, causes, methods of diagno them, and Such as examining individual immune proliferation, the effect of complement, and estimating quantity of Immune globulin and other components of bodily fluids, blood serum, and fluids For any o body.
	C4	Analyze the results by comparing the result of a healthy person
11. Teaching and Learning Strategies		
1.	Lectures	4. QUIZ

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2.	USE DATASHOW	5.	Theoretical and practical lectures
3.	Adopting video lectures to increase knowledge	6.	Quarterly exams

12. The Structure of the Course

Week	Hours	RLOs	Topic/Subject Name	Learning Method	Evaluation Method
1	2th +2p	The student gets to know	Microbiology	Theoretical and practical	Quiz + Attendance
2	2th +2p	The student gets to know	Introduction	Theoretical and practical	Quiz + Attendance
3	2th +2p	The student gets to know	Safety and principles of sterilization	Theoretical and practical	Quiz + Attendance
5-4	2th +2p	The student gets to know	Collection, Transport, Examination reporting of specimens	Theoretical and practical	Quiz + Attendance
7-6	2th +2p	The student gets to know	Culturing of organisms	Theoretical and practical	Quiz + Attendance
9-8	2th +2p	The student gets to know	Conventional microbiological techniques	Theoretical and practical	Quiz + Attendance
12-11-1	2th +2p	The student gets to know	Biochemical testing of microorganisms	Theoretical and practical	Quiz + Attendance
13	2th +2p	The student gets to know	Serological diagnostic techniques	Theoretical and practical	Quiz + Attendance
14	2th +2p	The student gets to know	diagnostic techniques	Theoretical and practical	Quiz + Attendance
15	2th +2p	The student gets to know	Molecular diagnostic techniques	Theoretical and practical	Quiz + Attendance
16	2th +2p	The student gets to know	Cell and tissue culture	Theoretical and practical	Quiz + Attendance
18-17	2th +2p	The student gets to know	Molecular diagnostic techniques	Theoretical and practical	Quiz + Attendance
19	2th +2p	The student gets to know	Biochemistry	Theoretical and practical	Quiz + Attendance
22-21-2	2th +2p	The student gets to know	Cell homogenisation and fractionation	Theoretical and practical	Quiz + Attendance

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25-24-2	2th +2p	The student gets to know	Separation techniques	Theoretical and practical	Quiz + Attendance
28-27-2	2th +2p	The student gets to know	Enzyme kinetic Monitoring techniques	Theoretical and practical	Quiz + Attendance
29-30	2th +2p	The student gets to know	Enzyme assay techniques	Theoretical and practical	Quiz + Attendance

13. Course Evaluation

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

14. Learning & Teaching Resources

Required textbooks (curricular if any)	Diagnostic Criteria in generals practical's laboratory techniques
Main References (sources)	Stevens practical's immunology and serology : a laboratory perspective / Christine Dorresteyn Stevens. — 3rd ed. Mary Louise Turgeon. 2014. IMMUNOLOGY & SEROLOGY IN LABORATORY MEDICINE 4th ed.
Recommended Books & References (Scientific Journals, Reports ...)	Journal of medical laboratory technology in general objective.
Websites or Electronic References	http://www.healthline.com/health/practicals

Course Description (Histopathology 2)

1. Course Title		Histopathology 2	
2. Course Code		02013201	
3. Semester/Year		2025-2026	
4. Description Preparation Date		2025/9/5	
5. Available Attendance Form		Lectures and laboratory sessions	
6. No. of Hours (Total)		30 hours (theory) 30 hours (practical)	
7. No. of Credits (Total)		3 units for the second semester	
8. Course Administrator Name		Dr.Hamed Harata Lec.Rafal Yousif Salman	
9. E-mail		Rafal.y@albayan.edu.iq	
10. Course Objectives			
Knowledge	A1	Provides the students with the essential basic scientific knowledge required to understand in integrated manner the structure and functional deviations from the normal in the various body systems and organs.	
	A2	Familiarize students with the basic pathology.	
	A3	Understand the etiology, pathogenesis and pathologic manifestation of disease process.	
	A4	Provide the students with the skills of differentiation between normal and abnormal tissues.	
Skills	B1	Describe and contrast neoplasm and cysts.	
	B2	Identify pathological changes by the light microscope	
	B3	Describe the pathologic picture of a disorder based on gross or microscopic morphology	
	B4	Demonstrate the ability to identify the macroscopic and microscopic criteria of the altered structure and hence function of the tissue in disease process	
Values	C1	Explain terms and divisions in general pathology.	
	C2	Demonstrate an understanding of the etiology and pathogenesis of disease & it's effects on the body	
	C3	Explain the salient principles of inflammation and repair	
	C4	Describe circulatory dysfunction	
11. Teaching and Learning Strategies			
1.	Presentations	4.	E-learning
2.	Panel discussions	5.	
3.	Practical exercises	6.	

12. The Structure of the Course

Week	Hours	RLOs	Topic/Subject Name	Learning Method	Evaluation Method
1	2th+2p	The student's knowledge of the scientific subject and the realization of scientific, mental and professional skills	Factors influencing rate impregnation, Agitation, heat, viscosity, ultrasonies, vacuum	Data show and white board	Quiz and homework
2	2th+2p	The student's knowledge of the scientific subject and the realization of scientific, mental and professional skills	Microtomy and paraffin section	Data show and white board	Quiz and homework
3	2th+2p	The student's knowledge of the scientific subject and the realization of scientific, mental and professional skills	Staining of tissue section Hematoxylin, eosin, connective tissue, stains	Data show and white board	Quiz and homework
4	2th+2p	The student's knowledge of the scientific subject and the realization of scientific, mental and professional skills	Special stains for proteine, carbohydrate, lipid, mucosubstance, pigment, minerals, apud cell and microorganisms	Data show and white board	Quiz and homework
5	2th+2p	The student's knowledge of the scientific subject and the realization of scientific, mental and professional skills	Preparation of bone sections	Data show and white board	Quiz and homework
6	2th+2p	The student's knowledge of the scientific subject and the realization of scientific, mental and professional skills	Demonstration of cytoplasm granules organells and social tissue	Data show and white board	Quiz and homework
7	2th+2p	The student's knowledge of the scientific subject and the realization of scientific, mental and professional skills	Neuropathological techniques	Data show and white board	Quiz and homework
8	2th+2p	The student's knowledge of the scientific subject and the realization of scientific, mental and professional skills	Enzyme histochemistry and aplicaton	Data show and white board	Quiz and homework

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9	2th+2p	The student's knowledge of the scientific subject and the realization of scientific, mental and professional skills	Immunohistochemistry and application	Data show and white board	Quiz and homework
10	2th+2p	The student's knowledge of the scientific subject and the realization of scientific, mental and professional skills	Resin embedding media	Data show and white board	Quiz and homework
11	2th+2p	The student's knowledge of the scientific subject and the realization of scientific, mental and professional skills	Electron microscopy techniques	Data show and white board	Quiz and homework
12	2th+2p	The student's knowledge of the scientific subject and the realization of scientific, mental and professional skills	Electron microscopy -Diagnostic uses	Data show and white board	Quiz and homework
13	2th+2p	The student's knowledge of the scientific subject and the realization of scientific, mental and professional skills	Histometry and diagnostic uses	Data show and white board	Quiz and homework
14	2th+2p	The student's knowledge of the scientific subject and the realization of scientific, mental and professional skills	Immunofluorescence Techniques	Data show and white board	Quiz and homework
15	2th+2p	The student's knowledge of the scientific subject and the realization of scientific, mental and professional skills	Museum and other demonstration techniques	Data show and white board	Quiz and homework

13. Course Evaluation

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

14. Learning & Teaching Resources

Required textbooks (curricular if any)	Robins Basic Pathology
Main References (sources)	
Recommended Books & References (Scientific Journals, Reports ...)	
Websites or Electronic References	

Course Description (Hematology2)

1. Course Title		Hematology2	
2. Course Code		02013202	
3. Semester/Year		2025-2026	
4. Description Preparation Date		7/9/2025	
5. Available Attendance Form		Theoretical + Practical	
6. No. of Hours (Total)		(30 Theoretical + 30 Practical)	
7. No. of Credits (Total)		3 units for the first semester	
8. Course Administrator Name		Fadaa Abdullah Mahmoud	
9. E-mail		fathaa.m@albayan.edu.iq	
10. Course Objectives			
Knowledge	A1	Giving the student expanded and recent idea about hematology and normal and abnormal ranges of blood components in addition to the changes that occur in infection with different diseases.	
	A2		
	A3		
	A4		
Skills	B1	Giving the student a good idea about important diagnostic characteristics of each hematological disease.	
	B2		
	B3		
	B4		
Values	C1	Setting a good information basis to enable the student to follow up with medical society with they dealing in hospitals.	
	C2		
	C3		
	C4		
11. Teaching and Learning Strategies			
1.	Practical doing of hematological tests	4.	
2.		5.	
3.		6.	

12. The Structure of the Course

Week	Hours	RLOs	Practical/Subject Name	Learning Method	Evaluation Method
1	2th+2p	Learning of blood collection	Total leukocyte count	Theoretical + Practical	Quiz
2	2th+2p	Distinguish between Anticoagulant types	Absolute leukocyte count	Theoretical + Practical	Quiz
3	2th+2p	Learning the normal values	Differential counting of leukocytes	Theoretical + Practical	Quiz
4	2th+2p	Hb testing and anemia diagnosis	Counting eosinophilic cells	Theoretical + Practical	Quiz
5	2th+2p	Blood viscosity testing	Blood film for leukemia	Theoretical + Practical	Quiz
6	2th+2p	Knowing RBCs Count diagnose pathological conditions	Special dye for leukemia	Theoretical + Practical	Quiz
7	2th+2p	Testing of RBCs indices	Special dye for leukemia	Theoretical + Practical	Quiz
8	2th+2p	Blood Picture microscopically	Platelet count	Theoretical + Practical	Quiz
9	2th+2p	Blood Picture microscopically	Measurement of bleeding time	Theoretical + Practical	Quiz
10	2th+2p	Learning shape and size of RBCs	Measurement of coagulation time	Theoretical + Practical	Quiz
11	2th+2p	Distinguishing	Measurement of prothrombin	Theoretical +	Quiz

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		inclusion bodies inside RBCs		Practical	
12	2th+2p	RBCs testing	Measurement of partial thromboplastin time	Theoretical + Practical	Quiz
13	2th+2p	Diagnosis of sikle cell anemia	Detection of a deficiency of coagulation facto	Theoretical + Practical	Quiz
14	2th+2p	Diagnosis of some pathological conditions	Qualitative control of laboratories	Theoretical + Practical	Quiz
15	2th+2p	Study the previous subjects	Review of materials	Theoretical + Practical	Quiz

13. Course Evaluation

Daily preparation 10 Monthly exams 10 Monthly exams 20 Oral exams 10
Monthly exams 50

14. Learning & Teaching Resources

Required textbooks
(curricular if any)

Hematology Science book

Main References
(sources)

Recommended Books & References
(Scientific Journals, Reports ...)

Websites or Electronic References

Course Description (Medical Mycology)

1. Course Title		Medical Mycology	
2. Course Code		02013203	
3. Semester/Year		2025-2026	
4. Description Preparation Date		4/9/2025	
5. Available Attendance Form		Lectures(Theory &Practical)	
6. No. of Hours (Total)		60 (30 Theoretical + 30 Practical)	
7. No. of Credits (Total)		4 units for the first semester	
8. Course Administrator Name		Dr.Ghufran.h.Abed	
9. E-mail		Ghufran.h@albayan.edu.iq	
10. Course Objectives			
Knowledge	A1	Make the student known to medical viruses and fungi, and the causes of it diseases	
	A2		
	A3		
	A4		
Skills	B1	Make the student how diagnose the viral and fungal diseases and how to treatment	
	B2		
	B3		
	B4		
Values	C1	The student must have full knowledge of viral and fungal diseases and how to deal with them.	
	C2		
	C3		
	C4		
11. Teaching and Learning Strategies			
1.	Intellectual or mental education	4.	
2.	Collaborative co-education	5.	
3.	Blended learning	6.	

Week	Hours		RLOs	Topic/Subject Name	Learning Method	Evaluation Method
	Theory	Practical				
1	2	2	Theoretical: introduction to medical epidemiological mycology	Top of Mycology	Method of giving lectures Discussion method Cooperative education	Oral &written exam.
			Practical: types of fungi and how to diagr them			
2	2	2	Theoretical: morphological qualities reproduction of fungi	Reproduction of fungi	Method of giving lectures Discussion method Cooperative education	Oral &written exam.
			Practical: types of reproduction of fungi			
3	2	2	My theory: tinea surface fungi and black fung	Superficial mycosis	Method of giving lectures Discussion method Cooperative education	Oral &written exam.
			Practical: tests and tinctures used for fungi			
4	2	2	Theoretical: Trychphytonspp, Microsporiums	Dermatophytes	Method of giving lectures Discussion method Cooperative education	Oral &written exam.
			andEpidermophytonspp			
5	2	2	Practical: continuous	Subcutaneous fungus	Method of giving lectures Discussion method Cooperative education	Oral &written exam.
			Theoretical Trychphytonspp, Microsporiums			
6	2	2	andEpidermophytonspp	Filamentous fungi	Method of giving lectures Discussion method Cooperative education	Oral &written exam.
			Practical: subcutaneous mycosis			
7	2	2	Theoretical: infection due to filamentous f aspergillosis	Yeasts	Method of giving lectures Discussion method Cooperative education	Oral &written exam.
			Practical: types of tinea			
8	2	2	Theoretical: infection due to fungi ye candidiasis	Opportunistic fungi	Method of giving lectures Discussion method Cooperative education	Oral &written exam.
			Practical: continuous			
9	2	2	My theory: penicillium opportunistic fungus	Antifungal agents	Method of giving lectures	Oral &written exam.

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			Practical: continuous		Discussion method Cooperative education	
10	2	2	Theoretical: antifungal	Systemic mycosis Top of Mycology	Method of giving lectures Discussion method Cooperative education	Oral & written exam.
			Practical: Histoplasmosis Paracoccidiomycosis			
11	2	2	Theoretical: Systemic mycosis: Coccidiomycosis and Blastomycosis	Reproduction of fungi	Method of giving lectures Discussion method Cooperative education	Oral & written exam.
			Practical: antifungal agents and allergy testing			
12	2	2	Theoretical: introduction to medical epidemiological mycology	Superficial mycosis	Method of giving lectures Discussion method Cooperative education	Oral & written exam.
			Practical: types of fungi and how to diagnose them			
13	2	2	Theoretical: morphological qualities and reproduction of fungi	Dermatophytes	Method of giving lectures Discussion method Cooperative education	Oral & written exam.
			Practical: types of reproduction of fungi			
14	2	2	Theoretical: tinea surface fungi and black fungus	Subcutaneous fungus	Method of giving lectures Discussion method Cooperative education	Oral & written exam.
			Practical: tests and tinctures used for fungi			
15	2	2	Theoretical: Trychophyton spp, Microsporium spp		Method of giving lectures Discussion method Cooperative education	Oral & written exam.
			and Epidermophyton spp			
			Antifungal agents (Sensitivity tests). Mycotoxins isolation			

14. Course Evaluation

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

15. Learning & Teaching Resources

Required textbooks (curricular if any)	Jawetz, R., J.L. Melnick, and E.A. Adelberg,(2019). Review of Medical
Main References (sources)	Review of Medical Microbiology and Immunology. Warren Levinson, 12th May 2012. Mc Graw-Hill (Lange). Microbiology, Twenty-Eighth Edition Edition,. Christopher J. Burrell, ... Frederick A. Murphy, in Fenner and White's Medical Virology (Fifth Edition), 2017
Recommended Books & References (Scientific Journals, Reports ...)	
Websites or Electronic References	https://hmt.mtu.edu.iq/e-learning/

Course Description (Metabolic disorders)

1. Course Title		Metabolic disorders
2. Course Code		02013204
3. Semester/Year		2025-2026
4. Description Preparation Date		2/9/2025
5. Available Attendance Form		Attendance in the classroom in addition to e-learning
6. No. of Hours (Total)		(30 Theoretical + 30 Practical)
7. No. of Credits (Total)		4 units for the first semester
8. Course Administrator Name		Prof.Dr. Waleed Hameed Yousif
9. E-mail		Waleed.h@albayan.edu.iq
10. Course Objectives		
Knowledge	A1	Introducing the student to the basic principles related to pathologic analyzes regarding metabolism and Endocrinology
	A2	Introducing the student to the theoretical and practical foundations laboratory tests in metabolic disorders and endocrinology of various diseases
	A3	Special emphasis on the examinations of some organs, which are related to the compounds of Endocrinology
	A4	Introducing important experiments with modern technologies laboratory diagnostics to give the student a new opportunity to get acquainted with qualitative examinations
Skills	B1	The student should be able to acquire basic knowledge and skills Endocrinology and disorders
	B2	Teaching the student how to become able to think logically, analyze, and employ the prescribed curriculum vocabulary.
	B3	Developing the student's mental and personal ability in the specialty an important part of his field of specialization
	B4	Providing the student with communication skills and using modern educational technologies effectively.
Values	C1	The student should be able to work collectively, and work individually make clinical endocrinological analyzes
	C2	The student should be able to use information technology to search for information

	C3	The student should be able to communicate with the professor and colleagues
	C4	The student must be able to rely on himself
11. Teaching and Learning Strategies		
1.	Providing an appropriate educational climate for logical thinking through continuous guidance of students during lectures	4. Use the display screen to lecture and the blackboard.
2.	Opening the door for open and direct discussions with students	5. Visit the library
3.	Follow a cooperative learning strategy	6. Directing the student to websites to benefit from them

12. The Structure of the Course

Week	Hours	RLOs	Topic/Subject Name	Learning Method	Evaluation Method
1,2	4	The student should be aware of information provided to him and the extent of its applicability to reality	WATER HOMEOSTASIS	Gain information about the mechanism of water balance in the human body	Oral questions
3,4	4	The student should be aware of information provided to him and the extent of its applicability to reality	MINERAL METABOLISM: - Electrolytes: Na, K, Cl, Mg, Ca - Trace elements: Fe, Cu, Zn, Mn, F	Knowledge of the metabolism of some minerals	solving equations
5,6	4	The student should be aware of information provided to him and the extent of its applicability to reality	BLOOD GASES: - Acid - Base balance - Blood pH & Blood buffer	How to prepare acids and bases	solving equations
7,8	4	The student should be aware of information provided to him and the extent of its applicability to reality	Diabetes mellitus	Knowing the cause and types of diabetes	solving equations
9,10,11	6	The student should be aware of information provided to him and the extent of its applicability to reality	LIVER: - Physiology and role in metabolism - Bilirubin metabolism - Bile salts & gall stones - Liver function tests Disorders of the Liver: i) Jaundice & Neonatal Jaundice ii) Alcoholic Liver disease iii) Hepatitis iv) Cirrhosis v) Liver tumors	Identify tumors and diseases that affect them	Written exam
12,13	4	The student should be aware of information provided to him and the extent of its applicability to reality	KIDNEY: - Functions - Renal functions tests - Proteinuria - Renal failure (Acute:Chronic)	Learn about the kidney, functions, and the diseases that affect it	solving equations
14,15	4	The student should be aware of information provided to him and the extent of its applicability to reality	Disorder in lipid metabolism Cholesterol T.G, phospholipids lipoprotein	Knowledge of the types of blood plasma fats and their experiences	solving equations

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			Tests (lipid profile)		
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13. Course Evaluation

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

14. Learning & Teaching Resources

Required textbooks (curricular if any)	Peter Rae - Clinical Biochemistry Lecture Notes (2018, John Wiley & Sons Ltd)
Main References (sources)	William Clarke PhD (editor), Mark Marzinke (editor) - Contemporary Practice in Clinical Chemistry-Academic Press (2020)
Recommended Books & References (Scientific Journals, Reports ...)	Tietz Fundamentals of Clinical Chemistry and Molecular Diagnostics, 9th Edition
Websites or Electronic References	https://www.sciencedirect.com/ https://pubmed.ncbi.nlm.nih.gov/

Course Description (Medical Genetics2)

1. Course Title		Medical Genetics2	
2. Course Code		02013205	
3. Semester/Year		2025-2026	
4. Description Preparation Date		1/9/2025	
5. Available Attendance Form		Theoretical + Practical	
6. No. of Hours (Total)		(30) Theoretical+ (30) Practical	
7. No. of Credits (Total)		4 units for the second semester	
8. Course Administrator Name		Asst.Prof.Riad Abdulhussien Delool	
9. E-mail		Riad.delool@albayan.edu.iq	
10. Course Objectives			
Knowledge	A1	Knowledge of inheritance systems	
	A2	Studying the effect of mutations on genetic traits	
	A3	Chromosomal changes and their effects	
	A4	Environmental changes and their relationship to genetic traits	
Skills	B1	Identify the effect of genetic mutations	
	B2	Identify genetic traits and acquired traits	
	B3	Identify the inheritance of genetic diseases	
	B4	Identify the characteristics that are related to the sex of the organism	
Values	C1	Trying to differentiate between scientific studies and social factors	
	C2	Respecting religious traditions and social norms in genetic studies	
	C3	Trying to explain how genetic changes are transmitted between generations	
	C4	In-depth studies of the family tree and how genetic traits are transmitted	
11. Teaching and Learning Strategies			
1.	Attempting practical application of theoretical studies	4.	Many short-term scientific missions
2.	Continuously developing the curriculum	5.	More tests to develop students' level
3.	Continuous review of international educational systems	6.	Continuous interaction with other universities to identify differences in teaching methods

12. The Structure of the Course

Week	Hours	RLOs	Topic/Subject Name	Learning Method	Evaluation Method
1	2Th+2p	The student must be aware of information provided to him and extent of its application to reality	Mutagenic agents of all kinds	Theoretical study practical applications	Conduct quick exams
2	2Th+2p	The student must be aware of information provided to him and extent of its application to reality	Mutagenic agents of all kinds	Theoretical study practical applications	Conduct quick exams
3	2Th+2p	The student must be aware of information provided to him and extent of its application to reality	The relationship between genetics cancer	Theoretical study practical applications	Conduct quick exams
4	2Th+2p	The student must be aware of information provided to him and extent of its application to reality	The relationship between genetics cancer	Theoretical study practical applications	Conduct quick exams
5	2Th+2p	The student must be aware of information provided to him and extent of its application to reality	The relationship between genetics cancer	Theoretical study practical applications	Conduct quick exams
6	2Th+2p	The student must be aware of information provided to him and extent of its application to reality	The relationship between genetics cancer	Theoretical study practical applications	Conduct quick exams
7	2Th+2p	The student must be aware of information provided to him and extent of its application to reality	Family tree and how to benefit from genetic information	Theoretical study practical applications	Conduct quick exams
8	2Th+2p	The student must be aware of information provided to him and extent of its application to reality	Family tree and how to benefit from genetic information	Theoretical study practical applications	Conduct quick exams
9	2Th+2p	The student must be aware of information provided to him and extent of its application to reality	Family tree and how to benefit from genetic information	Theoretical study practical applications	Conduct quick exams
10	2Th+2p	The student must be aware of information provided to him and extent of its application to reality	Genetic counseling	Theoretical study practical applications	Conduct quick exams

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11	2Th+2p	The student must be aware of information provided to him and extent of its application to reality	Genetic counseling	Theoretical study practical applications	Conduct quick exams
12	2Th+2p	The student must be aware of information provided to him and extent of its application to reality	Genetic counseling	Theoretical study practical applications	Conduct quick exams
13	2Th+2p	The student must be aware of information provided to him and extent of its application to reality	Gene therapy, chemical and physical treatments	Theoretical study practical applications	Conduct quick exams
14	2Th+2p	The student must be aware of information provided to him and extent of its application to reality	Gene therapy, chemical and physical treatments	Theoretical study practical applications	Conduct quick exams
15	2Th+2p	The student must be aware of information provided to him and extent of its application to reality	Gene therapy, chemical and physical treatments	Theoretical study practical applications	Conduct quick exams

13. Course Evaluation

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

14. Learning & Teaching Resources

Required textbooks (curricular if any)	Basics of genetics
Main References (sources)	International scientific references
Recommended Books & References (Scientific Journals, Reports ...)	Specialized scientific journals and published scientific reports
Websites or Electronic References	Scientific references on the Internet, such as the (human genetics) website.

Course Description (Immunology 2)

1. Course Title		Immunology 2
2. Course Code		02013206
3. Semester/Year		2025-2026
4. Description Preparation Date		2/9/2025
5. Available Attendance Form		face to face learning
6. No. of Hours (Total)		(30 Theoretical +30 Practical)
7. No. of Credits (Total)		4 units for the second semester
8. Course Administrator Name		Hayder Ahmed Kadhim
9. E-mail		Hayder.a@albayan.edu.iq
10. Course Objectives		
Knowledge	A1	Knowledge and Understanding
	A2	Gaining experience in performing immunoassays
	A3	Gaining experience in the work of modern equipment
	A4	Dealing with various advanced laboratory analyzes
Skills	B1	Subject-specific skills
	B2	Training to use the equipment
	B3	making reports
	B4	Research work
Values	C1	Develop the student's ability to work with devices
	C2	Develop the student's ability to use modern laboratory equipment and techniques
	C3	Develop the student's ability to dialogue and debate

	C4	Develop the student's ability to research	
11.Teaching and Learning Strategies			
1.	The discussion	4.	Field visits to educational laboratories
2.	daily exams	5.	
3.	Directing students to some websites related to the scientific subject	6.	

12. The Structure of the Course

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Week	Hours	RLOs	Topic/Subject Name	Learning Method	Evaluation Method
1	2th+2p	Factors influencing rate of impregnation Agitation ,heat,viscosity,ultrasonies, vacuum	Factors influencing rate of impregnation Agitation ,heat, viscosity, ultrasonies, vacuum	theoretical & practical	Daily exam and direct questions
2	2th+2p	Microtomyandparaffin section	Microtomyandparaffin section	theoretical & practical	Daily exam and direct questions
3	2th+2p	Staining of tissue sections Hematoxylin ,eosin ,connective tissue ,stains	Staining of tissue sections Hematoxylin ,eosin ,connective tissue ,stains	theoretical & practical	Daily exam and direct questions
4	2th+2p	Special stains for proteine ,carbohydrates,lipid ,mucosubstance,pigments minerals ,apud cell and microorganisms	Special stains for proteine ,carbohydrates,lipid ,mucosubstance,pigments minerals ,apud cell and microorganisms	theoretical & practical	Daily exam and direct questions
5	2th+2p	Preparationof bone sections	Preparationof bone sections	theoretical & practical	Daily exam and direct questions
6	2th+2p	Demonstration of cytoplasmic granules organells and secial tissue	Demonstration of cytoplasmic granules organells and secial tissue	theoretical & practical	Daily exam and direct questions
7	2th+2p	Neuropatholgical tech niques	Neuropatholgical tech niques	theoretical & practical	Daily exam and direct questions
8	2th+2p	Enzyme histochemistry and aplicaton	Enzyme histochemistry and aplicaton	theoretical & practical	Daily exam and direct questions
9	2th+2p	Immunohistochemistry and application	Immunohistochemistry and application	theoretical & practical	Daily exam and direct questions
10	2th+2p	Resin embedding media	Resin embedding media	theoretical & practical	Daily exam and direct questions
11	2th+2p	Electron microscopy –techniques	Electron microscopy –techniques	theoretical & practical	Daily exam and direct questions
12	2th+2p	Electron microscopy –Diagnostic uses	Electron microscopy –Diagnostic uses	theoretical & practical	Daily exam and direct questions
13	2th+2p	Histometry and diagnostic uses		theoretical & practical	Daily exam and direct questions
14	2th+2p	Immunofluoresence Techniques		theoretical & practical	Daily exam and direct questions
15	2th+2p	Museum and other demonstration techniques		theoretical & practical	Daily exam and direct questions

13. Course Evaluation

The score out of 100 is based on the tasks assigned to the student, such as daily preparation, daily, oral, monthly, written exams, reports, etc.

14. Learning & Teaching Resources

Required textbooks (curricular if any)	Kuby IMMUNOLOGY. Sixth Edition
Main References (sources)	Kuby IMMUNOLOGY. Sixth Edition
Recommended Books & References (Scientific Journals, Reports ...)	Lectures , field studies
Websites or Electronic References	Ncbi Research gate

Course Description (Computer applications2)

1. Course Title		Computer applications2	
2. Course Code		02013207	
3. Semester/Year		2025-2026	
4. Description Preparation Date		2025/9/6	
5. Available Attendance Form		Face to face attendance	
6. No. of Hours (Total)		(30 Theoretical + 30 Practical)	
7. No. of Credits (Total)		2 for the second semester	
8. Course Administrator Name		Asst. Lect. Mustafa Mohammed Hammoodi	
9. E-mail		tuhafi.1989@gmail.com	
10. Course Objectives			
Knowledge	A1	The student gets to know the Excel program -	
	A2	The student learns how to deal with the jobs raised by this program -	
	A3	The student learns about the most important mathematical operations that can be applied in this program	
	A4	The student learns how to copy data from multiple cells and the paste options available	
Skills	B1	The student acquires the skill of dealing with the most important functions provided by the Excel progra	
	B2	The student acquires the skill of controlling the display of cells and changing their style and format through tools -	
	B3	The student acquires the skill of descriptive analysis of data using the SPSS program	
	B4	The student acquires the skill of using ready-made functions provided by the Excel program to carry operations -	
Values	C1	Learn how to open calculator programs and deal with files, including storing, opening, editing, and loc data	
	C2	Learn how to use Excel & Power Point. Learn how to use the famous statistical program SPSS	
	C3	Learn how to open calculator programs and deal with files, including storing, opening, editing, and loc data	
	C4	The most important components of a computer and how to deal with them	
11. Teaching and Learning Strategies			
1.	Through lecture, clarification methods, giving electronic assignments, and interacting within the electronic platform		4. Short exams, quizzes, quarterly and annual exams

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2.	Theoretical and practical lectures	5.	Apply, implement, and then evaluate the implementation
3.	- Applying the theoretical material in a practical manner electronically by using Google Sheet	6.	Short exams, quizzes, quarterly and annual exams

12. The Structure of the Course

Week	Hours	RLOs	Topic/Subject Name	Learning Method	Evaluation Method
1-10	30	spss	The statistical program (spss), the concept of the program, its operation, and the steps of data analysis - Identify the components of the main screen, enter data, save and retrieve data, types of data (direct or calculated) -Sort and exchange data, determine statistical procedure through the statistical topics that the student addresses in statistical lessons. -How to insert a variable or case, merge files, analytical analysis, descriptive statistics Identify the statistical summary of the given data and benefit from the data it provides in exploring data or reports for columns or rows - Performing comparison of averages, comparison between variables or regression - Conduct some non-parametric tests, such as chi square. -Applications of quality control panels. -Dealing with charts, such as	Lecture and other explanation	Quiz and exam
10-15	15	Power point	Power Point program: the concept of the program and its benefits, its operation, components of the main screen, the concept of presentations and its benefits. - Build a new presentation through templates provided by the program, or directly, store the presentation, perform presentation, make modifications, and save the changes. -Planning the structure of the presentation, inserting a new slide, whether it contains text or an image, entering notes, entering	Lecture and other explanation	Quiz and exam

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			main titles. -headers) or (footers) of the slide -Learn how to add drawings using available drawing tools, modify the text, control its shape and layout, change plan, control the colors and background of the slide. - Adding a clip chart and ways to control such as zooming in, zooming out or cropping, adding natural images and tools to control them, adding sound effects to slides.		
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13. Course Evaluation

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

14. Learning & Teaching Resources

Required textbooks (curricular if any)	There is no approved textbook for attending lectures and taking notes Illustrations and lectures prepared for this purpose
Main References (sources)	1- John Walkenbach, " Microsoft Excel 2016 BIBLE", John Wily & sons, 2015. 2- Curtis Fry, " Microsoft Excel 2016 step by step", Microsoft press,
Recommended Books & References (Scientific Journals, Reports ...)	
Websites or Electronic References	https://courses.corporatefinanceinstitute.com/courses/free-excel-crash-course-for-finance?gclid=CjwKCAjwndCKBhAkEiwAgSDKQVbWDMZ3L4p6byNsvx9SXq00QovfoXfkBQdC9FkdOQOdV7pn3FdRlBoCufwQAvD_BwE

Course Description (Analytical biostatistics)

1. Course Title		Analytical biostatistics
2. Course Code		02013208
3. Semester/Year		2025-2026
4. Description Preparation Date		2025/9/6
5. Available Attendance Form		Attendance
6. No. of Hours (Total)		(30 Theoretical + 30 Practical)
7. No. of Credits (Total)		2
8. Course Administrator Name		Assist. Prof. Dr. Arshed Hameed Yaseen
9. E-mail		Arshed.h87@uosamarra.edu.iq
10. Course Objectives		
Knowledge	A1	To use statistical techniques or methods to collect data and information from different sources and summarize in different ways, classify data into different classes and groups, analyze data by different statistical methods, and interpret the results to make decisions.
	A2	To use statistical tools or methods to measure the chance or likelihood scientifically that a particular event will occur.
	A3	To have the fundamental concepts of probability.
	A4	To use statistical techniques or methods to collect data in different classes and groups, analyze data by different statistical methods, and interpret the results to make decisions.
Skills	B1	Identify the meaning of Statistics, Apply Summation Notation and understand its properties.
	B2	Describe the Population and Sample.
	B3	Use graphical methods.
	B4	Identify the measures of tendency, Identify the measures of variation, Measure the relationship between two variables, and Identify the types of probability.
Values	C1	
	C2	
	C3	
	C4	

11. Teaching and Learning Strategies

1.

The main strategy that will be adopted in delivering this module is to encourage student's participation in the exercises, while at the same time refining and expanding their critical thinking skills. This will be achieved through classes, interactive tutorials, and by considering types of simple experiments involving some sampling activities that are interesting to the students like some simple and clear exercises. Different teaching techniques will be used to reach the objectives of this course. Firstly: The English language will be used during the lecture. Secondly: There will be classroom discussion and the lecturer will give enough time to solve, analyze, and evaluate problem sets throughout the semester. Thirdly: Worksheets will be designed to give students a chance to practice several aspects of the course in the classroom.

12. The Structure of the Course

Week	Hours	RLOs	Topic/Subject Name	Learning Method	Evaluation Method
1	2th+2p	Definitions: Statistics, Population Sample, Elements, Variables Data Sources: Types of Data:	Introduction to biostatistics	Data show projector	Homework exercise
2	2th+2p	Displaying grouped Frequency distribution	Strategies for Understanding Meaning of Data	Data show projector	Homework exercise
3	2th+2p	The Histogram The Frequency Polygon	Graphs	Data show projector	Homework exercise
4	2th+2p	Measures of central of tendency or measures of Location: 1-The Mean, Examples, Exercises 2-The Median, Examples, and Exercises. 3-The Mode, Examples, Exercises	Measures of Central Tendency	Data show projector	Homework exercise
5	2th+2p	Measures of Dispersion: 1-The Range 2-The Sample Variance (S ²): a- Examples, b-Exercises 3-The Standard Deviation (S): a- Examples, b-Exercises 4-The Coefficient of Variation (C.V.), Examples, Exercises.	Measures of Dispersion (Measures of Variation)	Data show projector	Homework exercise
6	2th+2p		Midterm exam		

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7	2th+2p	Box plot: display of distribution Coefficient of Correlation Scatter plot Regression	Coefficient of Correlation	Data show projector	Homework exercise
8	2th+2p	Probability Experiments, Outcomes, Sample Space, Events Probability Roles	Probability	Data show projector	Homework exercise
9	2th+2p	Combination and binomial probability distribution	Binomial probability	Data show projector	Homework exercise
10	2th+2p	Test and hypothesis (t-test, z-score), application in R	Test and hypothesis	Data show projector	Homework exercise
11			Final exam		

13. Course Evaluation

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

14. Learning & Teaching Resources

Required textbooks
(curricular if any)

1. Statistics for Business and Economics- 2000, Anderson, Sweeny
2. Schaum's Outline of Theory and Problems of Probability, Random Variables, and Random Processes, Hwei P. Hsu, McGraw-Hill, 1997.

Schaum's Easy Outlines Probability and Statistics, Murray R. Spiegel, McGraw-Hill, 2001.

Main References
(sources)

Recommended Books & References
(Scientific Journals, Reports ...)

1. Statistics for Management and Economics 2003 –Gerald Keller & Brian Warrak.

Statistics for Economics, Accounting, and Business Studies, Michael Barrow.

Websites or Electronic References

Course Description (Clinical Immunology1)

1. Course Title		Clinical Immunology1
2. Course Code		02014101
3. Semester/Year		2026-2025
4. Description Preparation Date		2025/8/29
5. Available Attendance Form		face to face learning
6. No. of Hours (Total)		(30 Theoretical + 30 Practical)
7. No. of Credits (Total)		4
8. Course Administrator Name		Hayder Ahmed Kadhim
9. E-mail		Hayder.a@albayan.edu.iq
10. Course Objectives		
Knowledge	A1	Knowledge and Understanding
	A2	Gaining experience in performing immunoassays
	A3	Gaining experience in the work of modern equipment
	A4	Dealing with various advanced laboratory analyzers
Skills	B1	Subject-specific skills
	B2	Training to use the equipment
	B3	making reports
	B4	Research work
Values	C1	Develop the student's ability to work with devices
	C2	Develop the student's ability to use modern laboratory equipment and techniques
	C3	Develop the student's ability to dialogue and debate

	C4	Develop the student's ability to research		
11. Teaching and Learning Strategies				
1.	The discussion		4.	Field visits to educational laboratories
2.	daily exams		5.	
3.	Directing students to some websites related to the scientific subject		6.	

12. The Structure of the Course

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Week	Hours	RLOs	Topic/Subject Name	Learning Method	Evaluation Method
1	2th +2p	autoimmune diseases Rheumatoid arthritis	Rheumatoid Arthritis	theoretical & practical	Daily exam and direct questions
2	2th +2p	lupus erythematosus Its causes, origin and treatment	Systemic Lupus Erythmatosus	theoretical & practical	Daily exam and direct questions
3	2th +2p	Learn about spondylitis	Ankylosing Spondylitis	theoretical & practical	Daily exam and direct questions
4	2th +2p	Sjogren's Syndrome	Sjogren's Syndrome	theoretical & practical	Daily exam and direct questions
5	2th +2p	bread allergy	Gluten sensitive entero-pathy	theoretical & practical	Daily exam and direct questions
6	2th +2p	Anemia	Pernicious Anemia	theoretical & practical	Daily exam and direct questions
7	2th +2p	Diabetes mellitus	Diabetes mellitus	theoretical & practical	Daily exam and direct questions
8	2th +2p	T Lymphocytes	T Lymphocyte mediated Renal Injury	theoretical & practical	Daily exam and direct questions
9	2th +2p	Ulcerative Colitis	Ulcerative Colitis	theoretical & practical	Daily exam and direct questions
10	2th +2p	Crohn's Disease	Crohn's Disease	theoretical & practical	Daily exam and direct questions
11	2th +2p	Mucosa-associated lymphoid tissue	Mucosa-associated lymphoid tissue lymphoma and Helicobacter pylori associated diseases	theoretical & practical	Daily exam and direct questions
12	2th +2p			theoretical & practical	Daily exam and direct questions
13	2th +2p			theoretical & practical	Daily exam and direct questions
14	2th +2p			theoretical & practical	Daily exam and direct questions
15	2th +2p			theoretical & practical	Daily exam and direct questions

13. Course Evaluation

The score out of 100 is based on the tasks assigned to the student, such as daily preparation, daily, oral, monthly, written exams, reports, etc.

14. Learning & Teaching Resources

Required textbooks (curricular if any)	Clinical immunology,2007 Review of medical microbiology and immunology, 2015
Main References (sources)	Clinical immunology,2007 Review of medical microbiology and immunology, 2015
Recommended Books & References (Scientific Journals, Reports ...)	Kuby IMMUNOLOGY. Sixth Edition
Websites or Electronic References	Ncbi Research gate

Course Description (Diagnostic Bacteriology1)

1. Course Title		Diagnostic Bacteriology 1	
2. Course Code		02014102	
3. Semester/Year		2026-2025	
4. Description Preparation Date		2/9/2025	
5. Available Attendance Form		Lectures(Theory &Practical)	
6. No. of Hours (Total)		(30Theoretical + 30 Practical)	
7. No. of Credits (Total)		4	
8. Course Administrator Name		Dr.Ghufran.h.Abed	
9. E-mail		Ghufran.h@albayan.edu.iq	
10. Course Objectives			
Knowledge	A1	Make the student known to medical diagnostic bacteriology, and the causes of it diseases.	
	A2		
	A3		
	A4		
Skills	B1	Make the student how to diagnose the bacterial diseases and how to treatments.	
	B2		
	B3		
	B4		
Values	C1	The student must have full knowledge of viral and fungal diseases and how to deal with them.	
	C2		
	C3		
	C4		
11. Teaching and Learning Strategies			
1.	Intellectual or mental education	4.	
2.	Collaborative co-education	5.	
3.	Blended learning	6.	

Week	Hours		RLOs	Topic/Subject Name	Learning Method	Evaluation Method
	Theory					
1	2th+2p	Diagnostic :Microbiology purpose and philosophy	Diagnostic Microbiology: purpose and philosophy	Method of giving lectures Discussion method Cooperative education	Oral &written exam.	
2	2th+2p	General safety considerations Biohazards and practices specific to microbiology in general	Laboratorysafety	Method of giving lectures Discussion method Cooperative education	Oral &written exam.	
3	2th+2p	Managing the clinicalmicrobiology laboratory effective patient care in acos t	Managing clinicalmicrobiology laboratoryeffective patient car	Method of giving lectures Discussion method Cooperative education	Oral &written exam.	
4	2th+2p	Selection, collection, and transport of specimens for microbiological examination	Selection, collection, and transport of specimens for microbiological examination	Method of giving lectures Discussion method Cooperative education	Oral &written exam.	
5	2th+2p	-Optical methods for laboratory diagnosis of infectious diseases	Examination of fresh material	Method of giving lectures Discussion method Cooperative education	Oral &written exam.	
6	2th+2p	Preparation andcharacteristics of certainfrequently used media	-Cultivation and isolation of viable	Method of giving lectures Discussion method Cooperative education	Oral &written exam.	
7	2th+2p	Microbiologic al methods for identification of microorganisms	Basic approaches to identification of pathogens	Method of giving lectures Discussion method Cooperative education	Oral &written exam.	
8	2th+2p	Rapid biochemical tests	API	Method of giving lectures	Oral &written exam.	

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				Discussion method Cooperative education	
9	2th+2p	Nontraditional methods for identification of pathogens or their products	Particle agglutination, ELISA, PCR,etc.	Method of giving lectures Discussion method Cooperative education	Oral & written exam.
10	2th+2p	-Antibiotic susceptibility tests	MIC	Method of giving lectures Discussion method Cooperative education	Oral & written exam.
11	2th+2p	Methods for identification of etiological agents of infectious disease	Staphylococci - Streptococci -Neisseria - Enterobacteriaceae - Pseudomonas -Other bacteria	Method of giving lectures Discussion method Cooperative education	Oral & written exam.
12	2th+2p	Enterobacteriaceae -Pseudomonas - Other bacteria	Enterobacteriaceae	Method of giving lectures Discussion method Cooperative education	Oral & written exam.
13	2th+2p	Diagnosis by organ system Blood stream infections	General considerations	Method of giving lectures Discussion method Cooperative education	Oral & written exam.
14	2th+2p	continuous	General considerations	Method of giving lectures Discussion method Cooperative education	Oral & written exam.
15	2th+2p	Meningitis and other infections of the central nervous system	General considerations	Method of giving lectures Discussion method Cooperative education	Oral & written exam.

14. Course Evaluation

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

15. Learning & Teaching Resources

Required textbooks (curricular if any)	Jawetz, R., J.L. Melnick, and E.A. Adelberg,(2019). Review of Medical
Main References (sources)	Review of Medical Microbiology and Immunology. Warren Levinson, 12th May 2012. Mc Graw-Hill (Lange). Microbiology, Twenty-Eighth Edition Edition,. Christopher J. Burrell, ... Frederick A. Murphy, in Fenner and White's Medical Virology (Fifth Edition), 2017
Recommended Books & References (Scientific Journals, Reports ...)	
Websites or Electronic References	https://hmt.mtu.edu.iq/e-learning/

Course Description (Clinical Enzymology)

1. Course Title		Clinical Enzymology
2. Course Code		02014103
3. Semester/Year		2026-2025
4. Description Preparation Date		2025/9/10
5. Available Attendance Form		Official attendance time (morning and evening)
6. No. of Hours (Total)		30 hours for the theoretical aspect and 30 hours for the practical aspect
7. No. of Credits (Total)		4 units
8. Course Administrator Name		Prof.Dr.Waleed Hameed Yousif
9. E-mail		
10. Course Objectives		
Knowledge	A1	Enzymes are biological catalysts They speed up biochemical reactions by lowering the activation energy, allowing life-sustaining processes to occur rapidly and efficiently.
	A2	Enzyme specificity Enzymes are highly specific for their substrates due to the precise shape and chemical properties of their active sites ("lock-and-key" and "induced fit" models).
	A3	Factors affecting enzyme activity Temperature, pH, substrate concentration, enzyme concentration, and inhibitors/activators can significantly influence enzyme reaction rates.
	A4	Enzyme regulation and kinetics Cells control enzyme activity through mechanisms such as allosteric regulation, feedback inhibition, covalent modification, and changes in enzyme synthesis; enzyme kinetics (e.g., Michaelis–Menten) help quantify reaction rates and affinities.
Skills	B1	Scientific reports
	B2	Daily exams
	B3	Monthly tests
	B4	Practical examinations
Values	C1	Participation in the classroom
	C2	Provide activities
	C3	Semester and final tests and activities
	C4	Self-learning, discussion panels
11. Teaching and Learning Strategies		
1.	Active participation in the classroom is evidence of the	4. Developing the student's ability to deal with multiple media.

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	student's commitment and responsibility		
2.	Adherence to the specified deadline for submitting assignments and research.	5.	Active participation in the classroom is evidence of the student's commitment and responsibility
3.	Semester and final exams express commitment and cognitive and skill achievement.	6.	Developing the student's ability to deal with technical means

12. The Structure of the Course

Week	Hours	RLOs	Topic/Subject Name	Learning Method	Evaluation Method
1-2	2 theory 2 practi.	The way out in theory The way out in practice	Definition of enzyme	presence	Daily, monthly and annual written exam
3-4	2 theory 2 practi.	The way out in theory The way out in practice	Mechanism of enzyme	presence	Daily, monthly and annual written exam
5-6	2 theory 2 practi.	The way out in theory The way out in practice	Active site, substrate binding site	presence	Daily, monthly and annual written exam
7	2 theory 2 practi.	The way out in theory The way out in practice	classification	presence	Daily, monthly and annual written exam
8	2 theory 2 practi.	The way out in theory The way out in practice	Factors effecting enzymes	presence	Daily, monthly and annual written exam
9	2 theory 2 practi.	The way out in theory The way out in practice	Enzymes of clinical significance	presence	Daily, monthly and annual written exam
10	2 theory 2 practi.	The way out in theory The way out in practice	Alanine aminotransferase, Acid phosphatase	presence	Daily, monthly and annual written exam
11	2 theory 2 practi.	The way out in theory The way out in practice	Glutamyltransferrase, amylase Lipase glucose-6-phosphate Dehydrogenase	presence	Daily, monthly and annual written exam
12	2 theory 2 practi.	The way out in theory The way out in practice	Drug-metabolizing enzymes	presence	Daily, monthly and annual written exam
13-14	2 theory 2 practi.	The way out in theory The way out in practice	Diadnostic enzymology	presence	Daily, monthly and annual written exam

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15	2 theory 2 practi.	The way out in theory The way out in practice	exam	presence	Daily, monthly and annual written exam
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13. Course Evaluation

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

14. Learning & Teaching Resources

Required textbooks (curricular if any)	Clinical Enzymology principal book
Main References (sources)	Articles
Recommended Books & References (Scientific Journals, Reports ...)	Many papers about blood transfusion
Websites or Electronic References	Wikipedia, research gate, google scholar, and many

Course Description (Diagnostic Parasitology1)

1. Course Title		Diagnostic Parasitology1	
2. Course Code		02014104	
3. Semester/Year		2026-2025	
4. Description Preparation Date		6/9/2025	
5. Available Attendance Form		In-person lecture+ online	
6. No. of Hours (Total)		(30 Theoretical + 30 Practical)	
7. No. of Credits (Total)		4	
8. Course Administrator Name		Dr. safa tawfeeq whqeeb	
9. E-mail		safa.tawfeeq@albaya.edu.iq	
10. Course Objectives			
Knowledge	A1	Knowledge of the parasite's appearance, life cycle, and pathogenesis.	
	A2	Diagnose all parasites of medical importance.	
	A3	Identify the epidemiology of parasites with special reference to those endemic to Iraq.	
	A4	Control and prevent the spread of disease	
Skills	B1	Teaching the use of a microscope and diagnosing the stages of parasites	
	B2	Teaching modern techniques in diagnosis	
	B3		
	B4		
Values	C1	Participation in seminars and conferences held inside and outside the college	
	C2	Motivating students to expand their thinking by making posters and scientific research	
	C3	Develop skills to solve problems that hinder student understanding	
	C4	Holding periodic seminars for students to exchange information, raise the level thinking, and enhance self-confidence	
11. Teaching and Learning Strategies			
1.	Education through pictures presentation	4.	
2.	Education through video presentation	5.	
3.	Education via online	6.	

12. The Structure of the Course

Week	Hours	RLOs	Topic/Subject Name	Learning Method	Evaluation Method
1	2th+2p	Diagnostic Parasitology1	Recent classification of parasite Systematic grouping of parasites General terms used in parasitology	Theoretical and practical	-Through questions during lecture -The student participates explaining a topic - The Quiz - Monthly exam.
2	2th+2p	Diagnostic Parasitology1	Strategies for diagnosis of parasitic infection Collection and transport of specimens for factors interfering for all *enteric pathogens types of stool collection *Precaution in the procedure of collection specimens	Theoretical and practical	-Through questions during lecture -The student participates explaining a topic - The Quiz - Monthly exam.
3	2th+2p	Diagnostic Parasitology1	Examination of stool sample a) Macroscopic examination of stool b) Microscopic examination of wet mounts	Theoretical and practical	-Through questions during lecture -The student participates explaining a topic - The Quiz - Monthly exam.
4	2th+2p	Diagnostic Parasitology1	Preparation of solutions for wet mount; the advantages and disadvantages of each solution Saline solution Iodine solutions Eosin solution	Theoretical and practical	-Through questions during lecture -The student participates explaining a topic - The Quiz- Monthly exam
5	2th+2p	Diagnostic Parasitology1	Preparation of preservatives and fixatives for mounted slides (%7-5) Formalin solution PVA (Polyvinyle alcohol) as fixative Schaudinns fixative	Theoretical and practical	-Through questions during lecture -The student participates explaining a topic - The Quiz - Monthly exam.
6	2th+2p	Diagnostic Parasitology1	Laboratory diagnosis of enteric protozoa *The routine methods used in laboratory diagnosis	Theoretical and practical	-Through questions during lecture

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					-The student participates explaining a topic - The Quiz - Monthly exam.
7	2th+2p	Diagnostic Parasitology1	Concentration methods; types, purpose to concentration methodes	Theoretical and practical	-Through questions during lecture -The student participates explaining a topic - The Quiz - Monthly exam.
8	2th+2p	Diagnostic Parasitology1	Application of immunological methods in diagnosis of parasite in general * Detectio antibodies in serum of patients with enteric protozoa (ELISA) * Detection antigens in stool specimen of patients with enteric protozoa (ELISA)	Theoretical and practical	-Through questions during lecture -The student participates explaining a topic - The Quiz - Monthly exam.
9	2th+2p	Diagnostic Parasitology1	Differentiation of pathogenic Entamoebahistolytica and the morphologically identical non pathogenic Entamoebadispar using immunological assays.	Theoretical and practical	-Through questions during lecture -The student participates explaining a topic - The Quiz - Monthly exam.
10	2th+2p	Diagnostic Parasitology1	The application of molecular assays in diagnosis ofparasites	Theoretical and practical	-Through questions during lecture -The student participates explaining a topic - The Quiz - Monthly exam.
11	2th+2p	Diagnostic Parasitology1	Free living pathogenic amoeba Naegleriafowleri&Acanthamoeba Morphology, habitat, mode of infect infective stage, life cycle and labora diagnosis	Theoretical and practical	-Through questions during lecture -The student participates explaining a topic - The Quiz - Monthly exam.
12	2th+2p	Diagnostic Parasitology1	Blastocystishominis as the causative agen irritable bowel syndrome Morphology of forms, habitat, mode of infection, infective stage and laboratory diagnosis	Theoretical and practical	-Through questions during lecture -The student participates explaining a topic - The Quiz

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					- Monthly exam.
13	2th+2p	Diagnostic Parasitology1	Tissue flagellates e.g Genus Trypanosoma & Genus Leishmania Laboratory diagnosis; routine methods, immunological Assays molecular assays	Theoretical and practical	-Through questions during lecture -The student participates explaining a topic - The Quiz - Monthly exam.
14	2th+2p	Diagnostic Parasitology1	Properties of ideal vaccines.leishmania Vaccine in trail	Theoretical and practical	-Through questions during lecture -The student participates explaining a topic - The Quiz - Monthly exam.
15	2th+2p	Diagnostic Parasitology1	Phylum Apicomplexa; Main properties of group, ultrastructure of the apical complex	Theoretical and practical	-Through questions during lecture -The student participates explaining a topic - The Quiz - Monthly exam.

13. Course Evaluation

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

14. Learning & Teaching Resources

Required textbooks (curricular if any)	Paniker's Textbook of Medical Parasitology
Main References (sources)	Paniker's Textbook of Medical Parasitology
Recommended Books & References (Scientific Journals, Reports ...)	Evolutionary Parasitology Textbook of Medical Parasitology
Websites or Electronic References	Any good research and good websites

Course Description (Blood transfusion)

1. Course Title		Blood transfusion
2. Course Code		02014105
3. Semester/Year		2026-2025
4. Description Preparation Date		2025/9/10
5. Available Attendance Form		Official attendance time (morning and evening)
6. No. of Hours (Total)		30 hours for the theoretical aspect and 30hours for the practical aspect
7. No. of Credits (Total)		4 units
8. Course Administrator Name		Assistant Lecturer Ali Saad Kazem
9. E-mail		ali.saad@albayan.edu.iq
10. Course Objectives		
Knowledge	A1	Teaching students about the blood group systems in the human body and how to prevent giving mismatched blood
	A2	Study of blood types, antigens, antibodies, immune reactions, control of immune diseases, immunizations, and immunodiagnostic.
	A3	The program aims to provide students with the necessary skills to work in the fields of health care, scientific research, technological development, education and training.
	A4	Teaching students the mechanism of blood donation and how to store blood units in the blood bank
Skills	B1	Scientific reports
	B2	Daily exams
	B3	Monthly tests
	B4	Practical examinations
Values	C1	Participation in the classroom
	C2	Provide activities
	C3	Semester and final tests and activities
	C4	Self-learning, discussion panels
11. Teaching and Learning Strategies		
1.	Active participation in the classroom is evidence of the student's commitment and responsibility	4. Developing the student's ability to deal with multiple media.

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2.	Adherence to the specified deadline for submitting assignments and research.	5.	Active participation in the classroom is evidence of the student's commitment and responsibility
3.	Semester and final exams express commitment and cognitive and skill achievement.	6.	Developing the student's ability to deal with technical means

12. The Structure of the Course

Week	Hours	RLOs	Topic/Subject Name	Learning Method	Evaluation Method
1	2 theory 2 practi.	The way out in theory The way out in practice	Blood Transfusion	presence	Daily, monthly and annual written exam
2	2 theory 2 practi.	The way out in theory The way out in practice	Blood Transfusion	presence	Daily, monthly and annual written exam
3	2 theory 2 practi.	The way out in theory The way out in practice	Blood donation	presence	Daily, monthly and annual written exam
4	2 theory 2 practi.	The way out in theory The way out in practice	Selection of donation	presence	Daily, monthly and annual written exam
5	2 theory 2 practi.	The way out in theory The way out in practice	General Donor assessment	presence	Daily, monthly and annual written exam
6	2 theory 2 practi.	The way out in theory The way out in practice	The Human Blood Group	presence	Daily, monthly and annual written exam
7	2 theory 2 practi.	The way out in theory The way out in practice	The Human Blood Group	presence	Daily, monthly and annual written exam
8	2 theory 2 practi.	The way out in theory The way out in practice	AIDS and Blood Transfusion	presence	Daily, monthly and annual written exam
9	2 theory 2 practi.	The way out in theory The way out in practice	Complication of blood transfusion	presence	Daily, monthly and annual written exam
10	2 theory 2 practi.	The way out in theory The way out in practice	Complication of blood transfusion	presence	Daily, monthly and annual written exam
11	2 theory 2 practi.	The way out in theory The way out in practice	Haemolytic Anaemias	presence	Daily, monthly and annual written exam

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12	2 theory 2 practi.	The way out in theory The way out in practice	Haemolytic Anaemias	presence	Daily, monthly and annual written exam
13	2 theory 2 practi.	The way out in theory The way out in practice	Types of Anticoagulants used hematology	presence	Daily, monthly and annual written exam
14	2 theory 2 practi.	The way out in theory The way out in practice	Types of Anticoagulants used hematology	presence	Daily, monthly and annual written exam
15	2 theory 2 practi.	The way out in theory The way out in practice	Autologous Blood Transfusion (Al	presence	Daily, monthly and annual written exam

13. Course Evaluation

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

14. Learning & Teaching Resources

Required textbooks (curricular if any)	Blood Transfusion principal book
Main References (sources)	Articles
Recommended Books & References (Scientific Journals, Reports ...)	Many papers about blood transfusion
Websites or Electronic References	Wikipedia, research gate, google scholar, and many

Course Description (Pathology)

1. Course Title		Pathology
2. Course Code		02014106
3. Semester/Year		2026-2025
4. Description Preparation Date		5/9/2025
5. Available Attendance Form		Lectures and practical sessions
6. No. of Hours (Total)		30 hours (theory) 30 hours (practical)
7. No. of Credits (Total)		4
8. Course Administrator Name		Dr. Ahmed Turki Hani
9. E-mail		ahmedt@albayan.edu.iq
10. Course Objectives		
Knowledge	A1	Learn the students the gross structure of human organs.
	A2	Provide the students with the skills of managements and solving problems during pract training.
	A3	Learn the student to understand the diseases in different body systems
	A4	Make the student correlate his knowledge with the clinical problem solving.
Skills	B1	
	B2	
	B3	
	B4	
Values	C1	identification and handling in anatomical pathology.
	C2	Acquire the necessary skills required in the preparation of slides for microscopic examination.
	C3	Demonstrate a general knowledge of the principles and procedures involved in the collection specimens from different body systems.
	C4	
11. Teaching and Learning Strategies		
1.		4.
2.		5.
3.		6.

12. The Structure of the Course

Week	Hours	RLOs	Topic/Subject Name	Learning Method	Evaluation Method
1	2th+2p	The student should be aware of the information provided to him and the extent of its applicability to reality	Lung (atelectasias, acute lung injury)	Data show and white board	Quiz and homework
2	2th+2p	The student should be aware of the information provided to him and the extent of its applicability to reality	Lung (chronic bronchitis pulmona embolism)	Data show and white board	Quiz and homework
3	2th+2p	The student should be aware of the information provided to him and the extent of its applicability to reality	Lung tumors	Data show and white board	Quiz and homework
4	2th+2p	The student should be aware of the information provided to him and the extent of its applicability to reality	Kidney (glomerular disease)	Data show and white board	Quiz and homework
5	2th+2p	The student should be aware of the information provided to him and the extent of its applicability to reality	Kidney (nephrotic syndrome) IgA nephropathy (Berger disease)	Data show and white board	Quiz and homework
6	2th+2p	The student should be aware of the information provided to him and the extent of its applicability to reality	Kidney tumors	Data show and white board	Quiz and homework
7	2th+2p	The student should be aware of the information provided to him and the extent of its applicability to reality	Cancer of the oral cavity and tongue	Data show and white board	Quiz and homework
8	2th+2p	The student should be aware of the information provided to him and the extent of its applicability to reality	Esophagus (lacivation, varices, esophageal carcinoma)	Data show and white board	Quiz and homework
9	2th+2p	The student should be aware of the information provided to him and the extent of its applicability to reality	Stomach (gastritis, ulcer, carcinoma)	Data show and white board	Quiz and homework

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10	2th+2p	The student should be aware of the information provided to him and the extent of its applicability to reality	Large intestines (hemorrhoids, malabsorption syndrome)	Data show and white board	Quiz and homework
11	2th+2p	The student should be aware of the information provided to him and the extent of its applicability to reality	Crohn disease	Data show and white board	Quiz and homework
12	2th+2p	The student should be aware of the information provided to him and the extent of its applicability to reality	Large intestines tumors	Data show and white board	Quiz and homework
13	2th+2p	The student should be aware of the information provided to him and the extent of its applicability to reality	Liver (hepatic infection, failure, cirrhosis)	Data show and white board	Quiz and homework
14	2th+2p	The student should be aware of the information provided to him and the extent of its applicability to reality	Hepatic tumors	Data show and white board	Quiz and homework
15	2th+2p	The student should be aware of the information provided to him and the extent of its applicability to reality	Gall bladder (cholecystitis, tumors)	Data show and white board	Quiz and homework

13. Course Evaluation

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

14. Learning & Teaching Resources

Required textbooks (curricular if any)	Robbins and Cotran Pathologic Basis of Disease
Main References (sources)	
Recommended Books & References (Scientific Journals, Reports ...)	
Websites or Electronic References	

Course Description (Professional Ethics)

1. Course Title		Professional Ethics	
2. Course Code		02014107	
3. Semester/Year		2025-2026	
4. Description Preparation Date		3-9-2025	
5. Available Attendance Form		In-person lecture	
6. No. of Hours (Total)		30 Theoretical	
7. No. of Credits (Total)		2	
8. Course Administrator Name		Prof.Dr.Abdul Sattar Jabbar Taha	
9. E-mail		Abdulsattar.j@albayan.edu.iq	
10. Course Objectives			
Knowledge	A1	Provide the student with the appropriate method for dealing with patients, devices and equipment in the field of work	
	A2		
	A3		
	A4		
Skills	B1	Teaching how to deal with patients or anyone with flexibility and avoid disagreements	
	B2		
	B3		
	B4		
Values	C1	Participation in seminars and conferences held inside and outside the college	
	C2	Motivating students to expand their thinking by making posters and scientific research	
	C3	Develop skills to solve problems that hinder student understanding	
	C4	Holding periodic seminars for students to exchange information, raise the level of thinking, and enhance self-confidence	
11. Teaching and Learning Strategies			
1.	Education through pictures presentation	4.	
2.		5.	
3.		6.	

12. The Structure of the Course

Week	Hours	RLOs	Topic/Subject Name	Learning Method	Evaluation Method
1	2	Principles of professional conduct	Principles of professional ethics in stages of cultural developments	Theoretical 2	-Through questions during the lecture -The student participation in explaining a topic - The Quiz - Monthly exam.
2	2	Principles of professional conduct	Professional behavior, its concept Its practical applications	Theoretical 2	-Through questions during the lecture -The student participation in explaining a topic - The Quiz - Monthly exam.
3	2	Principles of professional conduct	Types of employees and ways to deal with each type	Theoretical 2	-Through questions during the lecture -The student participation in explaining a topic - The Quiz - Monthly exam.
4	2	The basics of professional dealing	Methods that the manager must follow it to encourage the employee, motivate him to work, and increase his productivity	Theoretical 2	-Through questions during the lecture -The student participation in explaining a topic - The Quiz

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					- Monthly exam.
5	2	The basics of professional dealing	Basic etiquette of the profession How to employ professional ethics from the position of guiding the individual's behavior, emotions, and ability to make the appropriate decision	Theoretical 2	-Through questions during the lecture -The student participate in explaining a topic - The Quiz - Monthly exam.
6	2	The basics of professional dealing	Characteristics and qualities of health workers Appearance, behavior and commitment	Theoretical 2	-Through questions during the lecture -The student participate in explaining a topic - The Quiz - Monthly exam.
7	2	The art of artistic and behavioral dealing	For behavioral pattern, characteristics of behavioral pattern	Theoretical 2	-Through questions during the lecture -The student participate in explaining a topic - The Quiz - Monthly exam.
8	2	The art of artistic and behavioral dealing	Communication methods/linguistic and non-linguistic their definition and types	Theoretical 2	-Through questions during the lecture -The student participate in explaining a topic - The Quiz - Monthly exam.

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9	2	The art of artistic and behavioral dealing	Exam	Theoretical 2	-Through questions during the lecture -The student participate in explaining a topic - The Quiz - Monthly exam.
10	2	Professional conduct in medical fields	The art of listening and listening	Theoretical 2	-Through questions during the lecture -The student participate in explaining a topic - The Quiz - Monthly exam.
11	2	Professional conduct in medical fields	Behavioral trends and tendencies Values, customs and traditions	Theoretical 2	-Through questions during the lecture -The student participate in explaining a topic - The Quiz - Monthly exam.
12	2	Professional conduct in medical fields	Dealing with the patient: Receiving and dealing with the patient, maintaining professional secrets	Theoretical 2	-Through questions during the lecture -The student participate in explaining a topic - The Quiz - Monthly exam.
13	2	Maintaining professional behavior in crisis	Determine and maintain appointments and requirements on the patients needs	Theoretical 2	-Through questions during the lecture -The student participate in explaining a topic

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					- The Quiz - Monthly exam.
14	2	Maintaining professional behavior in crisis	Behavioral handling of medical devices and equipment	Theoretical 2	-Through questions during the lecture -The student participation in explaining a topic - The Quiz - Monthly exam.
15	2	Maintaining professional behavior in crisis	Occupational safety and prevention of work risks	Theoretical 2	-Through questions during the lecture -The student participation in explaining a topic - The Quiz - Monthly exam.

13. Course Evaluation

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

14. Learning & Teaching Resources

Required textbooks (curricular if any)	Medical Ethics
Main References (sources)	
Recommended Books & References (Scientific Journals, Reports ...)	
Websites or Electronic References	Any good research and good websites

Course Description (Research methods)

1. Course Title			Research methods		
2. Course Code			02014108		
3. Semester/Year			2025 /2026		
4. Description Preparation Date			3-9-2025		
5. Available Attendance Form			Theoretical		
6. No. of Hours (Total)			(30h) Theoretical		
7. No. of Credits (Total)			1		
8. Course Administrator Name			Dr.Osama Abdulmonem Khiery		
9. E-mail					
10. Course Objectives					
Knowledge	A1	How to keep results accurate			
	A2	Continuous development of the accuracy of pathological analysis results			
	A3	Accuracy in selecting laboratory departments and their efficiency			
	A4	Know how to deal with those requesting pathological analyzes			
Skills	B1	How to deal scientifically with maintaining the efficiency of laboratories			
	B2	Selecting the appropriate staff for laboratory management			
	B3	Maintaining sound relations between laboratory directors and scientific staff working in laboratory			
	B4	Pay attention to the maintenance and periodic inspection of devices to maintain them			
Values	C1	Paying attention to graduating competent personnel for laboratories			
	C2	Accuracy in reading analysis results			
	C3	Periodic inspection of devices to ensure accuracy of readings			
	C4	Maintaining appropriate relations between laboratory workers and management			
11. Teaching and Learning Strategies					
1.	Trying to learn about international experiences in laboratory management		4.	Many short-term scientific missions	
2.	Continuously developing the curriculum		5.	More tests to develop students' level	
3.	Continuous review of international educational systems		6.	Continuous interaction with other universities to identify differences in teaching methods	

12. The Structure of the Course

Week	Hours	RLOs	Topic/Subject Name	Learning Method	Evaluation Method
1	2	The student must be aware of information provided to him and extent of its application to reality	Types of laboratories and their role in controlling infections	Theoretical applications	Conducting tests to develop staff
2	2	The student must be aware of information provided to him and extent of its application to reality	Types of laboratories and their role in controlling infections	Theoretical applications	Conducting tests to develop staff
3	2	The student must be aware of information provided to him and extent of its application to reality	Types of laboratories and their role in controlling infections	Theoretical applications	Conducting tests to develop staff
4	2	The student must be aware of information provided to him and extent of its application to reality	Laboratory management including Director, management level and planning	Theoretical applications	Conducting tests to develop staff
5	2	The student must be aware of information provided to him and extent of its application to reality	Laboratory management including Director, management level and planning	Theoretical applications	Conducting tests to develop staff
6	2	The student must be aware of information provided to him and extent of its application to reality	Laboratory management including Director, management level and planning	Theoretical applications	Conducting tests to develop staff
7	2	The student must be aware of information provided to him and extent of its application to reality	Contribution of laboratories to the individual health of the people	Theoretical applications	Conducting tests to develop staff
8	2	The student must be aware of information provided to him and extent of its application to reality	Contribution of laboratories to community public health	Theoretical applications	Conducting tests to develop staff
9	2	The student must be aware of information provided to him and extent of its application to reality	Long range planning	Theoretical applications	Conducting tests to develop staff
10	2	The student must be aware of information provided to him and extent of its application to reality	Short term planning	Theoretical applications	Conducting tests to develop staff

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11	2	The student must be aware of information provided to him and extent of its application to reality	Intermediate planning	Theoretical applications	Conducting tests to develop staff
12	2	The student must be aware of information provided to him and extent of its application to reality	Organization	Theoretical applications	Conducting tests to develop staff
13	2	The student must be aware of information provided to him and extent of its application to reality	The role of management in maintaining staff and staff development	Theoretical applications	Conducting tests to develop staff
14	2	The student must be aware of information provided to him and extent of its application to reality	The role of management in maintaining staff and staff development	Theoretical applications	Conducting tests to develop staff
15	2	The student must be aware of information provided to him and extent of its application to reality	The role of management in maintaining staff and staff development	Theoretical applications	Conducting tests to develop staff

13. Course Evaluation

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

14. Learning & Teaching Resources

Required textbooks (curricular if any)	Principles of research methods
Main References (sources)	Research methods
Recommended Books & References (Scientific Journals, Reports ...)	Scientific journals and international reports on research methods
Websites or Electronic References	Global search methods website

Course Description (Clinical Immunology2)

1. Course Title		Clinical Immunology2
2. Course Code		02014201
3. Semester/Year		2026-2025
4. Description Preparation Date		2025/8/29
5. Available Attendance Form		face to face learning
6. No. of Hours (Total)		(30 Theoretical + 30 Practical)
7. No. of Credits (Total)		4
8. Course Administrator Name		Hayder Ahmed Kadhim
9. E-mail		Hayder.a@albayan.edu.iq
10. Course Objectives		
Knowledge	A1	Knowledge and Understanding
	A2	Gaining experience in performing immunoassays
	A3	Gaining experience in the work of modern equipment
	A4	Dealing with various advanced laboratory analyzes
Skills	B1	Subject-specific skills
	B2	Training to use the equipment
	B3	making reports
	B4	Research work
Values	C1	Develop the student's ability to work with devices
	C2	Develop the student's ability to use modern laboratory equipment and techniques
	C3	Develop the student's ability to dialogue and debate

	C4	Develop the student's ability to research	
11.Teaching and Learning Strategies			
1.	The discussion	4.	Field visits to educational laboratories
2.	daily exams	5.	
3.	Directing students to some websites related to the scientific subject	6.	

12. The Structure of the Course

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Week	Hours	RLOs	Topic/Subject Name	Learning Method	Evaluation Method
1	2th +2p	Autoimmune Hepatitis diseases	Autoimmune Hepatitis	theoretical & practical	Daily exam and direct questions
2	2th +2p			theoretical & practical	Daily exam and direct questions
3	2th +2p			theoretical & practical	Daily exam and direct questions
4	2th +2p			theoretical & practical	Daily exam and direct questions
5	2th +2p	Eosinophilic Pneumonias	Eosinophilic Pneumonias	theoretical & practical	Daily exam and direct questions
6	2th +2p			theoretical & practical	Daily exam and direct questions
7	2th +2p	Asthma Hypersensitivity Diseases	Asthma Hypersensitivity Diseases	theoretical & practical	Daily exam and direct questions
8	2th +2p			theoretical & practical	Daily exam and direct questions
9	2th +2p			theoretical & practical	Daily exam and direct questions
11	2th +2p			theoretical & practical	Daily exam and direct questions
12	2th +2p	Thyroid immune activity	Endocrinology Immunological Thyroid Diseases , Immunological Infertility a	theoretical & practical	Daily exam and direct questions
13	2th +2p			theoretical & practical	Daily exam and direct questions
14	2th +2p			theoretical & practical	Daily exam and direct questions
15	2th +2p	immune gland diseases	Immunological Thyroid Diseases , Immunological	theoretical & practical	Daily exam and direct questions
16	2th +2p			theoretical & practical	Daily exam and direct questions

13. Course Evaluation

The score out of 100 is based on the tasks assigned to the student, such as daily preparation, daily, oral, monthly, written exams, reports, etc.

14. Learning & Teaching Resources

Required textbooks (curricular if any)	Clinical immunology, 2007 Review of medical microbiology and immunology, 2015
Main References (sources)	Clinical immunology, 2007 Review of medical microbiology and immunology, 2015
Recommended Books & References (Scientific Journals, Reports ...)	Kuby IMMUNOLOGY. Sixth Edition
Websites or Electronic References	Ncbi Research gate

Course Description (Diagnostic Bacteriology2)

1. Course Title		Diagnostic Bacteriology 2	
2. Course Code		02014202	
3. Semester/Year		2026-2025	
4. Description Preparation Date		2/9/2025	
5. Available Attendance Form		Lectures(Theory &Practical)	
6. No. of Hours (Total)		(30Theoretical + 30 Practical)	
7. No. of Credits (Total)		4	
8. Course Administrator Name		Dr.Ghufran.h.Abed	
9. E-mail		Ghufran.h@albayan.edu.iq	
10. Course Objectives			
Knowledge	A1	Make the student known to medical diagnostic bacteriology, and the causes of it diseases.	
	A2		
	A3		
	A4		
Skills	B1	Make the student how to diagnose the bacterial diseases and how to treatments.	
	B2		
	B3		
	B4		
Values	C1	The student must have full knowledge of viral and fungal diseases and how to deal with them.	
	C2		
	C3		
	C4		
11. Teaching and Learning Strategies			
1.	Intellectual or mental education	4.	
2.	Collaborative co-education	5.	
3.	Blended learning	6.	

Week	Hours	RLOs	Topic/Subject Name	Learning Method	Evaluation Method
1	2th+2p	continuous	Laboratory diagnosisMeningit	Method of giving lectures Discussion method Cooperative education	Oral &written exam.
2	2th+2p	Infection of the respiratory tract	General consideration,anatomy and normal stateof respiratory tract	Method of giving lectures Discussion method Cooperative education	Oral &written exam.
3	2th+2p	continuous	continuous	Method of giving lectures Discussion method Cooperative education	Oral &written exam.
4	2th+2p	Infection ofthe urinary tract	General considerations	Method of giving lectures Discussion method Cooperative education	Oral &written exam.
5	2th+2p	continuous	continuous	Method of giving lectures Discussion method Cooperative education	Oral &written exam.
6	2th+2p	Genital tractinfections	Sexually transmitted diseases and other genital tractinfections	Method of giving lectures Discussion method Cooperative education	Oral &written exam.
7	2th+2p	continuous	cont inuous	Method of giving lectures Discussion method Cooperative education	Oral &written exam.
8	2th+2p	Gastrointestinal tractinfections	General considerations	Method of giving lectures Discussion method Cooperative education	Oral &written exam.

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9	2th+2p	continuous	continuous	Method of giving lectures Discussion method Cooperative education	Oral & written exam.
10	2th+2p	Infections of the eyes, ears and sinuses	Anatomy —Resident microbial flora	Method of giving lectures Discussion method Cooperative education	Oral & written exam.
11	2th+2p	—General considerations	Skin, Soft tissue and wound infections	Method of giving lectures Discussion method Cooperative education	Oral & written exam.
12	2th+2p	—Specimens from sterile body sites	Normal sterile body fluids, bone and bone marrow and solid tissue	Method of giving lectures Discussion method Cooperative education	Oral & written exam.
13	2th+2p	—Specimen collection and transport	Laboratory diagnosis of parasitic infections	Method of giving lectures Discussion method Cooperative education	Oral & written exam.
14	2th+2p	Collection, and transport of clinical specimens	—Laboratory methods in basic mycology	Method of giving lectures Discussion method Cooperative education	Oral & written exam.
15	2th+2p	Specimen selection and collection	Laboratory methods in basic virology	Method of giving lectures Discussion method Cooperative education	Oral & written exam.

14. Course Evaluation

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

15. Learning & Teaching Resources

Required textbooks (curricular if any)	Jawetz, R., J.L. Melnick, and E.A. Adelberg,(2019). Review of Medical
Main References (sources)	Review of Medical Microbiology and Immunology. Warren Levinson, 12th May 2012. Mc Graw-Hill (Lange). Microbiology, Twenty-Eighth Edition Edition,. Christopher J. Burrell, ... Frederick A. Murphy, in Fenner and White's Medical Virology (Fifth Edition), 2017
Recommended Books & References (Scientific Journals, Reports ...)	
Websites or Electronic References	https://hmt.mtu.edu.iq/e-learning/

Course Description (stem cell & Embryology)

1. Course Title		stem cell & Embryology
2. Course Code		02014203
3. Semester/Year		2026-2025
4. Description Preparation Date		2025/9/10
5. Available Attendance Form		Official attendance time (morning and evening)
6. No. of Hours (Total)		30 hours for the theoretical aspect and 30 hours for the practical aspect
7. No. of Credits (Total)		2 units
8. Course Administrator Name		Prof.Dr.Bahaa Fakhri Hussien
9. E-mail		
10. Course Objectives		
Knowledge	A1	•Stem cells can self-renew and differentiate They can keep dividing to make more stem cells and can also turn into specialized cell types (like muscle, nerve, or blood cells).
	A2	•They are essential for understanding development and regeneration Studying stem cells helps scientists understand how organisms grow, repair tissues, and maintain healthy populations.
	A3	•They have major potential in medicine Stem cells offer possibilities for treating diseases such as Parkinson's, diabetes, heart disease, and spinal cord injuries through regenerative therapies.
	A4	• Ethical and practical challenges exist Issues like sourcing embryonic stem cells, controlling differentiation, preventing tumor formation, ensuring safety in treatments are key concerns in stem cell research.
Skills	B1	Scientific reports
	B2	Daily exams
	B3	Monthly tests
	B4	Practical examinations
Values	C1	Participation in the classroom
	C2	Provide activities
	C3	Semester and final tests and activities
	C4	Self-learning, discussion panels
11. Teaching and Learning Strategies		

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1.	Active participation in the classroom is evidence of the student's commitment and responsibility	4.	Developing the student's ability to deal with multiple media.
2.	Adherence to the specified deadline for submitting assignments and research.	5.	Active participation in the classroom is evidence of the student's commitment and responsibility
3.	Semester and final exams express commitment and cognitive and skill achievement.	6.	Developing the student's ability to deal with technical means

12. The Structure of the Course

Week	Hours	RLOs	Topic/Subject Name	Learning Method	Evaluation Method
1-2-3	2 theory 2 practi.	The way out in theory The way out in practice	Introduction, what are stem Cell	presence	Daily, monthly and annual written exam
4-5	2 theory 2 practi.	The way out in theory The way out in practice	Characterizing of stem cells	presence	Daily, monthly and annual written exam
6	2 theory 2 practi.	The way out in theory The way out in practice	Cell differentiation and Growth	presence	Daily, monthly and annual written exam
7	2 theory 2 practi.	The way out in theory The way out in practice	Regenerative medicine	presence	Daily, monthly and annual written exam
8	2 theory 2 practi.	The way out in theory The way out in practice	General embryology	presence	Daily, monthly and annual written exam
9	2 theory 2 practi.	The way out in theory The way out in practice	Gametogenesis	presence	Daily, monthly and annual written exam
10	2 theory 2 practi.	The way out in theory The way out in practice	First week of development	presence	Daily, monthly and annual written exam
11	2 theory 2 practi.	The way out in theory The way out in practice	Second week	presence	Daily, monthly and annual written exam
12	2 theory 2 practi.	The way out in theory The way out in practice	Third week	presence	Daily, monthly and annual written exam
13	2 theory 2 practi.	The way out in theory The way out in practice	Third to eight week	presence	Daily, monthly and annual written exam
14	2 theory 2 practi.	The way out in theory The way out in practice	Third month to birth	presence	Daily, monthly and annual written exam

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15	2 theory 2 practi.	The way out in theory The way out in practice	Birth defects and prenatal diagnosis	presence	Daily, monthly and annual written exam
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13. Course Evaluation

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

14. Learning & Teaching Resources

Required textbooks (curricular if any)	stem cell & Embryology principal book
Main References (sources)	Articles
Recommended Books & References (Scientific Journals, Reports ...)	Many papers about blood transfusion
Websites or Electronic References	Wikipedia, research gate, google scholar, and many

Course Description (Diagnostic Parasitology2)

1. Course Title		Diagnostic Parasitology2	
2. Course Code		02014204	
3. Semester/Year		2026-2025	
4. Description Preparation Date		6/9/2025	
5. Available Attendance Form		In-person lecture+ online	
6. No. of Hours (Total)		(30 Theoretical + 30Practical)	
7. No. of Credits (Total)		4	
8. Course Administrator Name		Dr. safa tawfeeq whqeeb	
9. E-mail		safa.tawfeeq@albaya.edu.iq	
10. Course Objectives			
Knowledge	A1	Knowledge of the parasite's appearance, life cycle, and pathogenesis.	
	A2	Diagnose all parasites of medical importance.	
	A3	Identify the epidemiology of parasites with special reference to those endemic to Iraq.	
	A4	Control and prevent the spread of disease	
Skills	B1	Teaching the use of a microscope and diagnosing the stages of parasites	
	B2	Teaching modern techniques in diagnosis	
	B3		
	B4		
Values	C1	Participation in seminars and conferences held inside and outside the college	
	C2	Motivating students to expand their thinking by making posters and scientific research	
	C3	Develop skills to solve problems that hinder student understanding	
	C4	Holding periodic seminars for students to exchange information, raise the level thinking, and enhance self-confidence	
11. Teaching and Learning Strategies			
1.	Education through pictures presentation	4.	
2.	Education through video presentation	5.	
3.	Education via online	6.	

12. The Structure of the Course

Week	Hours	RLOs	Topic/Subject Name	Learning Method	Evaluation Method
1	2th+2p	Diagnostic Parasitology2	First term examination	Theoretical and practical	-Through questions during lecture -The student participates explaining a topic - The Quiz - Monthly exam.
2	2th+2p	Diagnostic Parasitology2	Intestinal coccidian e.g Cryptosporid parvum Morphology, habitat, mode infection, infective stage, lifecycle laboratory diagnosis with special emphasis on Ziehl-Neelsen technique	Theoretical and practical	-Through questions during lecture -The student participates explaining a topic - The Quiz - Monthly exam.
3	2th+2p	Diagnostic Parasitology2	Extra-intestinal coccidian e.g.Toxoplasma gondiiBrief lecture morphology, habitat, modes of infection,infective stages, cycle	Theoretical and practical	-Through questions during lecture -The student participates explaining a topic - The Quiz - Monthly exam.
4	2th+2p	Diagnostic Parasitology2	Methods of laboratorydiagnosis includes: Direct detection of the parasite; Serological methods& Molecular assays	Theoretical and practical	-Through questions during lecture -The student participates explaining a topic - The Quiz - Monthly exam.
5	2th+2p	Diagnostic Parasitology2	Genus Plasmodium; Terms used in malaria& Life cycle	Theoretical and practical	-Through questions during lecture -The student participates explaining a topic - The Quiz - Monthly exam.
6	2th+2p	Diagnostic Parasitology2	Methods of laboratory diagnosis includ Preparation and detection of parasite in thick and thin blood Smears - Preparation	Theoretical and practical	-Through questions during lecture

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			Geimsa and leishman stains – Quantitative Buffy Coat (QBC) test - microscopic test - Rapid Diagnostic Tests (RDTs)		-The student participates explaining a topic - The Quiz - Monthly exam.
7	2th+2p	Diagnostic Parasitology2	Introduction to Helminths Classification helminthes into: Phylum Platyhelminths which includes; Class Cestoda& Class Trematoda	Theoretical and practical	-Through questions during lecture -The student participates explaining a topic - The Quiz - Monthly exam.
8	2th+2p	Diagnostic Parasitology2	General characters of: Platyhelminths& Class Cestoda	Theoretical and practical	-Through questions during lecture -The student participates explaining a topic- The Quiz - Monthly exam.
9	2th+2p	Diagnostic Parasitology2	Genus Taenia including Taeniasaginata soluim Morphology, habitat, mode of infect infective stage, life cycle and laboratory diagnosis;differentiate between both species in labrotory	Theoretical and practical	-Through questions during lecture -The student participates explaining a topic - The Quiz - Monthly exam.
10	2th+2p	Diagnostic Parasitology2	EchinococcusgranulosusShort notes on parasite with special emphasis on the methods of diagnosis (detection certain Ag)	Theoretical and practical	-Through questions during lecture -The student participates explaining a topic - The Quiz - Monthly exam.
11	2th+2p	Diagnostic Parasitology2	Genus Schistosoma in general with emphasis on the species endemic in Schistosomahaematobium the use of special technique in the examination of urine sample (filtration by Schisto-kit) as direct method andimmunoblot as indirect method	Theoretical and practical	-Through questions during lecture -The student participates explaining a topic - The Quiz - Monthly exam.
12	2th+2p	Diagnostic Parasitology2	Second term examination	Theoretical and practical	-Through questions during lecture -The student participates explaining a topic - The Quiz

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					- Monthly exam.
13	2th+2p	Diagnostic Parasitology2	Phylum Nematelminths in general Short notes on; Ascarislumbricoides, Enterobiusvermicularis, Ancylostomaduodenale, Strongyloidesstercoralis	Theoretical and practical	-Through questions during lecture -The student participates explaining a topic - The Quiz - Monthly exam.
14	2th+2p	Diagnostic Parasitology2	Modified Kato-Katis technique examination of thick smear, application of anal swab for pin worm	Theoretical and practical	-Through questions during lecture -The student participates explaining a topic - The Quiz - Monthly exam.
15	2th+2p	Diagnostic Parasitology2	Haradi-Mori technique for cultivation of hook worm and detection of rhabditiformand filariform larvae	Theoretical and practical	-Through questions during lecture -The student participates explaining a topic - The Quiz - Monthly exam.

13. Course Evaluation

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

14. Learning & Teaching Resources

Required textbooks (curricular if any)	Paniker's Textbook of Medical Parasitology
Main References (sources)	Paniker's Textbook of Medical Parasitology
Recommended Books & References (Scientific Journals, Reports ...)	Evolutionary Parasitology Textbook of Medical Parasitology
Websites or Electronic References	Any good research and good websites

Course Description (Clinical Chemistry)

1. Course Title		Clinical Chemistry
2. Course Code		02014205
3. Semester/Year		2026-2025
4. Description Preparation Date		1/9/2025
5. Available Attendance Form		Attendance in the classroom in addition to e-learning
6. No. of Hours (Total)		(30 Theoretical + 30 Practical)
7. No. of Credits (Total)		4
8. Course Administrator Name		Dr.Mustafa Saleem Shareef Lec.Yousif Nadim Abbas
9. E-mail		Mustafa.s@albayan.edu.iq Yosif.n@albayan.edu.iq
10. Course Objectives		
Knowledge	A1	The Advanced Clinical Chemistry course is concerned with security and safety procedures within the laboratory and how to deal with hazardous materials
	A2	Learn about laboratory quality laws
	A3	Particular emphasis on examinations of some organs related to biochemical compounds
	A4	Introducing important experiments using modern technologies in laboratory diagnosis, giving the student a new opportunity to learn about specific tests
Skills	B1	The student should be able to acquire basic knowledge and skills in clinical chemistry
	B2	Teaching the student how to become able to think logically, analyze, and employ the prescribed curriculum vocabulary.
	B3	Developing the student's mental and personal ability in this specialty is an important part of his field of specialization
	B4	Providing the student with communication skills and using modern educational technologies effectively.
Values	C1	The student should be able to work collaboratively and individually to conduct clinical chemistry analyses
	C2	The student should be able to use information technology to search for information

	C3	The student should be able to communicate with the professors and colleagues
	C4	The student must be able to rely on himself
11. Teaching and Learning Strategies		
1.	Providing an appropriate educational climate for logical thinking through continuous guidance of students during lectures	4. Use the display screen to lecture and the blackboard.
2.	Opening the door for open and direct discussions with students	5. Visit the library
3.	Follow a cooperative learning strategy	6. Directing the student to websites to benefit from them

Theoretical and practical vocabulary

12. The Structure of the Course					
Week	H ou rs	RLOs	Topic/Subject Name	Learning Method	Evaluation Method
1&2	4	A1, A3, A4, B1, B2, B3, B4, C1, C2, C3, C4	Laboratory Safety: 1- Safety awareness of persons and safety equipments. 2- Chemical safety. 3- Biological safety . 4- fire safety and control of other hazards. 5- Disposal of hazardous materials.	Gain information about occupational safety	Oral questions
3	2	A3, A4, B1, B2, B3, B4, C1, C2, C3, C4	Requesting lab .results Classification of request card in laboratory interpretation of selective test & screening	Know the ideal form for requesting laboratory tests and the results form	solving equations
4	2	A3, A4, B1, B2, B3, B4, C1, C2, C3, C4	1- Specimen collection (urine, blood, faeces, cerebrospinal fluid and other body fluids). 2- Specimen Handling (maintenance of identification, preservation, separation, storage and transport of specimens	How to collect samples	solving equations
5,6,7	6	A2, A3, A4, B1, B2, B3, B4, C1, C2, C3, C4	Quality Management: 1- Fundamentals of total quality management. 2- The total testing process. 3- Control of preanalytical variables. 4- Control of analytical variables. 5- External quality assessment	Knowledge of the basics of laboratory quality	solving equations
8,9,10,11,12	10	A1, A2, A3, A4, B1, B2, B3, B4, C1, C2, C3, C4	Advanced technique in clinical chemistry	Learn about advanced techniques related to clinical chemistry	Written exam

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13,14	4	A1, A2, A3, A4, B1, B2, B3, B4, C1, C2, C3, C4	Computers in clinical chemistry	Learn about modern techniques in advanced clinical chemistry	solving equations
15	8	A1, A2, A3, A4, B1, B2, B3, B4, C1, C2, C3, C4	Pediatric clinical chemistry	Knowing the concentrations of some substances related to clinical chemistry in children	Discussions

13. Course Evaluation

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

14. Learning & Teaching Resources

Required textbooks (curricular if any)	Peter Rae - Clinical Biochemistry Lecture Notes (2018, John Wiley & Sons Ltd)
Main References (sources)	Michael L. Bishop, Clinical Chemistry: Principles, Techniques, and Correlations, NINTH EDITION 2023
Recommended Books & References (Scientific Journals, Reports ...)	Tietz Fundamentals of Clinical Chemistry and Molecular Diagnostics, 9th Edition
Websites or Electronic References	https://www.sciencedirect.com/ https://pubmed.ncbi.nlm.nih.gov/

Course Description (Antibiotic resistance and infection)

1. Course Title		Antibiotic resistance and infection	
2. Course Code		02014206	
3. Semester/Year		2026-2025	
4. Description Preparation Date		2025/9/9	
5. Available Attendance Form		Official attendance time (morning and evening)	
6. No. of Hours (Total)		30 hours for the theoretical aspect and 30hours for the practical aspect	
7. No. of Credits (Total)		4 units	
8. Course Administrator Name		Prof.Dr.Gaith Ali Jasim	
9. E-mail			
10. Course Objectives			
Knowledge	A1	• Overuse and misuse of antibiotics drive resistance When antibiotics are used unnecessarily or incorrectly, bacteria are exposed to the drugs more often, increasing the chances that resistant strains will emerge and spread.	
	A2	• Resistant infections are harder to treat Bacteria that develop resistance can survive standard antibiotics, leading to longer illnesses, more severe infections, and limited treatment options.	
	A3	• Resistance can spread between bacteria and between people Resistant genes can move from one bacterium to another, and resistant infections can pass from person to person, making it a public-health issue rather than an individual one.	
	A4	• Prevention and stewardship are essential Measures such as infection control, vaccination, proper hygiene, and responsible antibiotic use help slow the development and spread of resistance.	
Skills	B1	Scientific reports	
	B2	Daily exams	
	B3	Monthly tests	
	B4	Practical examinations	
Values	C1	Participation in the classroom	
	C2	Provide activities	
	C3	Semester and final tests and activities	
	C4	Self-learning, discussion panels	
11. Teaching and Learning Strategies			
1.	Active participation in the classroom is evidence of the student’s commitment and responsibility		4. Developing the student’s ability to deal with multiple media.

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2.	Adherence to the specified deadline for submitting assignments and research.	5.	Active participation in the classroom is evidence of the student's commitment and responsibility
3.	Semester and final exams express commitment and cognitive and skill achievement.	6.	Developing the student's ability to deal with technical means

12. The Structure of the Course

Week	Hours	RLOs	Topic/Subject Name	Learning Method	Evaluation Method
1	2 theory 2 practi.	The way out in theory The way out in practice	introduction	presence	Daily, monthly and annual written exam
2-3	2 theory 2 practi.	The way out in theory The way out in practice	antibiotics	presence	Daily, monthly and annual written exam
4	2 theory 2 practi.	The way out in theory The way out in practice	Mode of action	presence	Daily, monthly and annual written exam
5	2 theory 2 practi.	The way out in theory The way out in practice	Cell wall inhibition	presence	Daily, monthly and annual written exam
6	2 theory 2 practi.	The way out in theory The way out in practice	Mycolic acid and arabinogalactan	presence	Daily, monthly and annual written exam
7-8	2 theory 2 practi.	The way out in theory The way out in practice	Protein synthesis inhibition	presence	Daily, monthly and annual written exam
9	2 theory 2 practi.	The way out in theory The way out in practice	Nucleic acid inhibition	presence	Daily, monthly and annual written exam
10	2 theory 2 practi.	The way out in theory The way out in practice	Microbial metabolism inhibition	presence	Daily, monthly and annual written exam
11-12	2 theory 2 practi.	The way out in theory The way out in practice	Antibiotic resistance	presence	Daily, monthly and annual written exam
13	2 theory 2 practi.	The way out in theory The way out in practice	Antibiotic susceptibility tests	presence	Daily, monthly and annual written exam
14-15	2 theory 2 practi.	The way out in theory The way out in practice	Infection control	presence	Daily, monthly and annual written exam

13. Course Evaluation

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

14. Learning & Teaching Resources

Required textbooks (curricular if any)	Antibiotic resistance principal book
Main References (sources)	Articles
Recommended Books & References (Scientific Journals, Reports ...)	Many papers about blood transfusion
Websites or Electronic References	Wikipedia, research gate, google scholar, and many

Course Description (Laboratory Management)

1. Course Title			Laboratory Management		
2. Course Code			02014207		
3. Semester/Year			2025 /2026		
4. Description Preparation Date			3-9-2025		
5. Available Attendance Form			Theoretical		
6. No. of Hours (Total)			(30h) Theoretical		
7. No. of Credits (Total)			1		
8. Course Administrator Name			Dr.Osama Abdulmonem Khiery		
9. E-mail					
10. Course Objectives					
Knowledge	A1	How to keep results accurate			
	A2	Continuous development of the accuracy of pathological analysis results			
	A3	Accuracy in selecting laboratory departments and their efficiency			
	A4	Know how to deal with those requesting pathological analyzes			
Skills	B1	How to deal scientifically with maintaining the efficiency of laboratories			
	B2	Selecting the appropriate staff for laboratory management			
	B3	Maintaining sound relations between laboratory directors and scientific staff working in laboratory			
	B4	Pay attention to the maintenance and periodic inspection of devices to maintain them			
Values	C1	Paying attention to graduating competent personnel for laboratories			
	C2	Accuracy in reading analysis results			
	C3	Periodic inspection of devices to ensure accuracy of readings			
	C4	Maintaining appropriate relations between laboratory workers and management			
11. Teaching and Learning Strategies					
1.	Trying to learn about international experiences in laboratory management		4.	Many short-term scientific missions	
2.	Continuously developing the curriculum		5.	More tests to develop students' level	
3.	Continuous review of international educational systems		6.	Continuous interaction with other universities to identify differences in teaching methods	

12. The Structure of the Course

Week	Hours	RLOs	Topic/Subject Name	Learning Method	Evaluation Method
1	2	The student must be aware of information provided to him and extent of its application to reality	Types of laboratories and their role in controlling infections	Theoretical applications	Conducting tests to develop staff
2	2	The student must be aware of information provided to him and extent of its application to reality	Types of laboratories and their role in controlling infections	Theoretical applications	Conducting tests to develop staff
3	2	The student must be aware of information provided to him and extent of its application to reality	Types of laboratories and their role in controlling infections	Theoretical applications	Conducting tests to develop staff
4	2	The student must be aware of information provided to him and extent of its application to reality	Laboratory management including Director, management level and planning	Theoretical applications	Conducting tests to develop staff
5	2	The student must be aware of information provided to him and extent of its application to reality	Laboratory management including Director, management level and planning	Theoretical applications	Conducting tests to develop staff
6	2	The student must be aware of information provided to him and extent of its application to reality	Laboratory management including Director, management level and planning	Theoretical applications	Conducting tests to develop staff
7	2	The student must be aware of information provided to him and extent of its application to reality	Contribution of laboratories to the individual health of the people	Theoretical applications	Conducting tests to develop staff
8	2	The student must be aware of information provided to him and extent of its application to reality	Contribution of laboratories to community public health	Theoretical applications	Conducting tests to develop staff
9	2	The student must be aware of information provided to him and extent of its application to reality	Long range planning	Theoretical applications	Conducting tests to develop staff
10	2	The student must be aware of information provided to him and extent of its application to reality	Short term planning	Theoretical applications	Conducting tests to develop staff

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11	2	The student must be aware of information provided to him and extent of its application to reality	Intermediate planning	Theoretical applications	Conducting tests to develop staff
12	2	The student must be aware of information provided to him and extent of its application to reality	Organization	Theoretical applications	Conducting tests to develop staff
13	2	The student must be aware of information provided to him and extent of its application to reality	The role of management in maintaining staff and staff development	Theoretical applications	Conducting tests to develop staff
14	2	The student must be aware of information provided to him and extent of its application to reality	The role of management in maintaining staff and staff development	Theoretical applications	Conducting tests to develop staff
15	2	The student must be aware of information provided to him and extent of its application to reality	The role of management in maintaining staff and staff development	Theoretical applications	Conducting tests to develop staff

13. Course Evaluation

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

14. Learning & Teaching Resources

Required textbooks (curricular if any)	Principles of laboratory management
Main References (sources)	Laboratory management
Recommended Books & References (Scientific Journals, Reports ...)	Scientific journals and international reports on laboratory management
Websites or Electronic References	Global laboratory management website