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

Academic Program and Course Description Guide

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

Ashur University

University: Ashur University

College: College of Health and Medical technologies

Department: Medical Laboratory Techniques

Date of Completion: 2025 / 6 / 1

Signature:

Assistant for Scientific Affairs: Asst. Prof. Dr. Sameer Abdul Sahib Yarah

Date: 2025 / 6 / 1

Signature:

Head of Department: Prof. Dr. Faleh Hassan Al-Moussawi

Date: 2025 / 6 / 1

The file was reviewed by
Department of Quality Assurance and University Performance

Director of the Department of Quality Assurance and University Performance:
Asst. Prof. Dr. Saad Sami Al-Khafaji

Approved by the President of the University

Introduction:

The academic program serves as a coordinated and organized package of courses that comprises procedures and experiences structured as curricular elements. Its primary purpose is to develop and refine the skills of graduates, making them qualified to meet the demands of the labor market. The program is reviewed and evaluated annually through internal or external auditing processes, such as the External Examiner Program.

The academic program description provides a concise summary of the program's key features and its courses, highlighting the skills targeted for student development based on the program's intended objectives. This description is of significant importance as it constitutes the foundation for obtaining programmatic accreditation and is collaboratively prepared by the teaching staff under the supervision of the scientific committees within the academic departments.

This guide, in its second edition, presents an updated description of the academic program, reflecting revisions made to the previous version in light of recent changes and developments in Iraq's educational system. It includes the traditional description formats for annual and semester-based systems, in addition to the standardized description format adopted according to the letter issued by the Directorate of Studies (Ref. T M3/2906 on 3/5/2025) for programs based on the Bologna Process.

In this regard, we emphasize the importance of drafting comprehensive academic program and course descriptions to ensure the quality and effectiveness of the educational process.

Concepts and Terminology:

- **Academic Program Description:** A concise overview of the program's vision, mission, and objectives, including a precise outline of the intended learning outcomes based on specified learning strategies.
- **Course Description:** A brief summary of the course's key characteristics and the learning outcomes expected from students, demonstrating the extent to which they have benefited from available learning opportunities. This is derived from the academic program description.
- **Program Vision:** An aspirational view of the future of the academic program, portraying it as advanced, inspiring, motivating, realistic, and applicable.
- **Program Mission:** A brief statement outlining the goals and the activities required to achieve them, while also identifying the program's developmental paths and directions.
- **Program Objectives:** Statements describing what the academic program intends to accomplish within a specific timeframe, which must be measurable and observable.
- **Curriculum Structure:** All the courses/subjects included in the academic program according to the adopted learning system (semester-based, annual, Bologna Process), whether they are required by the Ministry, University, College, or Department, along with the corresponding credit units.
- **Learning Outcomes:** A coherent set of knowledge, skills, and values acquired by the student upon successful completion of the academic program. Each course must define its learning outcomes in a way that aligns with the overall program objectives.
- **Teaching and Learning Strategies:** The strategies employed by faculty members to enhance student education and learning. These are planned methods used to achieve learning goals and encompass both in-class and extracurricular activities aimed at attaining the program's learning outcomes

1. Program Vision

The Department of Medical Laboratory Techniques aims to graduate healthcare professionals who are knowledgeable and skilled in performing a wide range of laboratory tests. These graduates will serve both the public and private sectors and contribute to enhancing the efficiency and quality of the profession at the national level.

The department is committed to training students in the use of advanced laboratory equipment and modern technologies, equipping them with the necessary tools to strengthen their scientific knowledge. This is achieved through reliance on the latest research, up-to-date academic resources, advanced courses, and specialized seminars.

The department continuously strives to elevate students' scientific understanding and professional competence to ensure that graduates remain aligned with rapid advancements in the medical field in general, and clinical diagnostics in particular.

2. Program mission

To prepare and graduate scientifically qualified professionals in the field of medical laboratory techniques, to advance knowledge in scientific research and materials development in service of the local, regional, and international community. Additionally, to train and intellectually develop students, emphasizing scientific and intellectual growth, reinforcing social and cultural values, and meeting the needs of the local job market.

3. Program Objectives

1. To comprehend and understand current and modern laboratory techniques and seek solutions to related challenges.
2. To handle laboratory problems and develop appropriate solutions.
3. To understand alternative and modern methods in the field of clinical diagnostics.

4. Other External Influences

None

5. Program Accreditation

None

Program Structure for the Department of Medical Laboratory Techniques

- **first stage / first semester:**

N	Course Title		Units	Weekly Hours	
	Arabic	English		theoretical	Practical
1	الكيمياء العامة	General chemistry	4	2	4
2	المصطلحات طبية	Medical terminology	1	1	0
3	علم الاحياء البشري	Human biology	4	2	4
4	اجهزة المختبرات	Laboratory instruments	2	1	2
5	السلوك المهني	Professional Ethics	2	2	0
6	تطبيقات الحاسوب	Computer Applications	2	1	2
7	حقوق الانسان	Human rights and democracy	2	2	0
8	اللغة الانكليزية	English	2	2	0
Total			19	13	12

- **first stage / second semester**

N	Course Title		Units	Weekly Hours	
	Arabic	English		theoretical	Practical
1	الكيمياء العامة	General chemistry 2	4	2	4
2	التشريح	Anatomy	4	2	4
3	علم الاحياء البشري	Human biology 2	4	2	4
4	اجهزة المختبرات	Laboratory instruments 2	2	1	2
5	تطبيقات الحاسوب	Computer Applications 2	2	1	2
6	اللغة العربية	Arabic	2	2	-
Total			18	10	16

- **second stage / first semester**

N	Course Title		Units	Weekly Hours	
	Arabic	English		theoretical	Practical
1	البكتريا الطبية	Medical Bacteriology	4	2	4
2	الكيمياء الحياتية	Biochemistry	4	2	4
3	الفسلجة البشرية	Human physiology	3	2	2
4	انسجة	Histology	3	2	2
5	علم الاحياء الجزيئي	Molecular Biology	4	2	4
6	الطفيليات الطبية	Medical Parasitology	4	2	4
7	تطبيقات الحاسوب	Computer applications	2	2	4
8	جرائم حزب البعث	Crimes of the Ba'ath Party	2	2	-
Total			26	16	22

- **second stage / second semester**

N	Course Title		Units	Weekly Hours	
	Arabic	English		theoretical	Practical
1	البكتريا الطبية	Medical Bacteriology 2	4	2	4
2	الكيمياء الحياتية 2	Biochemistry 2	4	2	4
3	الفسلجة البشرية 2	Human physiology 2	3	2	2
4	انسجة 2	Histology 2	3	2	2
5	الطفيليات الطبية 2	Medical Parasitology 2	4	2	4
6	الاحصاء الحيوي	Descriptive biostatistics	2	1	2
7	اللغة العربية	Arabic	2	2	-
Total			20	11	18

- **Third Stage / first semester**

N	Course Title		Units	Weekly Hours	
	Arabic	English		theoretical	Practical
1	علم الامراض النسيجية	Histology	3	2	3
2	الوراثة البشرية	Human genetics	3	2	3
3	امراض الدم	Hematology	4	2	2
4	التقنيات المختبرات المتقدمة	Advance laboratory	4	2	2
5	علم الفطريات الطبية	Medical mycology	4	2	2
6	اضطرابات الأيض	Metabolic disorder	4	2	2
7	المناعة	immunology	4	2	2
8	تطبيقات الحاسوب	Computer applications	2	1	2
9	اللغة العربية	Arabic	2	1	-
Total			30	16	18

- **Third stage / second semester**

N	Course Title		Units	Weekly Hours	
	Arabic	English		theoretical	Practical
1	علم الامراض النسيجية	Histology 2	3	2	3
2	الوراثة البشرية	Human genetics 2	4	2	3
3	امراض الدم	Hematology 2	3	2	2
4	التقنيات المختبرات المتقدمة	Advance laboratory 2	3	2	2
5	علم الفايروسات الطبية	Medical Virology	4	2	2
6	علم الغدد الصماء السريرية	Clinical Endocrinology	4	2	2
7	علم المناعة 2	immunology 2	4	2	2
8	تطبيقات الحاسوب 2	Computer applications 2	2	1	2
Total			27	16	18

- **Fourth Stage / Annual System**

N	Course Title		Units	Weekly Hours	
	Arabic	English		theoretical	Practical
1	بكتريا تشخيصية	Bacterial diagnostic	8	2	4
2	طفيليات الطبية	Medical parasitology	8	2	4
3	الكيمياء السريرية المتقدمة	Advanced clinical Chemistry	8	2	4
4	المناعة السريرية	Clinical immunology	8	2	4
5	نقل دم	Blood transfusion	8	2	4
6	علم الامراض النسيجية	Histopathology	7	1	3
7	مشروع تخرج	Graduation Project	4	-	-
8	ادارة المختبرات	Laboratory management	2	1	-
9	اللغة الأنكليزية	English	2	1	-
10	اخلاقيات المهنة	Professional Ethics	2	1	-
Total			57	14	23

9. Personal Development PlanningProfessional training in recognized governmental or private laboratories approved by health authorities for a duration of two months, divided into two stages.
10. Admission Criteria (Establishment of regulations related to admission to the college or institute)
Centralized admission system.

11. Key Information Sources about the Program
□ College Registration Directorate □ Department Administration □ Official College Website on the Internet

Curricula
Department of Medical Laboratory Techniques
Academic Year 2025/2024
Courses

1. Course Title
Clinical Biochemistry – Second Stage
2. Course Code
BIE04202 BIE04201
3. Semester / Academic Year
First semester 2024-2025
4. Date of Course Description Preparation
2025/3/30
5. Attendance Requirements
Mandatory
6. Total Contact Hours / Total Units
Theory: 2 hours + Practical: 4 hours / Total Units: 8
7. Course Coordinator(s)
Name: Dr. Saad Mohammed Hassan Email: saad.mohammedhassan@au.edu.iq
8. course objectives
To provide foundational knowledge and essential concepts in clinical chemistry, and to develop the student's ability and skills in pathological analysis.
9. Teaching and Learning Strategies
10. Course Structure

week	hours	unite title	Intended Learning Outcomes	Learning Method	Assessment Method
1	Introduction of metabolism	Food energy	Introduction Clinical Biochemistry and Development of Student Skills in Clinical Chemistry	Lectures, visua presentations, interactive discussions, an self-directed learning	Oral, written, practical, daily, and monthly exams, as well as

					practical reports
2	Enzyme and Isoenzyme	Regulation of enzyme Activity by covalent Metabolism, michaeils-menten energy, inhibitors of enzymes deficient or defective enzyme: phenylketonuria, lactose dificiency	=	=	=
3-4	Carbohydrate metabolism	a- glycolysis b- TCA cycle	=	=	=
5	Fructose and Galactose metabolism	Disorder of fructose Metabolism, Disorder Of galactose metabolism	=	=	=
6	Glycogen metabolism	Regulation of glycogen Synthesis and degradation, Glycogen storage disease	=	=	=
7	Blood glucose And it is regulati	Hypoglycemia, diabetes Mellitus, and insulin metabolism	=	=	=
8-9	Protein metaboli	Fate of ammonia, Urea(normal values, uremia) amino acids as buffers, serum protein components insulin structure, selected inborn errors of amino acid metabolism	=	=	=
10	Lipid metabolism	Oxidation of fatty acids, Ketone bodies, Cholesterol metabolism, Lipoprotein metabolism, atherosclerosis	=	=	=
11	Nucleotide metabolism	Disorder of purines & Pyramidines metabolism, Uric acid synthesis & hyperuricemia	=	=	=
12	Hemoglobin	Synthesis and types metabolism of hemoglobin	=	=	=

13	Electrolytes	Na, K, Cl	=	=	=
14	Trace elements	Types and function	=	=	=
15	Toxicity	Factor effect toxicity, Composition of the toxic Agent, Dose and concentration	=	=	=

11. Course Evaluation
The final grade (out of 100) is distributed based on several components, including daily preparation and class participation, quizzes and daily exams, oral examinations, monthly written exams, practical reports and laboratory performance, and the final theoretical examination

12. Teaching and Learning Resources	
Prescribed Textbooks (Including Official Curriculum, if Available)	Clinical Biochemistry
Main References (Sources)	Essential biochemistry
Recommended Supporting Books and References (Scientific Journals, Reports)	**Clinical ChemistryJohannes Wilhelm Jens**
Electronic References and Internet Websites	Essential biochemistry **Clinical ChemistryJohannes Wilhelm Jens**

Course Description

1. Course Title
Clinical Chemistry Third Stage/
2. Course Code
CCH04300
3. Semester / Academic Year
First semester2023/2024
4. Date of Course Description Preparation
2025/3/30
5. Attendance Requirements
Mandatory
6. Total Contact Hours / Total Units
Theory: 2 hours + Practical: 2 hours / Total Units: 6
7. Course Coordinator(s)
Name: Dr. Saad Mohammed Hassan Email: saad.mohammedhassan@au.edu.iq
8. course objectives

To provide fundamental ideas and essential information related to pathological analyses in clinical chemistry and to familiarize the student with these concepts. The curriculum includes theoretical and scientific foundations of laboratory tests in clinical chemistry for various diseases, with special emphasis on urinary system examinations and tests of certain other organs that involve biochemical components. The course also incorporates important experiments using modern techniques in laboratory diagnostics, offering students an opportunity to gain new insights into qualitative testing.

9. Teaching and Learning Strategies

10. Course Structure

week	hours	Intended Learning Outcomes	unite title	Learning Method	Assessment Method
1	Mineral Metabolism	Electrolytes: Na, K, Cl, Mg Ca Trace elements: Fe, Cu, Zn, Mn, F	Introduction to Clinical Biochemistry and Development of Student Skills in Clinical Chemistry	Lectures, visual presentations, interactive discussions, and self-directed learning	Oral, written, practical, daily, and monthly exams, as well as practical reports
2	Blood gases	Acid-base balance, Blood pH& blood buffer	=	=	=
3-4	Diabetes mellitus	Type of diabetic, Fasting blood glucose, Random blood glucose, HbAic	=	=	=
5-6	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	=	=	=

7	Kidney	Functions Renal function tests Proteinuria Renal failure(acute:chronic)	=	=	=
8	Disorder in lipid metabolism	Cholesterol T.G, phospholipids lipoprotein Tests (lipid profile)	=	=	=
9-10	Heart	Enzymes affected in heart diseases and pulmonary embolism (infarction, angina, pulmonary embolism)	=	=	=
11	Pancreatic function, exocrine, function, Pathology	P.F.T Disease	=	=	=
12	Serum protein components diseases	Serum protein Electrophoreses, Immunoglobin compound	=	=	=
13	Tumor Markers	Boold urine and body Tissue	=	=	=
14	Enzymes isoenzymes patterns to pathology	T,Aldolase, CK, LDH LP, A.la T ASP . T AS Acp, A	=	=	=
15	General aspect of hormone	Transport regulation Thyroid, gastrointestinal steroid Hormones Parathyroid, adrenal hormone Sex hormones	=	=	=

11. Course Evaluation

The final grade (out of 100) is distributed based on several components, including daily preparation and class participation, quizzes and daily exams, oral examinations, monthly written exams, practical reports and laboratory performance, and the final theoretical examination

12. Teaching and Learning Resources

Prescribed Textbooks (Including Official Curriculum, if Available)	Clinical chemirsty
Main References (Sources)	Advance clinical chemistry
Recommended Supporting Books and References (Scientific Journals, Reports)	Advance clinical chemistry
Electronic References and Internet Websites	Advance clinical chemistry

1. Course Title
English language –stage three
2. Course Code
ENG04303
3. Semester / Academic Year
2024/2025
4. Date of Course Description Preparation
19/3/2024
5. Attendance Requirements
Mandatory
6. Total Contact Hours / Total Units
48 h
7. Course Coordinator(s)
name : Mustafa yahya Email: Mustafa.yahya@au.edu.iq

8. course objectives	
Course Objectives (stage three)	• Introducing students to the basic skills of the English language: (Listening-Reading-Speaking-Writing • Converting students from English language learners to English language users

9. Teaching and Learning Strategies				
Explain the mater to students interactively	Use of blackboard and slides	Involving students in the lecture	Answer students' questions	Ask questions to students

10. Course Structure

Week	Hours	Intended Learning Outcomes	unite title	Learning Method	Assessment Method
24	2	Qualifying th student to use the four skills of the Englis language	Headway Intermediate-student's Book with Work Book	Using the Blackboard and Slides	Attendance ,student participation and daily ,

					monthly and exams

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

12. Teaching and Learning Resources	
Prescribed Textbooks (Including Official Curriculum, if Available)	Headway Intermediate-student's Book with Work Book
Main References (Sources)	English for Foreign Students
Recommended Supporting Books and References (Scientific Journals, Reports)	
Electronic References and Internet Websites	Academic English for International Students

1. Course Title
English language - fourth stage
2. Course Code
ENG04404
3. Semester / Academic Year
2024-2025
4. Date of Course Description Preparation19/3/2024
30/3/2025
5. Attendance Requirements
mandatory
6. Total Contact Hours / Total Units
48 h
7. Course Coordinator(s)
name :Mustafa yahya mohammed ali EmailMustafa.yahya@au.edu.iq

8. course objectives	
Course Objectives **(fourth stage)**	Introducing students to the basic skills of the English language: Listening-Reading-Speaking-Writing Converting students from English language learners t English language users
9. Teaching and Learning Strategies	

Explain the mater to students interactively	Use of blackboard and slides	Involving students in the lecture	Answer students' questions	Ask questions to students

10. Course Structure

week	hours	Intended Learning Outcomes	unite title	Learning Method	Assessment Method
24	2	Qualifying the student to use the four skills o the English language	Headway Upper-Intermediate-Student's Bo with Work Book	Use of blackboard and slides	Attendance ,student participation and daily , monthly and quarterly exams

11. Course Evaluation

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

12. Teaching and Learning Resources

Prescribed Textbooks (Including Official Curriculum, if Available)	Headway-Upper Intermediate-student's Book with Work Book
Main References (Sources)	English for Foreign Students
Recommended Supporting Books and References (Scientific Journals, Reports)	
Electronic References and Internet Websites	Academic English for International Students

Course Description

1. Course Title
Histology second stage
2 . Course Code
HIS04201 HPH04203
3 .Semester / Academic Year
2024-2025
4 .Date of Course Description Preparation
2025 \4\1
5. Attendance Requirements
Sight
6. number Hours of study (total) / number of units (total)
2 hours theoretical + 2 hours practical
7. Course administrator's name
Name : Assist.L. Hussein Ali Email :Hussein.Ali@au.edu.iq
8. course objectives
1- Giving the student sufficient information about histology 2- Teaching the student how to detect the normal tissues in the body and diagnose the various - organs and examine them with a microscope
9. Course Structure

Week	hour	Required Learning Outcomes	Unit	Method of elevation	Learning method
The first and second week	2	epithelial Tissue, types and location	Epithelial Tissue	Theoretical/ practical /	Quizes, Semester Exam
Third week	2	Connective tissue	Connective tissue	Theoretical/ practical/	Quizes, Semester Exam

					Semester Exam , Reports
Fourth week	2	Cartilage	Connective tissue	/Theoretical practical/	Semester Exam , Reports
week 5	2	bone	Connective tissue	/Theoretical practical/	Semester Exam , Reports Experiences
week Sixth	2	blood	Connective tissue	/Theoretical practical/	Semester Exam , Reports
week seven	2	Muscle Tissue skeletal , smooth , cardiac muscle	Muscle Tissue	/Theoretical practical/	Semester Exam , Reports
week eight	2	Nervous tissue	Nervous tissue	/Theoretical practical/	Semester Exam , Reports

					Experiences
Ninth week	**2**	**Nervous system**	**Nervous system**	**/theoretical practical**	**Semester Exam , Reports**
Tenth and eleventh week	**2**	**Circulatory System, heart , arteries, veins, capillaries**	**Circulatory System**	**/Theoretical practical/**	**Semester Exam , Reports**
12th week and 13th week	**W for 2**	**Lymphatic system, lymphatic organs and tissue**	**Lymphatic system**	**/Theoretical practical/**	**Semester Exam , Reports**
14th week	**t 2**	**Skin, layers of skin, accessory organs of skin**	**skin**	**/Theoretical practical/**	**Semester Exam , Reports**
15th and 16th week	**2**	**respiratory system (upper organs)**	**Respiratory system**	**/Theoretical practical/**	**Semester Exam , Reports**

17th and 18th week	U 2	Respiratory system (lower organs)	Respiratory system	/Theoretical practical/	Semester Exam , Reports
19th and 20th week	2	Digestive system (upper organs)	Digestive system	/Theoretical practical/	Semester Exam , Reports
21th and 22 second week	2	Digestive system (lower organs)	Digestive system	/Theoretical practical/	Semester Exam , Reports
23th and 24th week	2	Urinary system	Urinary system	/Theoretical practical/	Semester Exam , Reports
25th and 26th week	2	Endocrine system	Endocrine system	/Theoretical practical/	Semester Exam , Reports
27th week	2	male reproductive system	Male reproductive system	/Theoretical practical/	Semester Exam , Reports

Course Description

1. Course Title
Clinical Biochemistry – stage 2
2. Course Code
BIE04201 BIE04202
3. Semester / Academic Year
First semester 2025/2024
4. Date of Course Description Preparation
1/3/2025
5. Attendance Requirements
Mandatory
6. Total Contact Hours / Total Units
Theory: 2 hours + Practical: 4 hours / Total Units: 8
7. Course Coordinator(s)
Name: M.D. Sa'ad M. Hasan Email: saad.mohammedhassan@au.edu.iq
8. course objectives
Give an idea and basic information in clinical chemistry And develop the student's ability and skill in pathological analyzes
9. Teaching and Learning Strategies

10. Course Structure					
week	Hours	Intended Learning Outcomes	unite title	Learning Method	Assessment Method

1	Introduction of metabolism	Food energy	Getting to know chemistry Life Clinical and skills development Student In Clinical chemistry	Lecture & Illustration And discussion Interactivity and self-education	Oral, written, practical, daily, monthly tests and practical reports
2	Enzyme and Isoenzyme	Regulation of enzyme Activity by covalent Metabolism, michaeils-menten energy, inhibitors of enzymes deficient or defective enzyme: phenylketonuria, lactose dificiency	=	=	=
3-4	Carbohydrate metabolism	a- glycolysis b- TCA cycle	=	=	=
5	Fructose and Galactose metabolism	Disorder of fructose Metabolism, Disorder Of galactose metabolism	=	=	=
6	Glycogen metabolism	Regulation of glycogen Synthesis and degradation, Glycogen storage disease	=	=	=
7	Blood glucose And it is regulati	Hypoglycemia, diabetes Mellitus, and insulin metabolism	=	=	=
8-9	Protein metaboli	Fate of ammonia, Urea(normal values, uremia) amino acids as buffers, serum protein components insulin structure, selected inborn errors of amino acid metabolism	=	=	=
10	Lipid metabolism	Oxidation of fatty acids, Ketone bodies, Cholesterol metabolism, Lipoprotein metabolism, atherosclerosis	=	=	=
11	Nucleotide metabolism	Disorder of purines & Pyramidines metabolism, Uric acid synthesis & hyperuricemia	=	=	=

12	Hemoglobin	Synthesis and types metabolism of hemoglobin	=	=	=
13	Electrolytes	Na, K, Cl	=	=	=
14	Trace elements	Types and function	=	=	=
15	Toxicity	Factor effect toxicity, Composition of the toxic Agent, Dose and concentration	=	=	=

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

12. Teaching and Learning Resources	
Prescribed Textbooks (Including Official Curriculum, if Available)	Clinical Biochemistry
Main References (Sources)	Essential biochemistry
Recommended Supporting Books and References (Scientific Journals, Reports)	Clinical Chemistry Johannes Wilhelm Jens
Electronic References and Internet Website	Essential biochemistry Clinical Chemistry Johannes Wilhelm Jens

Course Description

1. Course Title
Clinical Chemistry - Stage 3
2. Course Code
CCH04300
3. Semester / Academic Year
First semester 2025/2024
4. Date of Course Description Preparation
2024/3/30
5. Attendance Requirements
Mandatory
6. Total Contact Hours / Total Units
Theory: 2 hours + Practical: 2 hours / Total Units: 6
7. Course Coordinator(s)
Dr.Saad mohammed Email saad.mohammedhassan@au.edu.iq

8. course objectives

Course Objectives

- **Give an idea and background information related to analytics**
  Pathological in relation to clinical chemistry and definition

- **The student learns the vocabulary of the curriculum topics in the foundations**
  Theoretical and scientific laboratory tests in clinical chemistry of
  various diseases with special emphasis
- **On urinary system examinations and examination of some other organs**
- **Which are biochemical components**
- **experiments with modern technologies in laboratory diagnosis**
  So that it gives the student a new opportunity to get to know
  Qualitative Tests

9. Teaching and Learning Strategies

10. Course Structure

week	hours	Intended Learning Outcomes	unite title	Learning Method	Assessment Method
1	Mineral Metabolism	Electrolytes: Na, K, Cl, Mg Ca Trace elements: Fe, Cu, Zn, Mn, F	Learn about chemistry Life Clinical and the developmer of student skills in clinical chemistry	Lecture & Offers Illustration and interactive discussion and self-education	Oral, written, practical, daily, monthly tests and practical reports
2	Blood gases	Acid-base balance, Blood pH& blood buffer	=	=	=
3-4	Diabetes mellitus	Type of diabetic, Fasting blood glucose, Random blood glucose, HbAic	=	=	=
5-6	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			
7	Kidney	Functions Renal function tests Proteinuria Renal failure(acute:chronic)	=	=	=
8	Disorder in lipid metabolism	Cholesterol T.G, phospholipids lipoprotein Tests (lipid profile)	=	=	=
9-10	Heart	Enzymes affected in heart diseases and pulmonary embolism (infarction, angina, pulmonary embolism)	=	=	=
11	Pancreatic function, exocrine, function, Pathology	P.F.T Disease	=	=	=
12	Serum protein components diseases	Serum protein Electrophoreses, Immunoglobin compound	=	=	=
13	Tumor Markers	Boold urine and body Tissue	=	=	=
14	Enzymes isoenzymes patterns to pathology	T,Aldolase, CK, LDH LP, A.la T ASP . T AS Acp, A	=	=	=
15	General aspect of hormone	Transport regulation Thyroid, gastrointestinal steroid Hormones Parathyroid, adrenal hormone Sex hormones	=	=	=

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

12. Teaching and Learning Resources	
Prescribed Textbooks (Including Official Curriculum, if Available)	Clinical Chemistry
Main References (Sources)	Advance clinical chemistry
Recommended Supporting Books and References (Scientific Journals, Reports)	Advance clinical chemistry
Electronic References and Internet Websites	Advance clinical chemistry

Course Description

1. Course Title					
English first stage					
2. Course Code					
ENN04101					
3. Semester / Academic Year					
First 2024-2025					
4. Date of Course Description Preparation					
19/3/2025					
5. Attendance Requirements					
mandatory					
6. Total Contact Hours / Total Units					
36					
7. Course Coordinator(s)					
name : Mustafa yahya EmailMustafa.yahya@au.edu.iq					
8. course objectives					
		• Introduce students to medical terminology relevant to their academic specialization Enable students to use medical terminology in Their theoretical and practical studies			
9. Teaching and Learning Strategies					
Explain the material to students interactively		Use of blackboard and slides	Involving students in the lecture	Answer students' questions	Ask questions to students
10. Course Structure					

week	Hours	Intended Learning Outcomes	unite title	Learning Method	Assessment Method
12	3	Qualifying the student to use medical terminolo	English for Medicine and Health Sciences	Using the Blackboa and Slide	Attendance, student participation and daily, monthly and quarterly exams

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

12. Teaching and Learning Resources	
Prescribed Textbooks (Including Official Curriculum, if Available)	English for Medicine and Health Sciences
Main References (Sources)	Open MD Medical Dictionary
Recommended Supporting Books and References (Scientific Journals, Reports)	
Electronic References and Internet Websites	Merriam-Webster Medical Dictionary

Course Description

1. Course Title
Principle computer third stage
2. Course Code
COM04101 COM04102
3. Semester / Academic Year
2024/2025
4. Date of Course Description Preparation
1/3/2025
5. Attendance Requirements Mandatory

6. Number of hours (total) / 45 Number of units (total) 2

45 h

7. Course administrator name

Name: Qusay loa'y saihood
Email: qusaysaihood@au.edu.iq

8. course objectives

Providing the student with the skills of dealing with basic office applications and creating off files and documents. and the use of

.The operating system is a substitute for the basics of working within the digital environment

9. Teaching and Learning Strategies

1. Lecturers
2. Use of legends inside the hall
3. INTERACTIVE LECTURE Interactive Lecture
4. HIRINGDATASHOW

10. Course Structure

week	hours	Intended Learning Outcomes	unite title	Learning Method	Assessment Method
First	3	The student understands the material	Computer Fundamental Computer Computer concept, computer life cycle phases The development of compute generations	Theoretical + Practical	Daily Exam + attendan ce
Second	3	The student understands the material	Computer advantages a areas of use Compute classification in terms	Theoretical + Practical	Daily Exam +

			purpose, size and type data		attendance
Third	3	The student understands the material	Computer Component	Theoretical + Practical	Daily Exam + attendance
Fourth	3	The student understands the material	Your personal computer computer security conce and software licenses	Theoretical + Practical	Daily Exam + attendance
fifth	3	The student understands the material	Computer Security and Software Licenses Licences Software & Computer Safety	Theoretical + Practical	Daily Exam + attendance
Sixth	3	The student understands the material	Creating the electronic world, forms of abuse, computer security, computer privacy	Theoretical + Practical	Daily Exam + attendance
Seventh	3	The student understands the material	Computer software licenses and types, intellectual property, electronic penetration, malware, most importan Steps to protect against hacking, computer dam to health	Theoretical + Practical	Daily Exam + attendance
Eighth	3	The student understands the material	Operating Systems Operating Operating System Definition, Functions, Objectives, Classification Examples of some operating syster	Theoretical + Practical	Daily Exam + attendance
Ninth	3	The student understands the material	Operating Systems / Windows 7 Operating System	Theoretical + Practical	Daily Exam + attendance
Tenth	3	The student understands the material	Desktop components / taskbar Start menu	Theoretical + Practical	Daily Exam + attendance
Eleventh	3	The student understands the material	Folders, files, and icons	Theoretical + Practical	Daily Exam + attendance
Twelfth	3	The student understands the material	Perform operations on windows desktop wallpapers	Theoretical + Practical	Daily Exam + attendance

Thirteenth	3	The student understands the material	Control Panel Control Groups (Category)	Theoretical + Practical	Daily Exam + attendance
Fourteenth	3	The student understands the material	From the Defragment control panel, organize files inside the computer install and delete progra	Theoretical + Practical	Daily Exam + attendance
Fifteenth	3	The student understands the material	Some common condition and settings in the computer, printer management, time and date settings, primary d maintenance	Theoretical + Practical	Daily Exam + attendance

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

12. Teaching and Learning Resources	
Prescribed Textbooks (Including Official Curriculum, if Available)	
Main References (Sources)	
Recommended Supporting Books and References (Scientific Journals, Reports)	
Electronic References and Internet Websites	

Course Description

1. Course Title Professional Ethics
Ethics first stage
2. Course Code
PRE04400
3. Semester / Academic Year
2024/2025
4. Date of Course Description Preparation
3/2/2025
5. Attendance Requirements
Mandatory
6. Number ofhours (2)/Number of units)2(

30 h

7. Course Coordinator(s)

Assist.L Hussein Ali Kamil
Email: Hussein.Ali@eud.ir

8. course objectives

Enhance the ability to overcome emerging problems.
The link between the system of moral values and creative abilities.
Creating a good productive reputation among organizations.
Remove the authoritarian character of an administration

9. Teaching and Learning Strategies

1. Lectures
2. Using the means of illustration inside the hall
3. Interactive lectures

10. Course Structure

week	hours	Intended Learning Outcomes	unite title	Learning Method	Assessment Method
1	2		The concept of ethics and its origin	View lectures On the screen Smart	Quick Question s
1	2		Work and its importance	View lectures On the screen Smart	Quick Question s
1	2		What is professional ethics?	View lectures On the screen Smart	Quick Question s

1	2		Sources of Ethics	View lectures On the screen Smart	Quick Questions
1	2		Honesty. Honesty. Advice. Justice.	Presentation o lectures on the smart screen	Quick Questions
1	2		Good handling. Workmanship.	View lectures On the screen Smart	Quick Questions
1	2		**Administrative corruption.** Unethical administrative behavior. Definition of administrative corruption. Types of administrative corruption	View lectures on Smart Screen	Quick Questions
1	2		**Bribery**. The concept of bribery. Types of bribery. The difference between a gift and a bribe. The reasons and motives behind the bribe**.Cheating.** The concept of cheating. The nature of cheating at work. Manifestations of job fraud	View lectures On the screen Smart	Quick Questions
1	2		The method of consolidating professional ethics. Levels of building and consolidating professional ethics. Means and methods of	View lectures On the screen Smart	Quick Questions

			consolidating professional ethics		
1	2		Things to be taken into account in drafting the ethical code of the profession. How ethical behavior at work is promoted according to Kreitner and Kinnicki.	View lectures On the screen Smart	Quick Question s
1	2		Items of the regulation of practicing the profession of the trade union. The Islamic view of professional ethics, compared to the Western and American view	View lectures On the screen Smart	Quick Question s
1	2		Functional behavior of administrative leaders (managers and bosses). Job behavior of employees and workers and professional relationships with bosses and co-workers. Professional behavior and dealing with citizens**.**	View lectures On the screen Smart	Quick Question s
1	2			View lectures On the screen Smart	Quick Question s

11. Course Evaluation

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

12. Teaching and Learning Resources

Prescribed Textbooks (Including Official Curriculum, if Available)	Professional ethics book
Main References (Sources)	Professional ethics book
Recommended Supporting Books and References (Scientific Journals, Reports)	
Electronic References and Internet Websites	Related Websites & Scientific Researcher

Course Description

1. Course Title
Medical terminology first stage
2. Course Code
AMT04101
3. Semester / Academic Year
2024/2025
4. Date of Course Description Preparation
2025/03/24
5. Attendance Requirements
Theoretical lectures in the hall
6. Total Contact Hours / Total Units
30 h
7. Course Coordinator(s)
Name: Assist.prof.Taha yassen Emil: taharo200@yahoo.com
8. course objectives
Course Objectives **1- Knowledge of medical terminology as a cornerstone in the assimilation of clinical sciences in his field of specialization** **2-** Studying important medical terms in the student's field of specialization
9. Teaching and Learning Strategies

Theoretical lectures Engage students in the discussion

10. Course Structure					
week	hours	Intended Learning Outcomes	unite title	Learning Method	Assessment Method

First Second Third Fourth V Sixth Seventh Eighth Ninth X Eleventh Twelfth Thirteenth Fourteenth Fifteenth	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2		Introduction, defining medical terminology, techniques of medical word building, elements of medical word, word root, suffixes, prefixes Common prefixes, common suffixes ,body structure key terms ,level of organization: cell, tissue,organ, system Pathology and abnormal condition :tumors, infection and inflammation ,symptoms ,disease , and diagnosis Integumentary (skin) system Musculoskeletal system Digestive system and Cardiovascular system Blood, lymph and immune system Respiratory system Nervous system and Special senses Endocrine system Urinary system and Reproductive system Gynaecology, pregnancy ,embryology and childbirth Childhood, growth and development Medical record activity and writing a diagnostic report Revision	theoretical theoretical theoretical theoretical theoretical theoretical theoretical theoretical theoretical theoretical	Questions, discussions and exam

11. Course Evaluation

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

12. Teaching and Learning Resources	
Prescribed Textbooks (Including Official Curriculu if Available)	
Main References (Sources)	Nath, Judi Lindsley; Lindsley, Kelsey P. A Short Course in Medical Terminology. Wolters Kluwer Health, 2018
Recommended Supporting Books and References (Scientific Journals, Reports)	
Electronic References and Internet Websites	

Course Description

1. Course Title
Computer Applications first stage
2. Course Code Computer Applications
CAP04302
3. Semester / Academic Year
2024/2025
4. Date of Course Description Preparation
2025/3/30
5. Attendance Requirements
Mandatory
6. Number of hours (total) / 90 Number of units (total) 2
30
7. Course Coordinator(s)
name : Qusay loay saihood. Email: qusaysaihood@au.edu.iq
8. course objectives
Providing the student with the skills of dealing with basic office applications and creating office files and documents. and the use of .The operating system is a substitute for the basics of working within the digital environment
9. Teaching and Learning Strategies
5. Lecturers 6. Use of legends inside the hall 7. INTERACTIVE LECTURE Interactive Lecture 8. HIRINGDATASHOW
10. Course Structure

week	hours	Intended Learning Outcomes	unite title	Learning Method	Assessment Method
First	3	The student understands the material	Learn about Excel, its benefits, specifications, concept and operation	Theoretical + Practical	Daily Exam + attendance

Second	3	The student understands the material	Identify the home scree its components, tools, a menu bar	Theoretical + Practical	Daily Exam + attendan ce
Third	3	The student understands the material	The concept of the cel types of basic data an how to enter them	Theoretical + Practical	Daily Exam + attendan ce
Fourth	3	The student understands the material	HOW TO SAVE A WORK BOOK FILE SHUT DOWN THE FIL AND SHUT DOWN TH PROGRAM	Theoretical + Practical	Daily Exam + attendan ce
V	3	The student understands the material	Open a saved file Enter data and perform simple calculations and cell formatting methods	Theoretical + Practical	Daily Exam + attendan ce
Sixth	3	The student understands the material	Learn about ways to coll data or group cells in the different forms and sort data	Theoretical + Practical	Daily Exam + attendan ce
Seventh a eighth	3	The student understands the material	Using some common functions Count , Sqrt, Average, Sum, Min, Max Cell retouching process Copy data, transfer, copy absolute and relative cell calculations	Theoretical + Practical	Daily Exam + attendan ce
Ninth and tenth	3	The student understands the material	Control cell width Change its style with formatting tools Dealing with charts charts and their various components and elements and identifying their types	Theoretical + Practical	Daily Exam + attendan ce
Eleventh and twelft	3	The student understands the material	Methods of creating charts and choosing different types of charts and their concept Modifying data and charts and making various revisions to them	Theoretical + Practical	Daily Exam + attendan ce

Thirteenth and fourteent	3	The student understands the material	Dealing with Lists , List Creation Conditions Sort Lists Sorting Filtering process, especially automatic and advanced filtering	Theoretical + Practical	Daily Exam + attendance
Fifteenth and sixteenth	3	The student understands the material	How to add or delete rows or columns How to print a practical/ page as data and charts Statistical program SPSS concept run data analysis steps	Theoretical + Practical	Daily Exam + attendance
Seventeer Eighteenti	3	The student understands the material	Main screen components Data entry, saving and retrieving the file Data types directly and calculated Sort and switch data, determine the statistical procedure Insert a variable or the status of the merge of files	Theoretical + Practical	Daily Exam + attendance
Nineteent Twentieth	3	The student understands the material	Descriptive analysis statistical data summary, data exploration reports by row or column Comparison of averages, comparison of linear regression variables	Theoretical + Practical	Daily Exam + attendance
Twenty-one, twenty-second	3	The student understands the material	Conducting nonparametric tests such as chi-squared Quality Control Applications	Theoretical + Practical	Daily Exam + attendance
XXIII, XXIV	3	The student understands the material	Dealing with charts, lines, columns, circular representation of ratios, spread chart and others	Theoretical + Practical	Daily Exam + attendance

			Dealing with statistical applications such as cross tables		
Twenty-fifth, twenty-sixth, twenty-seventh	3	The student understands the material	One-way variance analysis model Basic statistical tables Power Point program concept - benefits Operation Main screen components Presentation concept Build a new presentation with ready-made templates Save the file Make the presentation Modify and save changes, plan to build a presentation	Theoretical + Practical	Daily Exam + attendance
XXVIII, XXIX, X	3	The student understands the material	How to add graphics through drawing tools, insert a new slide Text or graphics Putting notes Entering titles Editing text Control its form Control the colors and floor of the slide, add ready-made art clips or media and images Zoom in and out Add charts or tables from Excel Or data from Access to deal with display commands such as timing for moving slides and animation methods Putting sound effects for slides	Theoretical + Practical	Daily Exam + attendance

11. Course Evaluation	
Distribution of the score out of 100 according to the tasks assigned to the student such as daily preparation, daily, oral, monthly, written exams, reports .... etc	
12. Teaching and Learning Resources	
Prescribed Textbooks (Including Official Curriculum, if Available)	
Main References (Sources)	

Recommended Supporting Books and References (Scientific Journals, Reports)	
Electronic References and Internet Websites	

Course Description

1. Course Title
(Molecular Biology) second stage
2. Course Code
MOB04201
3. Academic year
2024/2025
4. Date of Course Description Preparation
2025\3\19
5. Attendance Requirements
(Mandatory)
6. Number ofhours of study)2(+ practical (4) \number of units)4(
7. Course Coordinator(s)
name Hussein Ali Komall Mehmet:Email:Hussainalobaidy41@gmail.com
8. course objectives
Introducing the student to biology - biological activities (DNA replication - DNA cloning - DNA translation) - mutations Genetics and its reform: regulation of genetic expression
9. Teaching and Learning Strategies

10. Course Structure

week	hours	Intended Learning Outcomes	unite title	Learning Method	Assessment Method
1	Learn about biology	Learn about biology – Biological events (DNA replication – DNA cloning – translation DNA) – mutations Genetic and its repair :	Learn about biology	Lecture and Offers Illustration and discussion Interactive & Education Self	Oral tests Editorial and practical Daily and monthly and scientific reports

		Regulation of genetic expression			
2		Learn about biology – Biological events (DNA replication – DNA cloning – translation DNA) – mutations Genetic and its repair : Regulation of genetic expression	– Biological events	=========	=========
3			(DNA replication –	=========	=========
4			DNA cloning – translation	=========	=========
A5			DNA) – mutations	=========	=========
6			Genetic and its repair :	=========	=========
7			Regulation of genetic expression	=========	=========
8			Objective of the biological	=========	=========
9			Translation	=========	=========
10			Stages of chain synthesis	=========	=========
11			Peptide in prokaryotic = =	=========	=========
12			= Mutations = 11 mutations	=========	=========
13			12 Mutant agents	=========	=========
14			Regulating the effectiveness of genes Regulation of Gene Activity	=========	=========
15			Final Exam	=========	=========

11. Course Evaluation

Distribution of the score out of 100 according to the tasks assigned to the student such as daily preparation, daily, oral, monthly, written exams, reports .... etc
Short oral and written tests-
-Reporting
Tests – practical exams
Homework
- Other contributions and activities

12. Teaching and Learning Resources

Prescribed Textbooks (Including Official Curriculum, if Available)	Molecular Biology
Main References (Sources)	Molecular Biology
Recommended Supporting Books and References (Scientific Journals, Reports)	Molecular Biology
Electronic References and Internet Websites	Molecular Biology

Course Description

1. Course Title
Research project fourth stage
2. Course Code
LMA04400
3. Academic year
2024/2025
4. Date of Course Description Preparation
1/2/2025
5. Attendance Requirements
(Mandatory)
6. Number of hours (46)/Number of units (2)
7. Course administrator name
Prof.dr.Falih Hassan Email:falih.hassan@au.edu.tr
8. course objectives
Teaching the student how to develop a plan about the idea of research departments writing the researc
9. Teaching and Learning Strategies
• Videos include how to write research ideas work discussion • Plan for the organization of laboratory materials directories
10. Course Structure

week	hours	Intended Learning Outcomes	unite title	Learning Method	Assessment Method
1	**1 hour**	Learn about laboratory management	Laboratory premises • . General design objective • .laboratory type and classification	Lecture and Offers Illustration and discussion	Oral tests Editorial and practical Daily and monthly and scientific reports

				Interactive & Education Self	
2	**1 hour**	========	The role of the laboratory in the diagnosis and control of the infection	===	===
3	**1 hour**	==========	Laboratory management. ▪ Definition ▪ Who are the mangers in health laboratories ▪ Level of the management ▪ Planning ,organization,controling	===	===
4	**1 hour**	==========	Mission of health Laboratory services. ▪ Laboratory contribution to patient care and community health ▪ Laboratory contribution to public health services in the community	===	===
A5	**1 hour**	==========	Planning ▪ Definition ▪ The planning function ▪ Strategic planning. ▪ Determining priorities ▪ Approaches to setting the goal and objective.	===	===
6	**1 hour**	==========	Organization ▪ Definition ▪ Structural organization ▪ The organizing process ▪ Organization of supervision ▪ Organization charts	===	===
7	**1 hour**	==========	Direction ▪ Definition ▪ Direction and people ▪ Motivation of staff ▪ Practical approaches to enhance motivation in the laboratories	===	===

8	**1 hour**	==========	Leadership ▪ Definition ▪ Leadership style ▪ Useful characteristics for selective leadership	===	===
9-10	**1 hour**	==========	Controlling ▪ Definition ▪ Pre-analytical control ▪ Biological source of variation, Genetic, Sex, Age, etc……..	===	===
11	**1 hour**	==========	Laboratory communication with the administration ▪ Communication with disease surveillance programmer ▪ Laboratory communication with clinicians	===	===
12	**1 hour**	==========	Data handling and data processing ▪ Personal data of patient ▪ Record keeping ▪ Outlier test	===	===
13	**1 hour**	==========	Use of the computer for control laboratory performance	===	===
14	**1 hour**	==========	Laboratory equipment preventive maintenance programmer. ▪ Purpose ▪ Advantage	===	===
15	**1 hour**	==========	Inventory control system for laboratory supplies ▪ Work analysis chart ▪ Items identification per laboratory section ▪ Establishment of laboratory requisitioning procedure	===	===

11. Course Evaluation

Distribution of the score out of 100 according to the tasks assigned to the student such as daily preparation, daily, oral, monthly, written exams, reports .... etc
Short oral and written tests-
-Reporting
Tests – practical exams

Homework - Other contributions and activities	
12. Teaching and Learning Resources	
Prescribed Textbooks (Including Official Curriculum if Available)	
Main References (Sources)	Through the scientific sites in the laboratory management curriculum
Recommended Supporting Books and References (Scientific Journals, Reports)	Laboratory Management Book Laboratory management
Electronic References and Internet Websites	Related scientific research

Course Description

1. Course Title
Blood transfusion fourth stage
2. Course Code Blood transfusion
BTR04400
3. Academic year
2024/2025
4. Date of Course Description Preparation
3/3/2025
5. Attendance Requirements
(Mandatory)
6. Number of study hours
46 h
7. Course Coordinator(s)
name Hussein Ali Komall: Email:Hussainalobaidy41@gmail.com
8. course objectives
1- The student must master the process of drawing blood **2- - The student should recognize the blood groups** **3- - To learn some laboratory tests for blood transfusion** **4- Understand how to compare the results obtained with normal ratios -**
9. Teaching and Learning Strategies

- Conducting fun scientific competitions (individual or team).
- Organizing lectures prepared by students.
- Forming volunteer work groups.
- Scientific trips

10. Course Structure

week	hours	Intended Learning Outcomes	unite title	Learning Method	Assessment Method
1	2hours	Identify blood bank units	Introduction to Blood banking	theore tical	Theory test + Practical weekly
2	2hours	Donor selection process	Blood donation selection of donation	theoretical	Theory test + Practical weekly
3	2hours	Donor selection process	Blood donation selection of donation	theoretical	Theory test + Practical weekly
4	2hours	Donor tests	Test for donated blood	theoretical	Theory test + Practical weekly
5	2hours	Performance of the test success h	Test for donated blood	theoretical	Theory test + Practically weekly
6	2hours	Performance of the test success h	Test for donated blood	theoretical	Theory test + Practical weekly
7	2hours	Blood groups	The human blood groups	theoretical	Theory test + Practical weekly

8	2hours	Understanding the scientific material	The human blood groups	theoretical	Theory test + Practical weekly
9	2hours	Rhesus Factor	Rh system	theoretical	Theory test + Practical weekly
10	2hours	Blood analysis of the parent child D	Hemolytic Disease of the Newborn	theoretical	Theory test + Practical weekly
11	2hours	Complications that Occur after an operation Donate	Complication of disease by blood transfusion	theoretical	Theory test + Practical weekly
12	2hours	Understanding the scientific material	Complication of disease by blood transfusion	theoretical	Theory test + Practical weekly
13	2hours	Understanding the scientific material	Complication of disease by blood transfusion	theoretical	Theory test + Practical weekly
14	2hours	Understanding the scientific material	Complication of disease by blood transfusion	theoretical	Theory test + Practical weekly
15	2hours	Diseases transmitted during the donation process	Transmission disease of blood transfusion	theoretical	Theory test + Practical weekly
16	2hours	AIDS transmission	aids and blood transfusion	theoretical	Theory test + Practical weekly
17	2hours	Types of tubes used in the required analyzes	The types of anticoagulants use in hematology	theoretical	Theory test + Practical weekly
18	2hours	Understanding the scientific material	The types of anticoagulants use in hematology	theoretical	Theory test + Practical weekly

19	2hours	Understanding the scientific material	Autologous blood transfusion	theoretical	Theory test + Practical weekly
20	2hours	Understanding the scientific material	Anti –human globulin	theoretical	Theory test + Practical weekly
21	2hours	Hemolysis	Hemolytic anemia	theoretical	Theory test + Practical weekly

11. Course Evaluation
Distribution of the score out of 100 according to the tasks assigned to the student such as daily preparation, daily, oral, monthly, written exams, reports .... etc Short oral and written tests- -Reporting Tests – practical exams Homework - Other contributions and activities

12. Teaching and Learning Resources	
Prescribed Textbooks (Including Official Curriculum, if Available)	
Main References (Sources)	Islamic University of Gaza , Practical Hematology , Gaza , 2014
Recommended Supporting Books and References (Scientific Journals, Reports)	Hematology International Journal
Electronic References and Internet Websites	Local and international university websites

Course Description

1. Course Title
(Medical parasites and insects) second stage
2. Course Code
MPE04202 MIP04201
3. Academic year
2024/2025
4. Date of Course Description Preparation
1/3/2025
5. Attendance Requirements(
Mandatory
6. Number ofhours (2)/Number of units)4(
7. Course Coordinator(s)

Name: Dr. Joan Sabah JumaEmailjwansabah@gmail.com

8. course objectives

Course Objectives	1) Identify the types of helminths that infect humans, insects and diseases caused by them 2) Know their life cycles to get to how to control them and reduce their harms cycles Life. 3) identify the types of relationships between organisms 4) Finding methods, methods or drugs that can get rid of parasitic diseases cure . 5) Know where they are and the environments in which they are deployed methods and detect the various injuries caused diagnostic Identify (6 . Mode of Infectionby them and the ways of transmission

9. Teaching and Learning Strategies

1) Explain lectures to students interactively
2) Use different means of illustration
3) Involving students in the lecture

10. Course Structure

week	hours	Intended Learning Outcomes	unite title	Learning Method	Assessment Method
First	2	Morphology & the adult warm and the larval stages of each species, biology, life cycle of each species, pathologinicity of each species, Lab. Diagnosis	Platyhelminth: General characters Class cestode *Taenia saginata: Teania solium:*	theoretical	**Quiz,** attend ance
Second	2	**Biology, morphology, pathoginicity of eachspecies,Lab. Diagnosis**	***Hymenolepis nana, Hymenolepisdiminuta.***	theoretical	**Quiz,** attendance
Third	2	**Biology, morphology, pathoginicity of eachspecies,Lab. Diagnosis**	***Diplidium caninu Diphyllobathrium latum***	theoretical	**Quiz,** attendance
Fourth	2	**Biology, life cycle, pathoginicity, medical importance of hydatid cyst disease ,Lab. Diagnosis.**	***Echinococcus granulosus.***	theoretical	**Quiz,** attend ance

V and the sixth	2	**Specis of human schistosoma, life cycle. Biology of adult worm, habitat, pathgenicity,Lab.diagnosis**	**Class Trematoda: General characters.** ***Schistosoma. Schistosoma hematobium. Schistosoma mansoni.***	theoretical	**Quiz,** attend ance
Seventh	2	**Biology , life cycle, pathogenicity, Lab diagnosis. Nemathelminthis.ClssNemtoda, general characters.**	**Fasciula hepatica**	theoretical	**Quiz,** attend ance
Eighth	2	**Biology of adult worm,lifecycle, pathgenicity and medical importanceof each species, Lab. Diagnosis of each species.**	**Ascaris lambricoides Enterobius vermicularis.**	theoretical	**Quiz,** attend ance
Ninth	2	**Biology , life cycle , pathogenicity, medical importanceof each species, Lab. Diagnosis of each species.**	**Trichuris trichura.**	theoretical	**Quiz,** attend ance
X	2	**Biology , life cycle , pathogenicity, medical importanceof each species, Lab. Diagnosis of each species.**	**Trichenala spiralis.**	theoretical	**Quiz,** attend ance
atheist ten	2	**Biology, life cycle, pathgenicity, medical importance, Lab. Diagnosis.**	**Strogyloides stercoralis.**	theoretical	**Quiz,** ttendance
Second and the third ten	2	**Biology, life cycle, pathogenicity, medical importance of each species, Lab. Diagnosis.**	**Ancylostoma duadenale ,Necator Americans (Hooks worm)**	theoretical	**Quiz,** attendance
Fourth ten	2	**Biology, pathgenicity and medical importance of each species, Lab. Diagnosis of each species. Visceral larvae migrance, Cutaneaus larvae migrance.**	**The filariae:**	theoretical	**Quiz,** attend ance

V ten	2	**Transmitting and disease**	**Arthropods**	theoretical	**Quiz,** attendance

11. Course Evaluation	
Distribution of the score out of 100 according to the tasks assigned to the student such as daily preparation, daily, oral, monthly, written exams, reports .... etc	
12. Teaching and Learning Resources	
Prescribed Textbooks (Including Official Curriculum, if Available)	**Medical parasitology**
Main References (Sources)	**Medical parasitology books**
Recommended Supporting Books and References (Scientific Journals, Reports)	
Electronic References and Internet Websites	

Description course

1. Course Title
Medical terminology first stage
2. Course Code
AMT04101
3. Semester / Academic Year
2024/2025
4. Date of Course Description Preparation
2025/03/24
5. Attendance Requirements
Theoretical lectures in the hall
6. Total Contact Hours / Total Units
hours theoretical weekly 30 hours theoretical 2
7. Course Coordinator(s)
Email name Assoc. Prof. Taha Yassin Ghanitaharo200@yahoo.com
8. course objectives
Course Objectives **1- Knowledge of medical terminology as a cornerstone in the assimilation of clinical sciences in his field of specialization** Studying important medical terms in the student's field of specialization -2 •

9. Teaching and Learning Strategies							
Theoretical lectures Engage students in the discussion Use of legends Diversity in explaining the article							

10. Course Structure					
week	hours	Intended Learning Outcomes	unite title	Learning Method	Assessment Method

First	2		Introduction, defining medical terminology, techniques of medical word building, elements of medical word, word root, suffixes, prefixes	theoretical	Questions, discussions and exam
Second	2		Common prefixes, common suffixes ,body structure key terms ,level of organization: cell, tissue,organ, system	theoretical	
Third	2		Pathology and abnormal condition :tumors, infection and inflammation ,symptoms ,disease , and diagnosis	theoretical	
Fourth	2		Integumentary (skin) system	theoretical	
V	2		Musculoskeletal system		
Sixth	2		Digestive system and Cardiovascular system		
Seventh	2		Blood, lymph and immune system	theoretical	
Eighth	2		Respiratory system	theoretical	
Ninth	2		Nervous system and Special senses	theoretical	
X	2		Endocrine system		
Eleventh	2		Urinary system and Reproductive system	theoretical	
Twelfth	2		Gynaecology, pregnancy ,embryology and childbirth	theoretical	
Thirteenth	2		Childhood, growth and development	theoretical	
Fourteenth	2		Medical record activity and writing a diagnostic report		
Fifteenth	2		Revision		

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

12. Teaching and Learning Resources	
Prescribed Textbooks (Including Official Curriculu if Available)	

Main References (Sources)	Nath, Judi Lindsley; Lindsley, Kelsey P. A Short Course in Medical Terminology. Wolters Kluwer Health, 2018
Recommended Supporting Books and References (Scientific Journals, Reports)	
Electronic References and Internet Websites	

Course Description Pathology - Fourth Stage

1. Course Title
Pathology for the fourth stage
2. Course Code
HIS04402
3. Semester / Academic Year
2024/2025
4. Date of Course Description Preparation
2025/3/23
5. Attendance Requirements
mandatory
6. Total Contact Hours / Total Units
Theoretical 2 hours / Practical 3 hours Total 5 hours Number of units 5
7. Course Coordinator(s)
Name: Assist.L.Fattima Hussein Email: Fatima.A@aud.iq.
8. course objectives
1-11-To study the histopathological and anatomical structure of human body. 2- It is meant primarily to give the student a foundation for advanced study in health care, physiology, pathology, and other fields related to health and fitness. 3- At the end of the course, the student should be familiar with gross anatomical and the histopathological description of human body.
9. Teaching and Learning Strategies
1- Lectures (questions and discussion) 2- Laboratory skills 3- White board 4- Interactive electronic board 5- Seminars 6- Homework
10. Course Structure

week	hours	Intended Learning	unite title	Learning Method	Assessment Method

		Outcomes			
1	2		Lung (atelectasis, acute lung injury)	1-Lectures (questions and discussion) 2-Interactive electronic board	Quiz
2	2		Lung (chronic bronchitis pulmonary embolism)	1-Lectures (questions and discussion) 2-Interactive electronic board	Quiz
3	2		Lung tumors	1-Lectures (questions and discussion) 2-Interactive electronic board	Quiz
4	2		Kidney (glomerular disease)	1-Lectures (questions and discussion) 2-Interactive electronic board	Quiz
5	2		Kidney (nephritic syndrome, IgA nephropathy (Berger disease)	1-Lectures (questions and discussion) 2-Interactive electronic board	Quiz
6	2		Kidney tumors	1-Lectures (questions and discussion) 2-Interactive electronic board	Quiz
7	2		Cancer of the oral cavity and tongue	1-Lectures (questions and discussion) 2-Interactive electronic board	Quiz
8	2		Esophagus (lacivation, varices, esophageal carcinoma)	1-Lectures (questions and discussion) 2-Interactive electronic board	Quiz
9	2		Stomach (gastritis, ulcer, carcinoma)	1-Lectures (questions and discussion) 2-Interactive electronic board	Quiz
10	2		Large intestines(hemorrhoids, malabsorption syndrome)	1-Lectures (questions and discussion) 2-Interactive electronic board	Quiz
			Crohn disease		Quiz

11	2		Large intestine tumors	1-Lectures (questions and discussion) 2-Interactive electronic board	Quiz
12	2		Liver (hepatic infection, failure, cirrhosis)	1-Lectures (questions and discussion) 2-Interactive electronic board	Quiz
13	2		Hepatic tumors	1-Lectures (questions and discussion) 2-Interactive electronic board	Quiz
14	2		Gall bladder (cholecystitis, tumors)	1-Lectures (questions and discussion) 2-Interactive electronic board	Quiz
15	2		Pancreas (pancreatitis)	1-Lectures (questions and discussion) 2-Interactive electronic board	Quiz
16	2		Pancreatic neoplasma	1-Lectures (questions and discussion) 2-Interactive electronic board	Quiz
17	2		Male genital system (testicular atrophy, lesions, neoplasma)	1-Lectures (questions and discussion) 2-Interactive electronic board	Quiz
18	2		Male genital system (prostate tumors)	1-Lectures (questions and discussion) 2-Interactive electronic board	Quiz
19	2		Female genital system (cervicitis, tumors of cervix)	1-Lectures (questions and discussion) 2-Interactive electronic board	Quiz
20	2		Uterus (endometritis, endometriosis, tumor of the uterus)	1-Lectures (questions and discussion) 2-Interactive electronic board	Quiz
21	2				

22	2		Breast (fibrocystic changes, tumor of the breast)	1-Lectures (questions and discussion) 2-Interactive electronic board	Quiz
23	2		Endocrine system (hyperpituitarism and pituitary adenoma)	1-Lectures (questions and discussion) 2-Interactive electronic board	Quiz
24	2		Thyroid (thyroiditis, thyroid neoplasma)	1-Lectures (questions and discussion) 2-Interactive electronic board	Quiz
25	2		Bone tumors	1-Lectures (questions and discussion) 2-Interactive electronic board	Quiz
26	2		Skin (acute eczematous dermatitis, psoriasis)	1-Lectures (questions and discussion) 2-Interactive electronic board	Quiz
27	2		Skin tumors	1-Lectures (questions and discussion) 2-Interactive electronic board	Quiz
28	2		Nervous system (brain tumor)	1-Lectures (questions and discussion) 2-Interactive electronic board	Quiz
29	2		Nervous system (diseases of the peripheral nervous system)	1-Lectures (questions and discussion) 2-Interactive electronic board 1-Lectures (questions and discussion) 2-Interactive electronic board 1-Lectures (questions and discussion)	Quiz Quiz

				2-Interactive electronic board 1-Lectures (questions and discussion) 2-Interactive electronic board 1-Lectures (questions and discussion) 2-Interactive electronic board 1-Lectures (questions and discussion) 2-Interactive electronic board	

11. Course Evaluation	
Annual pursuit 40 degrees divided as follows: 15 degrees for practical, 20 degrees theoretical, five degrees reports and daily attendance **Final exam out of 60 theoretical** **The final grade combines the annual pursuit with the final theoretical exam score**	
12. Teaching and Learning Resources	
Prescribed Textbooks (Including Official Curriculum, if Available)	**Robbins Basic Pathology**
Main References (Sources)	10th Edition - March 8, 2017 Editors: Vinay Kumar, Abul K. Abbas, Jon C. Aster Language: English
Recommended Supporting Books and References (Scientific Journals, Reports)	
Electronic References and Internet Websites	No

Course Description

1. Course Title (Medical Devices)
(Medical Devices) first stage
2. Course Code
LIN04101 LIN04102
3. Semester / Academic Year
2025-2024
4. Date of Course Description Preparation

19/3/2025
5. Attendance Requirements
Mandatory
6. Total Contact Hours / Total Units
30
7. Course Coordinator(s)
Hussein Ali Kamil Email:hussainalobaidy41@gmail.com
8. course objectives

General Objectives: **The course aims to be able to identify at the end of the academic year the student :** • **Types of electron and optical microscope** • **Scales and their types** • **Spectroscopy Instruments** • **And the incubator, ovens and centrifuge** • **Electroforses**	Special Objectives The student learns about the scientific theories on which these devices work The student gets acquainted with the scientific techniques by which these devices work The student gets to know the parts and how ea device works The student learns how to maintain and sustai .these devices

9. Teaching and Learning Strategies
Blackboard Slideshow

10. Course Structure

week	hours	Intended Learning Outcomes	unite title	Learning Method	Assessment Method
1-2	2theoretical	Identify laboratory equipment	Microtome Types of microtome - Rotary Microtome Rotary Microtome parts Operation of Rotary Advantages - Disadvantages Care of the Rotary Microtome	theoretical	**Attendance** **+Quiz**
3	2 Theoretical		Water bath	theoretical	

4	2theoretical	Identify laboratory equipment	Principle-Parts-Types-Applications Hot Air Oven		
5	2 Theoretical	Identify laboratory equipment	Principles-Applications -Advantage Disadvantage	theoretical	
6	2 Theoretical	Identify laboratory equipment	PCR machine Essential components required Principles of PCR (Steps PCR) Applications	theoretical	
9-7	2 Theoretical	Identify laboratory equipment	Gel Electrophoresis. Agarose Gel Electrophoresis - Princip	theoretical	
10	2 Theoretical		Electrophoresis Equipme - Electrophoresis Materi Steps of agarose gel electrophoresis		
12-11	2 Theoretical		Types - Principle Applications automated lysis	theoretical	
13	2 Theoretical		Complete Blood Count (CBC) Machine (Blood Count Analyzer)	theoretical	
14	2 Theoretical		Principle & Applications Chromatography appara (chromatograph) Principle & types- Paper chromatography	theoretical	
	2 Theoretical		Thin layer chromatography- Colum chromatography		
	2 Theoretical		Types & Uses of the filt Laboratory test tubes Applications	theoretical	

				theoretical	

11. Course Evaluation	
Distribution of the score out of 100 according to the tasks assigned to the student such as daily preparation, daily, oral, monthly, written exams, reports .... etc	
12. Teaching and Learning Resources	
Prescribed Textbooks (Including Official Curriculum, if Available)	Medical Devices
Main References (Sources)	Laboratory instrumental
Recommended Supporting Books and References (Scientific Journals, Reports)	Materials." Biocompatiblity: Assessment of Medical Devices and Materials, by Julian H. Braybrook (Editor), ISBN 0-471-96597-9. Wiley VCH, December 1996. (1996): 246. 2-Ninfa, Alexander; Ballou, David; Benore, Marilee (2009). Fundamental Laboratory Approaches for Biochemistry and Biotechnology United Kingdom: Webster, John. Medical instrumentation: application and design. John Wiley & Sons, 200
Electronic References and Internet Websites	Laboratory instrumental

Course Description

1. Course Title
Histology Fourth stage
2. Course Code
HIS04301
3. Semester / Academic Year
2024/2025
4. Date of Course Description Preparation
2025/3/23
5. Attendance Requirements
mandatory
6. Total Contact Hours / Total Units
Theoretical 2 hours / Practical 3 hours Total 5 hours
7. Course Coordinator(s)
Name : Assist.L.Fattima Hussein Fatima.ali@aud.iq
8. course objectives
1-11-To study the histopathological and anatomical structure of human bo 2- It is meant primarily to give the student a foundation for advanced study in health care, physiology, pathology, and other fields related to health and fitness. 3- At the end of the course, the student should be familiar with gross anatomical and the histopathological description of human body.
9. Teaching and Learning Strategies

7- Lectures (questions and discussion)
8- Laboratory skills
9- White board
10- Interactive electronic board
11- Seminars
12- Homework

10. Course Structure

Assessment Method	Learning Method	unite title	Intended Learning Outcomes	hours	week
Quiz	1-Lectures (questions and discussion) 2-Interactive electronic board	Introduction, cell constitutions		2	1
Quiz	1-Lectures (questions and discussion) 2-Interactive electronic board	Inflammation, repair and degeneration, acute inflammation		2	2
Quiz	1-Lectures (questions and discussion) 2-Interactive electronic board	Chronic inflammation		2	3
Quiz	1-Lectures (questions and discussion) 2-Interactive electronic board	Repair, healing and regeneration		2	4
Quiz	1-Lectures (questions and discussion) 2-Interactive electronic board	Retrograde, changes, Degeneration		2	5

	1-Lectures (questions and discussion)	Atrophy, Necrosis, Cloudy swelling		2	6
Quiz	2-Interactive electronic board				
		Gangrene		2	7
	1-Lectures (				
Quiz	questions and discussion)	Criteria used for cytopathological			
	2-Interactive electronic board	diagnosis of cancer		2	8
Quiz	1-Lectures (	Changes in the cytoplasm and nucleus in malignancy			
	questions and discussion)			2	9
	2-Interactive				
Quiz	electronic board				
		Changes in cell as a general in malignancy			
	1-Lectures (questions and discussion)			2	10
	2-Interactive				
Quiz	electronic board	Nomenclature of tumors			
	1-Lectures (questions and			2	11
Quiz	discussion)				
	2-Interactive electronic board				
	1-Lectures (	Classification of tumors		2	12
	questions and				
Quiz	discussion)				
	2-Interactive				
	electronic board	Fixation, Fixative, theoretical aspects of fixation, most common fixatives in		2	13
Quiz	1-Lectures (	common use			
	questions and discussion)				
	2-Interactive			2	14
	electronic board	Fixation for special substances ,			
Quiz		specialized techniques for individual			
	1-Lectures (	tissue and fixative arte fact			
	questions and discussion)			2	15
	2-Interactive	Tissue processing, fixation , dehydration			
	electronic board	, clearing and embedding			
	1-Lectures (				
Quiz	questions and discussion)				

	2-Interactive electronic board	Factors influencing rate of impregnation, agitation, heat, viscosity, ultrasonic , vacuum		2	16
Quiz	1-Lectures (questions and discussion) 2-Interactive electronic board	Microtomy and paraffin section		2	17
Quiz	1-Lectures (questions and discussion)	Staining of tissue sections, hematoxylin, eosin, connective tissue stains		2	18
Quiz	2-Interactive electronic board	Special stains for protein, carbohydrates, lipid, mucosubstance, pigments, minerals		2	19
Quiz	1-Lectures (questions and discussion) 2-Interactive electronic board	Preparation bone sections		2	20
Quiz	1-Lectures (questions and discussion) 2-Interactive electronic board	Demonstration of cytoplasmic granules organelles		2	21
Quiz	1-Lectures (questions and discussion) 2-Interactive electronic board	Neuropathological techniques		2	22
Quiz	1-Lectures (questions and discussion) 2-Interactive electronic board	Enzyme histochemistry and application		2	23
Quiz	1-Lectures (questions and discussion) 2-Interactive electronic board	Immunohistochemistry and application		2	24
Quiz	1-Lectures (questions and discussion) 2-Interactive electronic board	Resin embedding media		2	25
Quiz		Electron microscopy- techniques		2	26

Quiz	1-Lectures (questions and discussion) 2-Interactive electronic board	Electron microscopy- diagnostic use		2	27
Quiz	1-Lectures (questions and discussion) 2-Interactive electronic board	Histochemistry and its diagnostic uses		2	28
Quiz	1-Lectures (questions and discussion) 2-Interactive electronic board	Immunofluorescence Techniques		2	29
Quiz	1-Lectures (questions and discussion) 2-Interactive electronic board	Museum and other demonstration techniques		2	30
Quiz	1-Lectures (questions and discussion) 2-Interactive electronic board				
Quiz	1-Lectures (questions and discussion) 2-Interactive electronic board				
	1-Lectures (questions and discussion) 2-Interactive electronic board				
	1-Lectures (questions and discussion) 2-Interactive electronic board				
	1-Lectures (questions and discussion) 2-Interactive electronic board				
	1-Lectures (questions and discussion) 2-Interactive electronic board				
	1-Lectures (questions and discussion) 2-Interactive electronic board				

11. Course Evaluation	
Annual pursuit 40 degrees divided as follows: 15 degrees for practical, 20 degrees theoretical, five degrees reports and daily attendance **Final exam out of 60 theoretical** **The final grade combines the annual pursuit with the final theoretical exam score**	
12. Teaching and Learning Resources	
Principles of histopathology author: Frank Burr Mallory the language: English publisher: Philadelphia, London, W. B. Saunders Release Date:January 1, 1914	Prescribed Textbooks (Including Official Curriculum, if Available) Main References (Sources) Recommended Supporting Books and References (Scientific Journals, Reports)
No	Electronic References and Internet Websites

Description Course

1. Course Title
Bacterial diagnostic fourth stage
2. Course Code
DBA04400
3. Semester / Academic Year
2024/2025
4. Date of Course Description Preparation
2025/03/24
5. Attendance Requirements
mandatory
6. Total Contact Hours / Total Units
2 hours theoretical weekly 60 hours theoretical hours of work per week 60 hours of work 2
7. Course Coordinator(s)
Email name Assoc. Prof. Taha Yassin Ghanitaharo200@yahoo.com
8. course objectives

Course Objectives **1- The student should be able to know microbiology of all kinds** **2- The student should be able to diagnose microorganisms and dea with them** **3-**The student should know what these neighborhoods cause of disease and injuries	

9. Teaching and Learning Strategies

Theoretical lectures
Engage students in the discussion

10. Course Structure

week	hours	Intended Learning Outcomes	unite title	Learning Method	Assessment Method
First	4		Purpose and physiology	theoretical	Questions, discussions and exam
Second	4		Laboratory safety	theoretical	
Third	4		Selection, collection, and	theoretical	
Fourth	4		transport of specimens		
fifth	4		Cultivation & Isolation of Viable Pathog	theoretical	
Sixth	4		Microbiological methods		
Seventh	4		for identification of microorganisms		
Eighth	4			theoretical	
Ninth	4				
tenth	4		Antibiotic susceptibility tests		
Eleventh	4		Methods for identification of etiological agents of infectious disease	theoretical	
Twelfth	4				
Thirteenth	4		Blood Stream infections	theoretical	
Fourteenth	4		Meningitis and other infections of the		
Fifteenth	4		central nervous system	theoretical	
Sixteenth	4		Diagnosis of bacterial respiratory tract		
Seventeenth	4		infections	theoretical	
Eighteenth	4		Infection of the urinary tract		
Nineteenth	4			theoretical	
20th	4		Genital tract infections		

21	4		Bacterial Infections of the Gastrointestir (GI) Tract	theoretical	
22	4				
23	4		Bacterial infections of eyes, ears and	theoretical	
24	4		sinuses infections		
25	4		Skin, Soft tissue and wound infection	theoretical	
			Normally Sterile Body Fluids, Bone and Bone Marrow, and		
26	4		Solid Tissues	theoretical	
27	4		Laboratory methods for diagnosis of parasitic infections	theoretical	
			Laboratory methods in basic mycology		
28	4		Laboratory methods in basic virology	theoretical	
29	4			theoretical	
30	4			theoretical	

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

12. Teaching and Learning Resources	
Prescribed Textbooks (Including Official Curriculu if Available)	Evaluation Curriculum
Main References (Sources)	
Recommended Supporting Books and References (Scientific Journals, Reports)	
Electronic References and Internet Websites	

Course Description

1. Course Title
Medical Parasites fourth stage
2. Course Code Medical parasitology
MPA04402
3. Semester / Academic Year
2025\2024
4. Date of Course Description Preparation
13/3/2025
5. Attendance Requirements
Mandatory
6. Number of hours (A6) / Number of units (4)
7. Course Administrator Name (Eng. Mariam Qasim Hammoud)
8. course objectives
1- Definition and introduction to the most important medical parasites **2- Identify the most important diseases and the most common diseases in laboratories** **3- Understand the mechanism of development of parasites.** **4- Understand the factors that lead to parasitic diseases.** **5 - Classification of parasites** 6.Analyze the results of students and compare them with standard samples
9. Teaching and Learning Strategies
1. Lecturers 2. INTERACTIVE LECTURE 3. DATASHOW
10. Course Structure

	week	Hours	Required Learning Outcomes	Unit / Subject Name	Method of education	Evaluation method
	The first	2 Theoretical	The student gets to know	Introduction and definition of parasitology , classification , type of parasite , type of host ..	theoretical	Quiz+ Attendance
	Second	2theoretical	The student understands the subject	Introduction and classification of protozoa , class rhizopoda	theoretical	Quiz+ Attendance
	Third	2theoretical	The student understands the subject	Class نظريastigophora – general classification intestinal – flagella species . giardia , lamblia	theoretical	Quiz+ Attendance

	Fourth	2theoretical	The student understands the subject	Tissue flagella , genus Leishmania general characteristic	theoretical	Quiz+ Attendance
	fifth	2theoretical	The student understands the subject	Class sporozoa . general characteristic , intestinal coccidia	theoretical	Quiz+ Attendance
	Sixth	2theoretical	The student understands the subject	Isospora balli sarcocytosis bovis	theoretical	Quiz+ Attendance
	Seventh	2theoretical	The student understands the subject	Genus Trichomonas. T. vaginalis/ urogenital flagellate. T. hominis T. tenax Biology , medical importance and Lab. Diagnosis of each species.	theoretical	Quiz+ Attendance
	Eighth	2theoretical	The student understands the subject	genus plasmodium , spesies ,vector , clinical sign	theoretical	Quiz+ Attendance
	Ninth	2theoretical	The student understands the subject	Genus Trypanosoma, species of trypanosome, biology , vector, medical importance of each species, forms of parasite, life cycle,Lab. Diagnosis.	theoretical	Quiz+ Attendance
	X	2theoretical	The student understands the subject	Ciliophora: Blantidium coli ,Biology , medical importance, Lab. Diagnosis. Apicomplex: General charcter. Genus Toxoplasma.,T.gondii ,Biology, medical lmportance,acquired and congenital toxoplasosis. Life cycle, role of domesticate animals in the transmission of the disease. Lab. Diagnosis.	theoretical	Quiz+ Attendance
	Eleventh	2theoretical	The student understands the subject	Genus plasmodium. Introduction to malarial parasites, malarial paroxysm, general life	theoretical	Quiz+ Attendance

				cycle of the plasmodium , species of plasmodium.		
	Twelfth	2theoretical	The student understands the subject	P.falciparum, P. vivax, P ovale, P. malarae Disease, pathology, medical importance, distribution, main differences during life cycle.	theoretical	Quiz+ Attendance
	Thirteenth	2theoretical	The student understands the subject	General discussion on malarial parastes ,epidemiology, methods of diagnosis. Time to take clinical	theoretical	Quiz+ Attendance
				samples. Blood films.		
	Fourteenth	2theoretical	The student understands the subject	Isopora, pathology, medical importance,Lab. Dianosis. Sarcocystis species: pathology , medical importance,Lab diagnosis.	theoretical	Quiz+ Attendance
	Fifteenth	2theoretical	The student understands the subject	Cryptosporidiadze Genus cryptosporidium, species belong the genus, biology, pathology, epidemiology,Lab.diagnosis.	theoretical	Quiz+ Attendance
	Sixteenth	2theoretical	The student understands the subject	Platyhelminth: General characters. Class cestoda: General characters. Teania saginata: Teania solium: Morphology & the adult warm and the larval stages of each species, biology, life cycle of each species, pathologinicity of each species, Lab. Diagnosis	theoretical	Quiz+ Attendance
	Seventeenth	2theoretical	The student understands the subject	Hymenolepis nana, Hymenolepis diminuta. Diplidium caninum, Diphyllobathrium latum, Biology, morphology,	theoretical	Quiz+ Attendance

				pathoginicity of eachspecies,Lab. Diagnosis.		
	Eighteenth	2theoretical	The student understands the subject	Echinococcus granulosus. Echinocuccus multilocularis. Biology,life cycle, pathoginicity, medical importance of hydatid cyst disease ,Lab. Diagnosis.	theoretical	Quiz+ Attendanc
	Nineteenth	2theoretical	The student understands the subject	Class Trematoda: General characters. Genus Schistosoma. Specis of human schistosoma, life cycle. Schistosoma hematobium. Schistosoma mansoni. Biology of adult worm, habitat, pathgenicity,Lab.diagnosis	theoretical	Quiz+ Attendance
	20th	2theoretical	The student understands the subject	Fasciula hepatica Biology , life cycle, pathogenicity, Lab diagnosis. Nemathelminthis. Clss Nemtoda, general characters.	theoretical	Quiz+ Attendance
	Twenty-first	2theoretical	The student understands the subject	Ascaris lambricoides Enterobius vermicularis. Biology of adult worm,lifecycle, pathgenicity and medical importanceof each species, Lab. Diagnosis of each species.	theoretical	Quiz+ Attendance
	Twenty-second	2theoretical	The student understands the subject	Trichuris trichura. Trichenala spiralis. Biology , life cycle , pathogenicity, medical importanceof each species, Lab. Diagnosis of each species.	theoretical	Quiz+ Attendance

	Twenty-third	2theoretical	The student understands the subject	Strogyloides stercoralis. Biology, life cycle, pathgenicity, medical importance, Lab.	theoretical	Quiz+ Attendance
	Fourth Twenty	2theoretical	The student understands the subject	Ancylostoma duadenale ,Necator Americans (Hooks worm) Biology, life cycle, pathogenicity, medical importance of each species, Lab. Diagnosis.	theoretical	Quiz+ Attendance
	Twenty-fifth	2theoretical	The student understands the subject	The filariae: Biology, pathgenicity and medical importance of each species, Lab. Diagnosis of each species. Visceral larvae migrance, Cutaneaus larvae migrance.	theoretical	Quiz+ Attendance

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

12. Teaching and Learning Resources	
Prescribed Textbooks (Including Official Curriculum, i Available)	Classification of parasitology
Main References (Sources)	List of publiacations in parasitology Parasitisism Parasitilogistis
Recommended Supporting Books and References (Scientific Journals, Reports)	
Electronic References and Internet Websites	