Ministry of Higher Education and Scientific Research, Academic Supervision and Evaluation Authority
Quality Assurance and Academic Accreditation Department,
Accreditation Section

Academic Program and Course Description

2025

Academic Program Description

University Name: Al-Farabi University

College/Institute: College of Health and Medical Technologies

Scientific Department: Department of Medical Laboratory Technologies

Academic or Professional Program Name: Bachelor's

Final Degree Name: Bachelor of Science in Medical Laboratory Technologies (Lab Technician)

Academic System: Semester system for the first and second years, and annual system for the third and fourth years.

File Preparation Date: 2024-2025

File Completion Date: 27/7/2025

Head of Department: M.Sc. Ali Sarmad Majeed

27/7/2025

Scientific Assistant:

Prof. Dr. Mazin S. Al Hadithi

File audited by

Quality Assurance and University Performance Division

Name of the Director of the Quality Assurance and University Performance Division: Athmar Waleed Hussein

Date: July 27th, 2025

Signature:

Dean's Approval:

1.Program Vision
The Department of Medical Laboratory Technologies aims to be an academic and professional leader in Iraq and the region by preparing distinguished medical cadres who possess the highest standards of scientific competence and technical skills. We aspire to be a center of expertise in medical laboratory technologies and to be effective partners in supporting the healthcare system and keeping pace with global developments, in a way that serves the community's aspirations and achieves sustainable development.

2. Program Mission
The Department of Medical Laboratory Technologies is committed to providing high-quality education based on the latest scientific curricula and applied technologies, in an environment that stimulates creativity and scientific research. We work to prepare qualified graduates with precise analytical skills and advanced research capabilities, enabling them to compete in the local and global job market. We are also committed to strengthening partnerships with health institutions and serving the community through awareness programs and applied research that contribute to the development of the healthcare sector.

3. Program Objectives

"Since its establishment, the department has sought to excel in the laboratory diagnosis of diseases through the integration of its graduates into the institutions of the Ministry of Health, Science, and Technology. The department aims to expand its scope of activities to include entering new fields in the provision of medical and therapeutic services by opening specialized teaching laboratories. Specialists and graduates of the department will work in these labs to provide diagnostic services to the college's affiliates and to citizens from outside the college."

General Objectives:

-To qualify graduates with skills and knowledge that meet the demands of the modern era and the job market.
-To employ faculty members with high efficiency and professional skills who are recognized - locally, regionally, and internationally.
-To continue conducting and publishing robust scientific research that serves development plans and the community.
-To optimally utilize the department's financial and material resources, while diversifying and maximizing them.

Educational Objectives for the Department:

-Selection of educational experiences or curriculum content.
-Definition of classroom and extracurricular activities related to the curriculum.
-Determination of appropriate teaching methods, techniques, and strategies.
-Determination of appropriate evaluation methods and tools.

4. Programmatic Accreditation

None... However, the self-assessment plan and the improvement plan have been completed, and the conformity plan will be finalized.

5. Other External Influences

The sponsoring body for the program is the Ministry of Higher Education and Scientific Research - Baghdad.

6. Program Structure				
Program Structure	Number of Courses	Credit Hours	Percentage	*Notes
Institution Requirements	Stage One: 8 Stage Two: 7 Stage Three: 7 Stage Four: 8	Stage One: 23 Stage Two: 26 Stage Three: 50 Stage Four: 53	Stage One: 10% Stage Two: 20% Stage Three: 30% Stage Four: 40%	Primary
College Requirements	Stage One: 8 Stage Two: 7 Stage Three: 7 Stage Four: 8	Stage One: 23 Stage Two: 26 Stage Three: 50 Stage Four: 53	Stage One: 10% Stage Two: 20% Stage Three: 30% Stage Four: 40%	Primary
Department Requirements	Stage One: 8 Stage Two: 7 Stage Three: 7 Stage Four: 8	Stage One: 23 Stage Two: 26 Stage Three: 50 Stage Four: 53	Stage One: 10% Stage Two: 20% Stage Three: 30% Stage Four: 40%	Primary
Summer Training	Stage One: 8 Stage Two: 7 Stage Three: 7 Stage Four: 8	Stage One: 23 Stage Two: 26 Stage Three: 50 Stage Four: 53	Stage One: 10% Stage Two: 20% Stage Three: 30% Stage Four: 40%	Primary
Other	-	-	-	-

7. وصف البرنامج				
Year / Level	**Course Code**	**Course Name**	**Credit Hours**	
			Theoretical	**Practical**
First	**MLB1.1**	**General Chemistry 1+2**	**2**	5
	MLB.1.2	**Medical Terminology 1**	**2**	-
	MLB1.3	**Human Biology 1+2**	2	5
	MLB1.4	**Laboratory Instruments 1+2**	2	4
	MLB1.5	**Professional Conduct 1**	2	-
	MLB1.6	**Computer Principles 1+2**	1	2
	MLB1.7	**Human Rights and Democracy 1**	2	-
	MLB 1.8	**English Language 1**	3	-
	MLB1.9	**Anatomy 2**	2	5
	MLB1.10	**Arabic Language**	2	-
Second	**MLB2.1**	**Medical Bacteriology 1+2**	2	4
	MLB2.2	**Biochemistry 1+2**	2	4
	MLB2.3	**Human Physiology 1+2**	2	4
	MLB2.4	**Histology 1+2**	2	4
	MLB2.5	**Molecular Biology 1**	2	4
	MLB2.6	**Medical Parasitology and Entomology 1+2**	2	4
	MLB2.7	**Crimes of the Ba'ath Party 1**	2	-
	MLB2.8	**Descriptive Biostatistics 2**	1	2
Third	**MLB3.1**	**Histopathology**	2	3
	MLB3.2	**Hematology**	2	2
	MLB3.3	**Virology and Mycology**	2	2
	MLB3.4	**Clinical Chemistry**	2	2
	MLB3.5	**Human Genetics**	2	3
	MLB3.6	**Immunology**	2	2
	MLB3.7	**Laboratory Techniques**	1	2

	MLB3.8	**Computer Applications**	1	2
	MLB3.9	**English Language**	1	-
				4
Fourth	**MLB4.1**	**Clinical Immunology**	2	4
	MLB4.2	**Diagnostic Bacteriology**	2	4
	MLB4.3	**Clinical Chemistry**	2	4
	MLB4.4	**Medical Parasitology**	2	4
	MLB4.5	**Blood Transfusion**	2	3
	MLB4.6	**Histopathology**	1	-
	MLB4.7	**English Language**	1	-
	MLB4.8	**Laboratory Management + Teaching Research Methods**	1	5
	MLB4.9	**Project**	-	4

8. Expected Learning Outcomes for the Program	
Knowledge	
Theoretical Foundations of Laboratory Tests	Describe the theoretical principles and scientific basis for various tests and procedures in medical laboratories, including clinical chemistry, hematology, microbiology, and immunology.
Skills	
Handling Biological Samples	Apply standard operating procedures for the collection, preparation, storage, and transport of various biological samples in a safe and proper manner.
Practical Performance and Quality Control	Operate and maintain various medical laboratory instruments efficiently, and implement quality control programs to ensure the accuracy and reliability of test results.
Values	
Ethics of Professional Practice	Adhere to professional ethics, including maintaining patient confidentiality and treating samples and patients with respect and professionalism.
Occupational Safety and Infection Control	Apply occupational safety and infection control standards in the laboratory environment to prevent biological and chemical hazards and to protect oneself and others.

9. Teaching and learning strategies

Active Learning: This is the core strategy of the program, where students are encouraged to actively participate in the educational process rather than being mere recipients of information. This aims to develop their ability for critical thinking and problem-solving.

Active learning applications include the following:

Problem-Based Learning: Students are presented with real-world problems or clinical cases and work in small groups to analyze the problem, identify what they need to learn, and search for possible solutions, which enhances clinical thinking and teamwork skills.

Team-Based Learning: Students work in teams to solve tasks and answer questions, which promotes collaboration and individual and collective responsibility.

Blended Learning: This approach combines traditional face-to-face instruction with online learning. It can include watching recorded lectures before attending class (the flipped classroom model) and utilizing class time for discussions and interactive activities.

Self-Directed Learning: This strategy aims to develop the student's ability to take responsibility for their own learning, set their educational goals, and independently search for sources of knowledge, which is an essential skill for lifelong learning in a constantly evolving field.

Competency-Based Learning: The program focuses on ensuring students acquire the specific competencies and skills required in the job market. Students are evaluated based on their ability to perform specific tasks according to clear criteria.

Teaching and Learning Methods (Applied Methods)

To achieve the aforementioned strategies, a variety of teaching methods and styles are used.

a. Theoretical and Interactive Methods

Interactive Lectures: Instead of traditional passive lectures, lectures that encourage participation are used by asking questions, using audience response systems, and conducting short discussions.

Discussion Panels and Seminars: Provide an opportunity for students to discuss specific topics in depth, exchange views, and give presentations, which develops their communication skills.

Case Studies: Analyzing real patient cases to link theoretical knowledge with practical clinical applications, which helps students understand the full context of laboratory tests.

Flipped Classroom: Students review the academic material (such as videos or readings) before the lecture, and the lecture time is dedicated to applied activities and problem-solving under the supervision of a faculty member.

b. Practical and Applied Methods

Practical Training in Laboratories: This is the cornerstone of the program. Students spend a significant amount of time in equipped laboratories to apply the techniques they learned theoretically, practice using the equipment, and perform various tests.

Simulation and Virtual Reality: Using simulation scenarios or virtual reality technologies to train students on specific procedures in a safe and controlled environment, which allows them to learn

from their mistakes without any harm.

Research Projects and Reports: Assigning students short research projects or to write reports on specific topics to encourage them to conduct scientific research, analyze data, and develop academic writing skills.

Field Training (Clinical Training/Internship): Placing students in real hospitals and medical laboratories for a training period, where they work under the supervision of specialists to gain direct practical experience and become familiar with the real work environment.

10. Assessment Methods

Main Assessment Strategies

Formative (Continuous) Assessment: Conducted throughout the semester to provide feedback and guide the learning process. Examples include quizzes, assignments, lab reports, and class participation.

Summative (Final) Assessment: Conducted at the end of a specific study period (such as mid-term and end-of-semester) to measure the student's final achievement. Examples include final exams (theoretical and practical) and final projects.

Second: Assessment Methods by Learning Domain

Assessment of Knowledge and Understanding

Written Exams: Include objective and essay questions.

Case Study Analysis: To link theoretical knowledge with practical application.

Reports and Presentations.

Assessment of Practical Skills

Objective Structured Practical Examination (OSPE): A standardized practical exam that assesses skills at multiple stations.

Logbook of Activities and Skills: To document practical and training performance.

Direct Observation of Performance: Using checklists in laboratories and during training.

Assessment of Professional Values and Competencies

Multi-source Feedback: By obtaining feedback from supervisors and peers.

Portfolio: To document and track professional and ethical development.

Observation of Professional Conduct: During the field training period to assess adherence to professional ethics.

Academic Rank	Specialization		Specific Skills	Faculty preparation
	General	Specific		
Doctorate	Life Sciences	Clinical Immunology	-	angel
Doctorate	Philosophy	Biotechnology	-	angel
Doctorate	Life Sciences	Animal Science	-	angel
Doctorate	Human Physiology	Cardiovascular Physiology in Athletes	-	angel
Doctorate	Genetic Engineering	Biological Techniques	-	angel
Master's	Pathological Analyses	Microbiology	-	angel
Master's	Biological Techniques	Biological Techniques	-	angel
Master's	Pathological Analyses	Microbiology	-	angel
Master's	Life Sciences	Microbiology	-	angel
Master's	Sciences	Clinical Biochemistry	-	angel
Master's	Life Sciences	Microbiology	-	angel
Master's	Life Sciences	Microbiology	-	angel

11.Professional Development

Guidance for New Faculty Members

The main objectives of these programs revolve around several key aspects to ensure a smooth and successful transition and integration:

Institutional and Cultural Integration: Introducing new faculty members to the university's vision, mission, and core values, as well as its policies, regulations, and organizational structure. Clarification of Roles and Expectations: Informing them of the duties and responsibilities assigned to them in academic, research, and administrative aspects, and clarifying their rights and obligations.

Initial Professional Development: Providing them with essential skills in areas such as effective university teaching strategies, use of educational technologies, and student assessment methods.

Enhancing Communication and Building Relationships: Facilitating the building of professional communication networks with their colleagues in the department and college and with various supporting administrations and deanships at the university.

Accelerating Productivity and Job Satisfaction: Helping new members realize their potential quickly, which enhances their sense of belonging and job satisfaction and accelerates the pace of their academic and research contributions.

Professional Development for Faculty Members

The professional development of faculty members is a strategic and continuous process adopted by our academic institution with the aim of improving the skills, abilities, and knowledge of faculty members. This process is not limited to training but includes all activities that contribute to their growth in their main areas: teaching, scientific research, and community service.

Importance of Professional Development

The professional development of faculty members is an imperative necessity imposed by the accelerating scientific and technological developments. It is the foundation for ensuring the quality of higher education and the ability of universities to achieve their mission and strategic goals. Investing in the development of faculty members is a direct investment in the quality of the entire

educational system's outcomes.

Objectives of Professional Development

Professional development programs aim to achieve a set of main goals, most notably:

Improving the Quality of Teaching and Learning: Providing faculty members with the latest teaching and evaluation strategies, and encouraging the use of modern educational technologies.

Enhancing Scientific Research Capabilities: Developing their skills in writing research proposals, publishing in prestigious scientific journals, and keeping up with developments in their specializations.

Developing Leadership and Administrative Skills: Preparing academic cadres to assume future leadership and administrative positions.

Keeping Pace with Technological Developments: Training them to employ modern technologies and information technology in the processes of education and scientific research.

Achieving Personal and Institutional Growth: Helping faculty members to grow and develop in their career path, which contributes to achieving job satisfaction and institutional commitment.

12. Admission Criteria

The Department of Medical Laboratory Technologies plays a pivotal role in the health and educational system, where it strives to be an effective element in achieving community progress and development. This is done by providing advanced educational services to a wide segment of promising youth and contributing to solid scientific research. Students are admitted to the department through the central admission system supervised by the Ministry, which distributes students to private and public universities.

The primary mission of the department is to supply the labor market with graduates who possess the high skills and competence that qualify them for proficient work in various health institutions. The specialization of medical laboratory technologies is considered a cornerstone of medical diagnosis, as estimates indicate that about 70% of medical decisions depend directly on the results of laboratory analyses.

Governing Values and Principles

The department adopts a set of principles and values that govern its performance and guide its path, which are:

- **Instilling a Spirit of National Belonging:** The department works to strengthen this aspect among its students.

Consolidating the Educational Role: Emphasizing the importance of the university professor's educational role in guiding and caring for students.

The Student is the Focus of the Educational Process: The department believes that the student is the country's real wealth, and therefore must be preserved and provided with all the necessary knowledge and skills that qualify him to enter the job market with confidence and competence.

Student Body and Graduates

The department currently has 879 students, distributed over the four academic stages as follows:

- **First Year:** 346 students
- **Second Year:** 89 students
- **Third Year:** 77 students
- **Fourth Year:** 367 students

The department celebrated the graduation of its first batch last year, with 78 graduates. It is hoped that the current academic year will witness the graduation of 367 students, who will be a qualitative addition to the health sector and medical laboratories in both the public and private sectors.

13. Key Sources of Information about the Program

Ministry Website

Department of Medical Laboratory Technologies

14. Program Development Plan

Our Vision: "Towards leadership and excellence in technical medical education, and preparing innovative professional cadres that meet future health needs."

This plan is based on four integrated strategic pillars aimed at moving the program to advanced levels of quality and excellence.

Pillar One: Updating Academic Content and Curricula

Keeping Abreast of Developments: Periodic review of curricula to integrate the latest diagnostic technologies, such as genomics and molecular diagnostics.

Flexibility and Specialization: Creating specific elective tracks (such as laboratory quality management, toxicology) to meet student interests and labor market requirements.

Integration of Skills: Enhancing soft skills (communication, professional ethics, critical thinking) within the core curriculum.

Pillar Two: Enhancing the Educational Environment and Practical Training

Laboratory Development: Updating and equipping educational laboratories with advanced simulation devices and virtual reality technologies.

Effective Partnerships: Expanding and deepening partnerships with reference hospitals and laboratories to ensure quality clinical training opportunities for students.

Competency-Based Assessment: Implementing a practical assessment system that focuses on measuring the student's mastery of basic skills with accuracy and objectivity.

Pillar Three: Empowering Faculty and Supporting Scientific Research

Continuous Development: Providing continuous professional development programs for faculty members in modern teaching methods and advanced scientific research.

Stimulating Applied Research: Encouraging and supporting scientific research that focuses on solving local health problems and promoting publication in prestigious international journals.

Pillar Four: Linking the Program with the Community and the Labor Market

Advisory Board: Activating the role of the program's advisory board, which includes experts from the health sector, to ensure the alignment of outcomes with labor market needs.

Community Initiatives: Organizing specialized workshops, seminars, and health awareness campaigns to serve the local community and enhance the department's pioneering role.

This plan represents a roadmap to ensure the program remains at the forefront, graduating health cadres who are not only technically qualified but also capable of leading and developing in their field.

Program Skills Map																
Year / Level	**Course Code**	**Course Name**	**Essential or optional?**	**Required learning outcomes of the program**												
				knowledge				**Skills**				**values**				
				A1	A2	A3	A4	B1	B2	B3	B4	C1	C2	C3	C4	
First stage\first course	MLB1.2	Medical Terminology	Primary	√	√			√	√	√		√	√	√	√	
	MLB1.3	Human Biology 1	Primary	√	√			√	√	√		√	√	√	√	
	MLB1.4	Laboratory Equipment 1	Primary	√	√			√	√			√	√			
	MLB1.5	Professional Conduct	Primary	√	√			√	√			√	√			
	MLB1.7	Human Rights and Democracy	Primary	√				√	√			√	√	√		
	MLB1.8	English Language	Primary	√	√			√				√				
	MLB1.1	General Chemistry	Primary	√				√				√				
	MLB1.2	Medical Terminology	Primary	√	√	√	√	√	√	√		√	√	√		
	MLB1.3	Human Biology 1	Primary	√	√	√	√	√	√	√		√	√	√		
	MLB1.4	Laboratory Equipment 1	Primary	√	√	√		√	√			√	√	√	√	
First stage \ Second course	MLB1.1	General Chemistry 2	Primary	√	√		√	√		√	√	√	√			
	MLB1.9	Anatomy	Primary	√	√	√		√	√	√		√	√	√	√	
	MLB1.3	Human Biology 2	Primary	√	√			√					√	√		
	MLB1.4	Laboratory Equipment 2	Primary	√	√			√					√	√		
	MLB1.6	Computer Principles	Primary	√	√			√	√	√			√	√	√	
	MLB1.10	Arabic Language	Primary	√	√			√	√	√		√	√	√	√	
			Primary													
Second stage\First course	MLB2.1	Medical Bacteriology 1	Primary	√	√	√		√		√	√	√	√			
	MLB2.2	Biochemistry 1	Primary	√	√	√		√	√	√	√	√	√			
	MLB2.3	Human Physiology 1	Primary	√	√	√		√	√		√	√	√			
	MLB2.4	Histology 1	Primary	√	√	√		√	√	√	√	√	√	√		
	MLB2.5	Molecular Biology	Primary	√	√			√	√	√	√	√	√	√	√	
	MLB2.6	Medical Parasitology 1	Primary	√	√	√		√			√	√				
	MLB2.17	Ba'ath Party Crimes	Primary	√				√		√	√	√	√			

Second stage\Second course	MLB2.1	Medical Bacteriology 2	Primary	√	√	√		√	√	√		√	√	√	
	MLB2.2	Biochemistry 2	Primary	√	√	√	√	√	√			√	√	√	
	MLB2.3	Human Physiology 2	Primary	√	√	√	√		√	√		√	√	√	
	MLB2.4	Histology 2	Primary	√	√	√		√	√	√		√	√	√	
	MLB2.6	Medical Parasitology and Entomology 2	Primary	√	√	√		√	√	√		√	√	√	
	MLB2.11	Descriptive Biostatistics	Primary	√				√				√			
Third stage	MLB3.1	Histopathology	Primary	√	√	√	√					√	√		
	MLB3.2	Hematology	Primary	√	√		√	√				√	√	√	
	MLB3.3	Virology and Mycology	Primary	√	√		√		√			√	√		
	MLB3.4	Clinical Chemistry	Primary	√	√	√	√		√			√	√	√	
	MLB3.5	Human Genetics	Primary	√	√	√			√	√			√	√	
	MLB3.6	Immunology	Primary	√	√	√			√	√	√	√	√	√	
	MLB3.7	Laboratory Techniques	Primary	√	√	√		√	√	√		√	√	√	√
	MLB3.8	Computer Applications	Primary	√				√	√			√			
	MLB3.1	English Language	Primary	√	√	√	√	√				√	√		
Fourth stage	MLB4.1	Clinical Immunology	Primary	√	√	√			√	√	√	√		√	
	MLB4.2	Diagnostic Bacteriology	Primary	√		√		√	√			√	√	√	
	MLB4.3	Clinical Chemistry	Primary	√	√		√		√	√	√		√	√	√
	MLB4.4	Advanced Medical Parasitology	Primary	√	√	√		√	√	√		√	√	√	
	MLB4.5	Blood Transfusion	Primary	√	√	√		√	√	√		√	√	√	
	MLB4.6	Histopathology	Primary	√	√	√		√	√	√		√	√	√	
	MLB4.7	English Language	Primary	√				√					√		
	MLB4.9	Project	Primary	√	√	√	√	√	√	√	√	√	√	√	√
	MLB4.8	Laboratory Management + Teaching Research Methods	Primary	√	√	√	√	√	√	√		√	√	√	√

Course Description Form

1. Course Name:
General Chemistry
2. Course Code:
MLB1.1
3. Semester / Year:
2024-2025
4. Description Preparation Date:
26.7.2025
5. Available Attendance Forms:
Theoretical attendance in classrooms + practical laboratory work
6. Number of Credit Hours (Total) / Number of Units (Total)
Number of hours: 30 / Number of units: 8
7. Course administrator's name (mention all, if more than one name)
Name: Mohammed Diab Damnan Email: mohamed.dhiab@alfarabiuc.edu.iq
8. Course Objectives

Course Objectives	Provide the student with basic concepts in general chemistry, including atomic structure, chemical bonding, and the periodic table. • Enable the student to understand the types of chemical reactions and how to balance chemical equations. • Provide the student with basic practical skills for working in chemical laboratories, including the use of tools and the safe handling of chemicals. • Introduce the student to the principles of basic analytical chemistry and calculations related to concentration and solutions.

9. Teaching and Learning Strategies	
Strategy	Theoretical lectures: Explain basic concepts and principles using presentations and the blackboard. • Practical experiments: Apply theoretical concepts through laboratory experiments, and train students in writing scientific reports. Discussion groups and exercises: Solve problems and exercises to enhance students' understanding of the material and encourage active participation. Homework and reports: Assign students periodic homework and laboratory reports to assess their understanding of the material and the development of their .practical skills

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2	To familiarize the student with the basic concepts of chemistry and the .structure of matter	Introduction to Analytical Chemistry (Atom,Periodic .Table, Bonds)	Theoretical Lecture	Discussion
2	2	The student should master the methods of preparing	Solutions and methods of expressing	Lecture and exercises	Homework

		standard solutions and calculating their concentrations	concentrations (molarity, .normality)		
3	2	The student will be able to evaluate the accuracy of analytical results statistically	Statistical processing of data (accuracy, errors, standard .deviation)	Lecture and exercises	Short test
4	2	The student will understand the factors that affect the course of chemical reaction	Chemical equilibrium (equilibrium constant, influencing .factors)	Theoretical Lecture	Discussion
5	2	The student will be able to distinguish between acids and bases and calculate the pH	Neutralization reactions (acid-base theories, pH, buffer .solutions)	Lecture and training	Short test
6	2	The student will understand the principles of oxidation-reduction reactions	Redox reactions and their applications	Theoretical Lecture	Discussion
7	2	-	Midterm exam	Theoretical Lecture	Written exam
8	2	To familiarize the student with the methods of separation and gravimetric analysis	Sedimentation methods (precipitating agents, gravimetric calculations)	Lecture and training	Discussion
9	2	The student will use the principles of spectroscopic analysis in quantitative measurements	Spectral analysis and the Beer-Lambert law	Lecture and exercises	Short test
10	2	The student will be able to distinguish between basic organic compounds and their reactions	Organic chemistry (alkanes, alkenes, alcohols)	Theoretical Lecture	Homework
11	2	The student will learn about functional groups and their distinct interactions	Aldehydes, ketones, and carboxylic acids	Lecture and training	Discussion
12	2	The student will understand the structure and biological function of carbohydrates	Carbohydrates: Definition, Classification, and Functions	Theoretical Lecture	Short test
13	2	The student will	Fats: definition,	Lecture and	Homework

		understand the structure and biological function of lipids	classification, and functions	exercises	
14	2	The student will understand the importance of proteins as structural and functional units	Amino acids and proteins: definition, structure, and functions	-	Open Discussion
15	2	-	Final review and practical exam	-	Practical Exam

11. Course Evaluation
The grade is distributed out of 100 based on the tasks assigned to the student, such as daily preparation, daily, oral, monthly, and written exams, reports, etc. 40 points for the annual effort, divided into 25 points for theory and 15 points for practical work. points for the final exam, divided into 35 points for theory and 25 points for practical work (60)

12. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	
Main references (sources)	1 - LEHNINGER .L ALBERT understanding chemistry by George Pimentel
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	noor-book.com wikipedia.org mu.edu.iq mawdoo3.com ktbbh.com

Course Description Form

. Course Name:
Medical Terminology 1
. Course Code:
MLB.1.2
. Semester / Year:
2024-2025
. Description Preparation Date:
26.7.2025
. Available Attendance Forms:
Theoretical attendance in classrooms
. Number of Credit Hours (Total) / Number of Units (Total)
Number of hours 2/Number of units 2
. Course administrator's name (mention all, if more than one name)
Name: Musa Mahmoud Marbat Email: musa.mahmoud@alfarabiuc.edu.iq
. Course Objectives

Course Objectives	• This course introduces the basics of medical terminology by explaining the basic elements that make up a medical term, showing how these elements are linked together to form a medical term, and providing appropriate examples. This is followed by a comprehensive explanation of the structural and functional organization of the human body, including its various systems. • Specific Objective: To familiarize the student with medical terminology, particularly those used during the academic phase.

. Teaching and Learning Strategies

Strategy	It includes all teaching procedures and educational practices that aim to activate the role of the student and transform him from a recipient and listener of information to a main focus in his learning process, where learning takes place through work and research and the student's reliance on himself to obtain knowledge

Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2	Understanding and Comprehension	Introduction, defining medical word	Theoretical Lecture	Discussion
2	2	Understanding and Comprehension	Techniques of medical word building	Theoretical Lecture	Homework
3	2	Understanding and Comprehension	Elements of medical word, word roots, suffixes, prefixes	Theoretical Lecture	Quiz
4	2	Understanding and	Word roots	Theoretical	Discussion

		Comprehension		Lecture	
5	2	Understanding and Comprehension	Common prefixes	Theoretical Lecture	Quiz
6	2	Understanding and Comprehension	Common suffixes	Theoretical Lecture	Homework
7	2	Understanding and Comprehension	Body structure key terms	Theoretical Lecture	Written Exam
8	2	Understanding and Comprehension	Level of organizations: cell, tissue, organ, system	Theoretical Lecture	Discussion
9	2	Understanding and Comprehension	Anatomical positions and terms, planes of body	Theoretical Lecture	Quiz
10	2	Understanding and Comprehension	Body parts and cavities	-	Homework
11	2	Understanding and Comprehension	Pathology and abnormal conditions: tumors, infections and inflammations	Theoretical Lecture	Discussion
12	2	Understanding and Comprehension	Symptoms, diseases and diagnosis	Theoretical Lecture	Quiz
13	2	Understanding and Comprehension	Diagnostic procedures	Theoretical Lecture	Homework
14	2	Understanding and Comprehension	Therapeuticprocedures	Theoretical Lecture	Open Discussion

. Course Evaluation

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

. Learning and Teaching Resources

Required textbooks (curricular books, if any)	The language of medicine
Main references (sources)	Medical terminology
Recommended books and references (scientific journals, reports...)	Essentials of anatomy and physiology
Electronic References, Websites	

Course Description Form

. Course Name:
Human Biology 2+1
. Course Code:
MLB.1.3
. Semester / Year:
2024-2025
. Description Preparation Date:
26.7.2025
. Available Attendance Forms:
Theoretical attendance in classrooms + practical laboratory work
. Number of Credit Hours (Total) / Number of Units (Total)
Number of hours: 7/Number of units: 4
. Course administrator's name (mention all, if more than one name)
Name: Ali Furat Abdul Sattar Email: ali.furat@alfarabiuc.edu.iq

. Course Objectives	
Course Objectives	Provides a clear understanding of living organisms by understanding their structure and functions. Specific objective: Focus on analyzing the structure and functions of genes

. Teaching and Learning Strategies	
Strategy	It includes all teaching procedures and educational practices that aim to activate the role of the student and transform him from a recipient and listener of information to a main focus in his learning process, where learning takes place through work and research and the student's reliance on himself to obtain knowledge

Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2	Understanding and Comprehension	The Science of Biology	Theoretical Lecture	Discussion
2	2	Understanding and Comprehension	Why sudy biology is importance ,Diffinition of biology,	Theoretical Lecture	Homework
3	2	Understanding and Comprehension	Some subdivision of biology	Theoretical Lecture	Quiz
4	2	Understanding and Comprehension	The Charactaristics of Living Things (Organisims)	Theoretical Lecture	Discussion
5	2	Understanding and Comprehension	Evaluation, Adaptation, Respiration, Homostasis,Metabolism,Anabolism, Catabolism,	Theoretical Lecture	Quiz
6	2	Understanding and Comprehension	Respond to stumili,Repruduction	Theoretical Lecture	Homework
7	2	Understanding and Comprehension	The Kingdom of Living Things	Theoretical Lecture	Written Exam
8	2	Understanding	ClassificationofOrganisms,Catogaries of	Theoretical	Discussion

		and Comprehension	Classification ofOrganisms,The five Kinkdom Scheme Of Classification	Lecture	
9	2	Understanding and Comprehension	Chemistry of Life(Biology of Polymerse,Levels of Organization Lipids, Carbohydrates ,Protiens, Amino acid	Theoretical Lecture	Quiz
10	2	Understanding and Comprehension	Cell Structure and Function ,Animal cells	-	Homework
11	2	Understanding and Comprehension	Cell Wall,CellMembrane,CytoplasmicMatrix,Nuecleous	Theoretical Lecture	Discussion
12	2	Understanding and Comprehension	Endoplasmic Reticulum,Golgiapparatus,Cilia , Flagella Plant cells	Theoretical Lecture	Quiz
13	2	Understanding and Comprehension	Comparision Between Animal and Plant,,etc.	Theoretical Lecture	Homework
14	2	Understanding and Comprehension	ProkcaryotesCells,EukaryotesCells,Differences ,Characterstics and Comparision	Theoretical Lecture	Open Discussion

. Course Evaluation

The grade is distributed out of 100 based on the tasks assigned to the student, such as daily preparation, daily, oral, monthly, and written exams, reports, etc.
40 points for the annual effort, divided into 25 points for theory and 15 points for practical work.
points for the final exam, divided into 35 points for theory and 25 points for practical work (60)

. Learning and Teaching Resources

Required textbooks (curricular books, if any)	.Glenco-Biology-Dynamic of Life(Megraw 2008)
Main references (sources)	.Mader-Biology-Injury into Life (Nine Edition)
Recommended books and references (scientific journals, reports...)	Prescott, Harley and Klein -Biology-(Sixth Eddition)
Electronic References, Websites	

Course Description Form

. Course Name:
laboratory equipment 1+2
. Course Code:
MLB.1.4
. Semester / Year:
2024-2025
. Description Preparation Date:
26.7.2025
. Available Attendance Forms:
Theoretical attendance in classrooms + practical laboratory work
. Number of Credit Hours (Total) / Number of Units (Total)
Number of hours: 6/Number of units: 4
. Course administrator's name (mention all, if more than one name)
Name: Ali Sarmed Majeed Email: ali.sarmad@alfarabiuc.edu.iq
. Course Objectives

Course Objectives	• General objective: The course aims to enable the student to identify the types of laboratory equipment. Specific objective: The student will become familiar with the scientific theories on which these devices operate.

. Teaching and Learning Strategies	
Strategy	It includes all teaching procedures and educational practices that aim to activate the role of the student and transform him from a recipient and listener of information to a main focus in his learning process, where learning takes place through work and research and the student's reliance on himself to obtain knowledge

Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2	Understanding and Comprehension	General introduction	Theoretical Lecture	Discussion
2	2	Understanding and Comprehension	microscope	Theoretical Lecture + Practical Lecture	Homework
3	2	Understanding and Comprehension	Phase Contrast microscopy	Theoretical Lecture	Quiz
4	2	Understanding and Comprehension	Darkfield microscopy	Theoretical Lecture	Discussion
5	2	Understanding and Comprehension	Fluorescent microscope ,Parts & principle	Theoretical Lecture	Quiz
6	2	Understanding and Comprehension	Setting up & uses	Theoretical Lecture	Homework
7	2	Understanding and Comprehension	Care & safety	Theoretical Lecture	Written Exam
8	2	Understanding and Comprehension	Electron Microscope	Theoretical Lecture	Discussion
9	2	Understanding and Comprehension	Parts & principle	Theoretical Lecture +	Quiz

				Practical Lecture	
10	2	Understanding and Comprehension	Magnification & resolution	Theoretical Lecture	Homework
11	2	Understanding and Comprehension	Uses	Theoretical Lecture	Discussion
12	2	Understanding and Comprehension	Tutorial sheet	Theoretical Lecture	Quiz
13	2	Understanding and Comprehension	Photometer & Spectrometer	Theoretical Lecture + Practical Lecture	Homework
14	2	Understanding and Comprehension	Parts & Principle	Theoretical Lecture	Open Discussion

. Course Evaluation
The grade is distributed out of 100 based on the tasks assigned to the student, such as daily preparation, daily, oral, monthly, and written exams, reports, etc. 40 points for the annual effort, divided into 25 points for theory and 15 points for practical work. points for the final exam, divided into 35 points for theory and 25 points for practical work (60)

. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	Principles of laboratory instruments
Main references (sources)	Configurable professional lab notebooks
Recommended books and references (scientific journals, reports...)	Laboratory equipment book
Electronic References, Websites	

Course Description Form

. Course Name:
Professional Conduct 1
. Course Code:
MLB.1.5
. Semester / Year:
2024-2025
. Description Preparation Date:
26.7.2025
. Available Attendance Forms:
Theoretical attendance in classrooms

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

Number of hours 2/Number of units 2

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

Name: Majeed Jassim Nayef
Email: majid.jassim@alfarabiuc.edu.iq

. Course Objectives

Course Objectives	• To equip the student with the appropriate method for dealing with patients, devices, and equipment in the field of work. • Specific objective: To qualify the graduate to demonstrate professional behavior in dealing with his profession and to achieve harmony with himself and his professional environment (the patient, his companions, healthcare workers, and medical equipment).

. Teaching and Learning Strategies

Strategy	It includes all teaching procedures and educational practices that aim to activate the role of the student and transform him from a recipient and listener of information to a main focus in his learning process, where learning takes place through work and research and the student's reliance on himself to obtain knowledge

Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2	Understanding and Comprehension	Principles of professional ethics in the stages of civilizational development	Theoretical Lecture	Discussion
2	2	Understanding and Comprehension	Basic professional ethics	Theoretical Lecture	Homework
3	2	Understanding and Comprehension	Behavioral patterns/human-interactive-collective	Theoretical Lecture	Quiz
4	2	Understanding and Comprehension	Communication Styles/Linguistic and Non-Linguistic	Theoretical Lecture	Discussion
5	2	Understanding and Comprehension	Behavioral trends .and tendencies	Theoretical Lecture	Quiz
6	2	Understanding and Comprehension	Values, customs and traditions	Theoretical Lecture	Homework
7	2	Understanding and Comprehension	Personality types and how to deal with them	Theoretical Lecture	Written Exam
8	2	Understanding and Comprehension	Conditions for improving mental health	Theoretical Lecture	Discussion
9	2	Understanding and Comprehension	Conditions of professional	Theoretical Lecture	Quiz

			compatibility and the associated work relationship		
10	2	Understanding and Comprehension	Job description for graduate work	Theoretical Lecture	Homework
11	2	Understanding and Comprehension	Patient behavior	Theoretical Lecture	Discussion
12	2	Understanding and Comprehension	Behavioral handling of medical devices and equipment	Theoretical Lecture	Quiz
13	2	Understanding and Comprehension	Occupational safety	Theoretical Lecture	Homework
14	2	Understanding and Comprehension	Applications in Professional Behavior	Theoretical Lecture	Open Discussion

. Course Evaluation

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

. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Professional Conduct for Health Technicians
Main references (sources)	Islamic Constitution of the Medical Profession
Recommended books and references (scientific journals, reports...)	Professional Conduct of Doctors, Raji Abbas Al-Tikriti
Electronic References, Websites	

Course Description Form

. Course Name:

Computer Principles 1+2

. Course Code:

MLB.1.6

. Semester / Year:

2024-2025

. Description Preparation Date:

26.7.2025

. Available Attendance Forms:

Theoretical attendance in classrooms

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

Number of hours: 3/Number of units: 2

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

Name: Majeed Jassim Nayef
Email: majid.jassim@alfarabiuc.edu.iq

. Course Objectives

Course Objectives	• Teaching the student to be familiar with the basic rules for dealing with and managing computers to help him complete projects, printing matters, preparing statistics and graphs, creating presentations, designing engineering plans, etc. • Specific objective: To teach the student to use the computer due to the role of the Internet in many fields, including education, scientific research, commerce, and marketing through electronic correspondence, web pages, and electronic conversation.

. Teaching and Learning Strategies

Strategy	It includes all the field and tactical areas of educational work through which the student's role can be activated and transformed from a recipient and Internet learner to a basic axis in learning, where learning is done through research and reliance on the student's continuous acquisition of knowledge

Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2	Understanding and Comprehension	Computer Cycle, Generations, Data, and Information	Theoretical Lecture	Discussion
2	2	Understanding and Comprehension	Computer Features, Areas of Use, and Components	Theoretical Lecture	Homework
3	2	Understanding and Comprehension	Types of Computers and Their Classification	Theoretical Lecture	Quiz
3	2	Understanding and Comprehension	Computer Components: Hardware, Input and Output Devices	Theoretical Lecture	Discussion
5	2	Understanding and Comprehension	Computer Case and Software	Theoretical Lecture	Quiz
6	2	Understanding and Comprehension	Setup Systems and Personal Computers	Theoretical Lecture	Homework
7	2	Understanding and Comprehension	Computer Platforms and Factors to Consider When Purchasing a Computer	Theoretical Lecture	Written Exam
8	2	Understanding and Comprehension	Main Features of Personal Computers and Chapter Questions	Theoretical Lecture	Discussion
9	2	Understanding and Comprehension	Electronic Ethics, Types of Violations, and Computer Security	Theoretical Lecture	Quiz

10	2	Understanding and Comprehension	Intellectual Property and Cyber Hacking	Theoretical Lecture	Homework
11	2	Understanding and Comprehension	Cyber Hacking and Types of Hacking	Theoretical Lecture	Discussion
12	2	Understanding and Comprehension	The Most Common Sources of Hacking and Security Risks	Theoretical Lecture	Quiz
13	2	Understanding and Comprehension	Malware - Computer Viruses	Theoretical Lecture	Homework
14	2	Understanding and Comprehension	Damages Caused by Viruses and Their Characteristics	Theoretical Lecture	Open Discussion

. Course Evaluation

The grade is distributed out of 100 based on the tasks assigned to the student, such as daily preparation, daily, oral, monthly, and written exams, reports, etc.
40 points for the annual effort, divided into 25 points for theory and 15 points for practical work.
points for the final exam, divided into 35 points for theory and 25 points for practical work (60)

. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Computer Basics and Office Applications - Ministry of Higher Education and Scientific Research - Research and Development Department
Main references (sources)	Yusr Al-Mustafa Science Series: Computer and Internet Basics
Recommended books and references (scientific journals, reports...)	Computing Fundamentals, Innovative training works USA, Inc, 2006
Electronic References, Websites	

Course Description Form

Course Name:
Human Anatomy 2
Course Code:
MLB1.3
Semester / Year:
2025-2026
Description Preparation Date:
23/7/2025
Available Attendance Forms:
Weekly (practical , theoretical)
Number of Credit Hours (Total) / Number of Units (Total)
Theoretical (2) , Practical (5) , Number of units (4)
Course administrator's name (mention all, if more than one name)
Name: Prof. Dr. M. A. Gali Email: mohammed.zyarah@ gmail.com.
Course Objectives

Course Objectives	To recognize the significance of the subject matter in relation to the student academic and professional development. To identify and describe the anatomical planes

	of the human body. To locate major body organs and describe their histological components

Teaching and Learning Strategies

Strategy	1-Explain the importance of studying human anatomy . 2-Introduce the anatomical planes and use them to describe the relative positions of body organ. 3- Discuss the anatomical location of major organs, including how these relate to clinical contexts such as pain localization. 4-Describe the type of tissues that constitute each organ , emphasizing their structure- function relationships. 5- Engage students with guided questions related to the topic .

Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2		Introduction to anatomy	Screen	Attendance and discussion
2	2		Level of organization	=	
3	2		Anatomical positions	=	
4	2		Body regions and cavities	=	
5	2		Body planes and sections	=	
6	2		Directional terms	=	
7	2		Tissues and membranes	=	
8	2		Epithelial & connective	=	
9	2		tissues	=	
10	2		Muscular & nervous	=	
11	2		tissues	=	
12	2		Digestive tract	=	
13	2		Accessory glands	=	
14	2		Respiratory system	=	
15	2		Blood	=	
			Circulatory system		
			Nervous system		

. Course Evaluation

Attendance: 5 Discussion: 5 Two-month exams: 90 converted to 25% + 15 practical + 60 final

. Learning and Teaching Resources

Required textbooks (curricular books, if any)	
Main references (sources)	Gartner , L.P., & Hiatt, J.L. (2022) " Color Textbook of Histology" 5th ed. Elsevier Vaughn,P. (2016) Anatomy and physiology
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	Google and chat GPT

Course Description Form

. Course Name:	
Arabic language	
. Course Code:	
MLB.1.10	
. Semester / Year:	
2024-2025	
. Description Preparation Date:	
26.7.2025	
. Available Attendance Forms:	
Theoretical attendance in classrooms	
. Number of Credit Hours (Total) / Number of Units (Total)	
30 study hours, 2 x 15 weeks study units 2	
. Course administrator's name (mention all, if more than one name)	
Name: Majeed Jassim Nayef Email: majid.jassim@alfarabiuc.edu.iq	
. Course Objectives	
Course Objectives	• Understanding Arabic grammar • The student must be able to form and construct correct sentences • As well as successfully identifying correct language and identifying errors when they occur

. Teaching and Learning Strategies	
Strategy	It includes all teaching procedures and educational practices that aim to activate the role of the student and transform him from a recipient and listener of information to a main focus in his learning process, where learning takes place through work and research and the student's reliance on himself to obtain .knowledge

Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2	Strengthening Student Knowledge in the Subject	Writing the hamzat 'al-qata	Theoretical Lecture	Test on the Board
2	2	Strengthening Student Knowledge in the Subject	Punctuation in sentences	Theoretical Lecture	Oral Exam
3	2	Strengthening Student Knowledge in the Subject		Theoretical Lecture	Oral Exam
4	2	Strengthening Student Knowledge in the Subject	Writing the letters Dhad and Tha	Theoretical Lecture	Oral Exam
5	2	Strengthening Student Knowledge in the Subject	Writing the soft alif	Theoretical Lecture	Oral Exam
6	2	Strengthening Student Knowledge in the Subject	Writing the tied taa	Theoretical Lecture	Oral Exam
7	2	Strengthening Student Knowledge in the Subject	Writing the open taa + how to find words in the dictionary	-	Homework
8	2	Student Evaluation	Verb Distinctive Marks - The Letter	Theoretical Lecture	Exam Preparation
9	2	Strengthening Student Knowledge in the Subject	First semester final exam	-	Oral Exam
10	2	Strengthening Student Knowledge in the Subject	Verb division - past tense	Theoretical Lecture	Written Exam
11	2	Strengthening Student Knowledge in the Subject	Present tense + imperative verb	Theoretical Lecture	Homework
12	2	Strengthening Student Knowledge in the Subject	The built and the expressed	Theoretical Lecture	Homework
13	2	Strengthening Student Knowledge in the Subject	Letters - Their Types and Functions	Theoretical Lecture	Homework
14	2	Strengthening Student Knowledge in the Subject	number	Theoretical Lecture	Homework

15	2	Strengthening Student Knowledge in the Subject	Linguistic corrections	Theoretical Lecture	Homework

. Course Evaluation
The grade is distributed out of 100 based on the tasks assigned to the student, such as daily preparation, daily, oral, monthly, and written exams, reports, etc.
. Learning and Teaching Resources

Required textbooks (curricular books, if any)	A Concise Introduction to the Arabic Language by Dr. Muhi Hilal Al-Sarhan • Arabic Language Only Specialization by Professor Hamid Mukhlif Al-Haiti and Professor Abdul Qadir Hassan • Explanation of Ibn Aqil - Ibn Malik's Alfiyyah Al-Minhaj on the Rules of Language and • Arabism by Al-Antaki
Main references (sources)	
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	Wikipedia.com

Course Description Form

. Course Name:
Medical Bacteriology 2+1
. Course Code:
MLB.2.1
. Semester / Year:
2024-2025
. Description Preparation Date:
26.7.2025
. Available Attendance Forms:
Theoretical attendance in classrooms + practical laboratory work
. Number of Credit Hours (Total) / Number of Units (Total)
Hours 6 / Number of units 4
. Course administrator's name (mention all, if more than one name)
Name: Omar Jamal Ibrahim Email: omar.jamal@alfarabiuc.edu.iq
. Course Objectives

Course Objectives	• The student will be able to identify pathogenic microbes, how to diagnose them, the diseases they cause, and how to control them. • Specific objective: To identify the epidemiology and symptoms of microbial diseases and how to control each

	disease.

. Teaching and Learning Strategies

Strategy	It includes all teaching procedures and educational practices that aim to activate the role of the student and transform him from a recipient and listener of information to a main focus in his learning process, where learning takes place through work and research and the student's reliance on himself to obtain knowledge

Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2	Understanding and comprehension	Introduction Classification of bacteria	Theoretical Lecture	Discussion
2	2	Understanding and comprehension	Structure and function of bacteria	Theoretical Lecture + Practical Lecture	Homework
3	2	Understanding and comprehension	Growth and death of bacteria	Theoretical Lecture	Quiz
4	2	Understanding and comprehension	Culturing of bacteria and media types	Theoretical Lecture	Discussion
5	2	Understanding and comprehension	Bacterial Physiology (Bacterial metabolism).	Theoretical Lecture	Quiz
6	2	Understanding and comprehension	Nutrient cycles and regulation)	Theoretical Lecture	Homework
7	2	Understanding and comprehension	- Bacterial genetics.	Theoretical Lecture	Written Exam
8	2	Understanding and comprehension	- Genetic material.	Theoretical Lecture	Discussion
9	2	Understanding and comprehension	- Plasmids, replication, mutation and genetic recombination.	Theoretical Lecture	Quiz
10	2	Understanding and comprehension	- Microbial virulence factors and pathogenesis of bacterial infection.	Theoretical Lecture + Practical Lecture	Homework
11	2	Understanding and comprehension	- Microflora.	Theoretical Lecture	Discussion
12	2	Understanding and comprehension	- Chemotherapy and antibiotic resistance.	Theoretical Lecture	Quiz
13	2	Understanding and comprehension	- Vaccination.	Theoretical Lecture	Homework
14	2	Understanding and comprehension	-Gram positive cocci:	Theoretical Lecture +	Open Discussion

			Staphylococcus, Streptococcus and enterococcus.	Practical Lecture	
15	2	Understanding and comprehension	Gram positive spore forming bacilli (Clostridium and Bacillus)	Theoretical Lecture + Practical Lecture	Discussion
16	2	Understanding and comprehension	- Gram positive non spore forming bacilli (Listeria and corynbacterium)	Theoretical Lecture	Open Discussion
17	2	Understanding and comprehension	- Gram negative cocci: Neiseria	Theoretical Lecture + Practical Lecture	Discussion

. Course Evaluation

The grade is distributed out of 100 based on the tasks assigned to the student, such as daily preparation, daily, oral, monthly, and written exams, reports, etc.
40 points for the annual effort, divided into 25 points for theory and 15 points for practical work.
points for the final exam, divided into 35 points for theory and 25 points for practical work (60)

. Learning and Teaching Resources

Required textbooks (curricular books, if any)	1-Bergeys manual of systematic bacteriology/George M. Garrity, edi in- chief. Boone, David R.;Castenholz, Richard W.; Garrity, Garrity, Geo M. - Medical Microbiology by Patrick R; Ken S Rosenthal; Michael A. pfaller.
Main references (sources)	Medical Microbiology and Immunology, Warren Levinson, thirteenth edition,McGraw Hill Education.
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	Wikipedia.com

Course Description Form

. Course Name:
Biochemistry 2+1
. Course Code:
MLB.2.2
. Semester / Year:
2024-2025
. Description Preparation Date:
26.7.2025
. Available Attendance Forms:
Theoretical attendance in classrooms + practical laboratory work
. Number of Credit Hours (Total) / Number of Units (Total)
Hours 6 / Number of units 4

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

Name: Mohammed Diab Damnan
Email: mohamed.dhiab@alfarabiuc.edu.iq

. Course Objectives

Course Objectives	General objective: To provide basic knowledge and information in clinical chemistry and develop the student's ability and skill in pathological analysis. Specific objective: To enable the student to perform clinical examinations and be familiar with preparing various solutions.

. Teaching and Learning Strategies

Strategy	It includes all teaching procedures and educational practices that aim to activate the role of the student and transform him from a recipient and listener of information to a main focus in his learning process, where learning takes place through work and research and the student's reliance on himself to obtain knowledge

Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2	Understanding and comprehension	Introduction To Metabolism	Theoretical Lecture	Discussion
2	2	Understanding and comprehension	Enzymes And Isoenzymes	Theoretical Lecture + Practical Lecture	Homework
3	2	Understanding and comprehension	Carbohydrate Metabolism	Theoretical Lecture	Quiz
4	2	Understanding and comprehension	TCA Cycle	Theoretical Lecture	Discussion
5	2	Understanding and comprehension	Fructose & Galactose Metabolism	Theoretical Lecture	Quiz
6	2	Understanding and comprehension	Glycogen Metabolism	Theoretical Lecture	Homework
7	2	Understanding and comprehension	Blood Glucose And Its Regulation	Theoretical Lecture	Written Exam
8	2	Understanding and comprehension	Protein Metabolism	Theoretical Lecture	Discussion
9	2	Understanding and comprehension	Lipid Metabolism	Theoretical Lecture + Practical Lecture	Quiz
10	2	Understanding and comprehension	Lipoprotein Metabolism	Theoretical Lecture	Homework
11	2	Understanding and comprehension	Nucleotide Metabolism	Theoretical Lecture	Discussion

12	2	Understanding and comprehension	Hemoglobin Synthesis And Types	Theoretical Lecture	Quiz
13	2	Understanding and comprehension	Electrolytes	Theoretical Lecture + Practical Lecture	Homework
14	2	Understanding and comprehension	Toxicity	Theoretical Lecture	Open Discussion

. Course Evaluation
The grade is distributed out of 100 based on the tasks assigned to the student, such as daily preparation, daily, oral, monthly, and written exams, reports, etc. 40 points for the annual effort, divided into 25 points for theory and 15 points for practical work. 60 points for the final exam, divided into 35 points for theory and 25 points for practical work

. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	Clinical Chemistry: Principles, Techniques, and Correlations, Ninth Edition
Main references (sources)	Clinical Chemistry Principles, Techniques, and Correlations
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	Medical Laboratory Science Review

Course Description Form

. Course Name:
Human Physiology 2+1
. Course Code:
MLB.2.3
. Semester / Year:
2024-2025
. Description Preparation Date:
26.7.2025
. Available Attendance Forms:
Theoretical attendance in classrooms + practical laboratory work
. Number of Credit Hours (Total) / Number of Units (Total)
Hours 6 / Number of units 4
. Course administrator's name (mention all, if more than one name)
Name: Musa Mahmoud Marbat Email: musa.mahmoud@alfarabiuc.edu.iq
. Course Objectives

Course Objectives	Course Objectives: General Objective: To familiarize the student with the components of somatic cells and the various components of blood, enabling the student to prepare for future work. Specific Objective: To study the organs of a living organism

	and the systems they comprise.

. Teaching and Learning Strategies

Strategy	It includes all teaching procedures and educational practices that aim to activate the role of the student and transform him from a recipient and listener of information to a main focus in his learning process, where learning takes place through work and research and the student's reliance on himself to obtain .knowledge

Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2	Understanding and comprehension	General Introduction to Physiology	Theoretical Lecture	Discussion
2	2	Understanding and comprehension	Cell Physiology: General Functions, Cell Membrane Transport	Theoretical Lecture + Practical Lecture	Homework
3	2	Understanding and comprehension	General Idea about Body fluids: Types, Composition, and Functions. Unit of Measurement, Conversion and Conversion factor.	Theoretical Lecture	Quiz
3	2	Understanding and comprehension	RBCs: Definition, Structure, and Normal Value; Hb Definition, Structure, and Normal Value; Blood Groups.	Theoretical Lecture	Discussion
5	2	Understanding and comprehension	Erythropoiesis, Homeostasis, Death and Disposal.	Theoretical Lecture	Quiz
6	2	Understanding and comprehension	White Blood Cells: Classification, Specific Function,Normal Value.	Theoretical Lecture	Homework
7	2	Understanding and comprehension	Platelet: Definition, Function, Normal Value, Thrombopoiesis and Hemostasis.	Theoretical Lecture	Written Exam
8	2	Understanding and comprehension	Heart Physiology: Conductive System, Cardiac Output (Mechanics and Control), and Factor Affecting.	Theoretical Lecture	Discussion
9	2	Understanding and comprehension	Anatomical positions and terms, planes of body	Theoretical Lecture + Practical Lecture	Quiz
10	2	Understanding and comprehension	Lymphatic Physiology:	Theoretical Lecture	Homework
11	2	Understanding and	Pathology and	Theoretical	Discussion

		comprehension	abnormal conditions: tumors, infections and inflammations	Lecture	
12	2	Understanding and comprehension	Respiratory Physiology:	Theoretical Lecture	Quiz
13	2	Understanding and comprehension	External Respiration,	Theoretical Lecture + Practical Lecture	Homework
14	2	Understanding and comprehension	Lung Volumes:	Theoretical Lecture	Open Discussion

. Course Evaluation

The grade is distributed out of 100 based on the tasks assigned to the student, such as daily preparation, daily, oral, monthly, and written exams, reports, etc.
40 points for the annual effort, divided into 25 points for theory and 15 points for practical work.
points for the final exam, divided into 35 points for theory and 25 points for practical work (60)

. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Medical physiology
Main references (sources)	Guyton and Hall Textbook of Medical Physiology
Recommended books and references (scientific journals, reports...)	Fundamentals of Anatomy and Physiology
Electronic References, Websites	-

Course Description Form

. Course Name:
Histology 1+2
. Course Code:
MLB2.4
. Semester / Year:
2025-2026
. Description Preparation Date:
23/7/2025
. Available Attendance Forms:
Weekly (practical , theoretical)
. Number of Credit Hours (Total) / Number of Units (Total)
Theoretical (2) , Practical (4) , Number of units (4)
. Course administrator's name (mention all, if more than one name)
Name: Prof. Dr. M. A. Gali Email: mohammed.zyarah@ gmail.com.
. Course Objectives

Course Objectives	To introduce the student to the importance of histology as a fundamental subject in medical and life sciences education. To enable the student to identify the tissue types and understand their structural and functional integration in different organs. To establish a scientific foundation for advanced studies in hematology, histopathology , physiology and immunology.

. Teaching and Learning Strategies

Strategy	1-Introduce the importance and scope of histology in understanding human body structure and function. 2-Discuss the types and properties of tissues in various organs, emphasizing their functional roles. 3-Explore the structural and functional relationships between tissues within a single organ, across organ systems, and among the body systems as a whole. 4-Promote critical thinking by raising key questions and analyzing incorrect responses to address misconceptions. 5-Integrating practical sessions using light microscopy with the theoretical part.

Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2		Introduction to	Screen	Attendance and discussion
2+3	4		histology	=	
4+5	4		Epithelial tissue	=	
6	2		Connective tissue	=	
7+8	4		Cartilage	=	
9	2		Bone& ossification	=	
10	2		Joints	=	
11	2		Muscular tissue	=	
12+13	4		Nervous tissue	=	
14+15	4		Nervous system	=	
16+17+18	6		Integumentary system	=	
19	2		Digestive tract	=	
20+21	4		Accessory glands	=	
22+23	4		Respiratory system	=	
24+25	4		Urinary system	=	
26+27	4		Circulatory system	=	
28+29+30	6		Lymphatic system Special sense organs	=	

. Course Evaluation

40 points for the annual effort, divided into 25 points for theory and 15 points for practical work.
points for the final exam, divided into 35 points for theory and 25 points for practical work (60)

. Learning and Teaching Resources

Required textbooks (curricular books, if any)	
Main references (sources)	Gartner , L.P., & Hiatt, J.L. (2022) " Color Textbook of Histology" 5th ed. Elsevier Vaughn,P. (2016) Anatomy and physiology
Recommended books and references (scientific journals, reports...)	

Electronic References, Websites	Google and chat GPT

Course Description Form

. Course Name:
Molecular Biology 1
. Course Code:
MLB.2.5
. Semester / Year:
2024-2025
. Description Preparation Date:
26.7.2025
. Available Attendance Forms:
Theoretical attendance in classrooms + practical laboratory work
. Number of Credit Hours (Total) / Number of Units (Total)
Hours 6 / Number of units 4
. Course administrator's name (mention all, if more than one name)
Name: Ali Furat Abdul Sattar Email: ali.furat@alfarabiuc.edu.iq

. Course Objectives	
Course Objectives	Course Objectives: General Objective: To familiarize students with the molecular components of somatic cells, enabling them to prepare for future careers. Specific Objective: To focus on analyzing the structure and functions of genes.

. Teaching and Learning Strategies	
Strategy	It includes all teaching procedures and educational practices that aim to activate the role of the student and transform him from a recipient and listener of information to a main focus in his learning process, where learning takes place through work and research and the student's reliance on himself to obtain knowledge

Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2	Understanding and comprehension	Introduction in Molecular Biology Structure of DNA & RNA DNA as the vehicle of inheritance	Theoretical Lecture	Discussion
2	2	Understanding and comprehension	DNA replication and transcription	Theoretical Lecture + Practical Lecture	Homework

3	2	Understanding and comprehension	Gene expression and regulation	Theoretical Lecture	Quiz
3	2	Understanding and comprehension	Post transcriptional modification	Theoretical Lecture	Discussion
5	2	Understanding and comprehension	Translation and protein synthesis	Theoretical Lecture	Quiz
6	2	Understanding and comprehension	Post translation modifications. Inhibitors of translation	Theoretical Lecture	Homework
7	2	Understanding and comprehension	Repair of DNA – types of damages, repair	Theoretical Lecture	Written Exam
8	2	Understanding and comprehension	Gene mutation and chromosomal aberrations. Cause of mutation-chemical and physical agents.	Theoretical Lecture + Practical Lecture	Discussion
9	2	Understanding and comprehension	Recombinant- DNA technology, Role of restriction endonucleases, plasmid and cosmid cloning vectors	Theoretical Lecture	Quiz
10	2	Understanding and comprehension	Gene and Gene Action ,DNA,RNA Structures.	Theoretical Lecture + Practical Lecture	Homework
11	2	Understanding and comprehension	Disorders of Cell growth & carcinogenesis	Theoretical Lecture	Discussion
12	2	Understanding and comprehension	Introduction in Molecular Biology Structure of DNA & RNA DNA as the vehicle of inheritance	Theoretical Lecture + Practical Lecture	Discussion
13	2	Understanding and comprehension	DNA replication and transcription	Theoretical Lecture	Homework
14	2	Understanding and comprehension	Gene expression and regulation	Theoretical Lecture	Quiz

. Course Evaluation

The grade is distributed out of 100 based on the tasks assigned to the student, such as daily preparation, daily, oral, monthly, and written exams, reports, etc.
40 points for the annual effort, divided into 25 points for theory and 15 points for practical work.
points for the final exam, divided into 35 points for theory and 25 points for practical work (60)

. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Molecular Biology & Genetics
Main references (sources)	Cell and Molecular Biology

Recommended books and references (scientific journals, reports...)	The Basics of Molecular Biology
Electronic References, Websites	-

Course Description Form

1-Course Name:
Helmithes-Metazoa
2-Course Code:
MI.B2.6
3-Semester / Year:
Semester 2
4-Description Preparation Date:
30-6-2025
Available Attendance Forms:
Theoritical and practical lectutres/ slide show and samples under Microscope
Number of Credit Hours (Total) / Number of Units (Total)
6 (2+4) Theoritical and Practical lectures
Course administrator's name (mention all, if more than one name)
Name : Assist prof. dr. Khaleel Ibrahim Rashid Email: drkhaleel1956@gmail.com
Course Objectives

Course Objectives	**helminthes name and species**

	Pathogenic helminthes and disease name. life cycle Transmission and Diagnosis
Teaching and Learning Strategies	
Strategy	Study pathogenic Helminthes and life cycle Diseases caused by them Transmission and diagnosis approaches

Course Structure

Week	**Hours**	**Required Learning Outcomes**	**Unit or subject name**	**Learning method**	**Evaluation method**
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	6 6 6 6 6 6 6 6 6 6 6	Metazoa groups: Helminthes Cestoda Group: Taenia saginata Taenia solium Diphyllobotherum Echinococcus Hymenolepis Trematoda Group : Scchistosoma, Fasciola Nematoda Group : Ascaric,Ancylostoma Trichuris trichura Trichenella spiralis, Strongyloides , Wuchereria bancrofti Entamology-Insects Mosqutoes : species transmitted diseases Flies: species Transmitted diseases	Introduction M Metazoa: H elminthes T T. saginata T. solium Yllobthrium Echinococcus Hymenolepis Trematodes: Schistosoma s Fasciola spp, Ascaris Ancylostoma Trichuris Trichenella trongyloides Wuchereria Medical impotance Disease name	Theoritical and practical -slide show ans sample under microscope for all lectures	Short exam and home duty For all

			Life cycle Edical importance , Disease name Life , and species		

- Course Evaluation	
Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc 80 % because of repeated absent	
- Learning and Teaching Resources	
Required textbooks (curricular books, if any)	Medical biology
Main references (sources)	Helminthes diseases
Recommended books and references (scientific journals, reports...)	Parasitology and Hlminthology
Electronic References, Websites	Helminthes, and Entamoloy

Course Description Form

. Course Name:	
Histopathology	
. Course Code:	
MLB.3.1	
. Semester / Year:	
2024-2025	
. Description Preparation Date:	
26.7.2025	
. Available Attendance Forms:	
Theoretical attendance in classrooms + practical laboratory work	
. Number of Credit Hours (Total) / Number of Units (Total)	
Hours 5 / Number of units 7	
. Course administrator's name (mention all, if more than one name)	
Name: Ali Sarmed Majeed Email: ali.sarmad@alfarabiuc.edu.iq	
. Course Objectives	
Course Objectives	General Objective: Continuous development in the teaching of histopathology and microbiology from a scientific perspective for analytical students, using modern teaching methods to

	establish a solid foundation for acquiring future clinical and scientific research skills, and to provide the appropriate scientific basis for students to understand and comprehend the subjects taught in subsequent stages. Specific Objective: Practical teaching of histopathology using modern educational methods to prepare students for future clinical and research studies.

. Teaching and Learning Strategies

Strategy	It includes all teaching procedures and educational practices that aim to activate the role of the student and transform him from a recipient and listener of information to a main focus in his learning process, where learning takes place through work and research and the student's reliance on himself to obtain knowledge

82. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2	Understanding and comprehension	Introduction, cell constituents	Theoretical Lecture	Discussion
2	2	Understanding and comprehension	Inflammation, Repair & Degeneration Acute Inflammation	Theoretical Lecture + Practical Lecture	Homework
3	2	Understanding and comprehension	Chronic Inflammation	Theoretical Lecture	Quiz
4	2	Understanding and comprehension	Repair, healing & Regeneration	Theoretical Lecture	Discussion
5	2	Understanding and comprehension	Rettrograde, changes, Degeneration	Theoretical Lecture	Quiz
6	2	Understanding and comprehension	Atropphy Necrosis, cloudy swelling	Theoretical Lecture	Homework
7	2	Understanding and comprehension	Gangrene	Theoretical Lecture	Written Exam
8	2	Understanding and comprehension	Criteria used for cytopathological diagnosis of cancer	Theoretical Lecture	Discussion
9	2	Understanding and comprehension	Changes in the cytoplasma in malignancy Changes in the nucleus in malignancy	Theoretical Lecture	Quiz
10	2	Understanding and comprehension	Changes in cell as a general in malignancy	Theoretical Lecture + Practical Lecture	Homework

11	2	Understanding and comprehension	Numenclature of tumors	Theoretical Lecture	Discussion
12	2	Understanding and comprehension	Fixation & Fixatives Theoretical aspects of Fixation Most common fixatives in common use	Theoretical Lecture	Quiz
13	2	Understanding and comprehension	Fixation for special substances Specializes Techniques for individual tissue & fixation Arte fact	Theoretical Lecture	Homework
14	2	Understanding and comprehension	Tissue processting Fixation ,dehydration ,clearing ,embdding	Theoretical Lecture + Practical Lecture	Open Discussion
15	2	Understanding and comprehension	Factors influencing rate of impregnation Agitation ,heat,viscosity,ultrasonies,vacuum	Theoretical Lecture + Practical Lecture	Quiz
16	2	Understanding and comprehension	Microtomy andparaffin section	Theoretical Lecture	Homework
17	2	Understanding and comprehension	Staining of tissuesections Hematoxylin ,eosin ,connective tissue ,stains	Theoretical Lecture	Discussion

. Course Evaluation

The grade is distributed out of 100 based on the tasks assigned to the student, such as daily preparation, daily, oral, monthly, and written exams, reports, etc.
40 points for the annual effort, divided into 25 points for theory and 15 points for practical work.
points for the final exam, divided into 35 points for theory and 25 points for practical work (60)

. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Histopathology
Main references (sources)	Practical histopathology
Recommended books and references (scientific journals, reports...)	Histology of pathology
Electronic References, Websites	

Course Description Form

. Course Name:
Hematology
. Course Code:
MLB.3.2
. Semester / Year:
2024-2025
. Description Preparation Date:
26.7.2025
. Available Attendance Forms:
Theoretical attendance in classrooms + practical laboratory work

. Number of Credit Hours (Total) / Number of Units (Total)
Hours 4 / Number of units 3
. Course administrator's name (mention all, if more than one name)
Name: Musa Mahmoud Marbat Email: musa.mahmoud@alfarabiuc.edu.iq
. Course Objectives

Course Objectives	General objective: To provide the student with a comprehensive and up-to-date understanding of hematology, the normal and abnormal ranges of blood components, and the changes that occur with various diseases. Specific objective: To establish a solid knowledge base about hematology, enabling the student to keep pace with the medical community they will live in after graduation.

. Teaching and Learning Strategies	
Strategy	It includes all teaching procedures and educational practices that aim to activate the role of the student and transform him from a recipient and listener of information to a main focus in his learning process, where learning takes place through work and research and the student's reliance on himself to obtain knowledge

Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2	Understanding and comprehension	Introduction of hematology(	Theoretical Lecture	Discussion
2	2	Understanding and comprehension	Hemopoiesis, erythropoiesis , morphology of RBCs,	Theoretical Lecture + Practical Lecture	Homework
3	2	Understanding and comprehension	Hemoglobin	Theoretical Lecture	Quiz
4	2	Understanding and comprehension	Anemia	Theoretical Lecture	Discussion
5	2	Understanding and comprehension	Iron metabolism , iron deficiency anemia	Theoretical Lecture	Quiz
6	2	Understanding and comprehension	Megaloblastic anemia	Theoretical Lecture	Homework
7	2	Understanding and comprehension	Folatedeficiency (causes, diagnosis	Theoretical Lecture	Written Exam
8	2	Understanding and comprehension	Hemolytic anemia	Theoretical Lecture	Discussion
9	2	Understanding and comprehension	Anatomical positions and terms, planes of body	Theoretical Lecture + Practical Lecture	Quiz
10	2	Understanding and	Thalassemia	Theoretical	Homework

		comprehension		Lecture	
11	2	Understanding and comprehension	Sickle cell anemia	Theoretical Lecture	Discussion
12	2	Understanding and comprehension	Aplastic anemia	Theoretical Lecture	Quiz
13	2	Understanding and comprehension	Polycythemia	Theoretical Lecture + Practical Lecture	Homework
14	2	Understanding and comprehension	White blood cells	Theoretical Lecture	Open Discussion

. Course Evaluation
The grade is distributed out of 100 based on the tasks assigned to the student, such as daily preparation, daily, oral, monthly, and written exams, reports, etc. 40 points for the annual effort, divided into 25 points for theory and 15 points for practical work. points for the final exam, divided into 35 points for theory and 25 points for practical work (60)

. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	Clinical hematology atlas
Main references (sources)	Hematology case review
Recommended books and references (scientific journals, reports...)	Hematology
Electronic References, Websites	

Course Description Form

. Course Name:	
Virology and Mycology	
. Course Code:	
MLB.3.3	
. Semester / Year:	
2024-2025	
0. Description Preparation Date:	
26.7.2025	
1. Available Attendance Forms:	
Theoretical attendance in classrooms + practical laboratory work	
2. Number of Credit Hours (Total) / Number of Units (Total)	
Hours 4 / Number of units 3	
3. Course administrator's name (mention all, if more than one name)	
Name ruqaiya Saad Jassim Email: ruqaiya.saad@alfarabiuc.edu.iq	
4. Course Objectives	
Course Objectives	•Course objectives: General objective: To provide a clear understanding of living organisms by understanding their structure and functions. Specific objective: To focus on analyzing the structure and functions of genes.
5. Teaching and Learning Strategies	
Strategy	It includes all teaching procedures and educational practices that aim to activate

	the role of the student and transform him from a recipient and listener of information to a main focus in his learning process, where learning takes place through work and research and the student's reliance on himself to obtain knowledge

Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2	Understanding and comprehension	General properties of Viruses.	Theoretical Lecture	Discussion
2	2	Understanding and comprehension	Structure, Classification and Nomenclature of the Viruses.	Theoretical Lecture + Practical Lecture	Homework
3	2	Understanding and comprehension	Atypical Virus-like agents (Prions, Defective viruses, Pseudovirion and Viriods).	Theoretical Lecture	Quiz
4	2	Understanding and comprehension	Viral Genetic and Molecular & Viral Replication	Theoretical Lecture	Discussion
5	2	Understanding and comprehension	Viral Pathogenesis and Transmission	Theoretical Lecture	Quiz
6	2	Understanding and comprehension	Immunity & Laboratory Diagnosis of Viruses.	Theoretical Lecture	Homework
7	2	Understanding and comprehension	Herpes virus	Theoretical Lecture	Written Exam
8	2	Understanding and comprehension	Hepatitis virus	Theoretical Lecture	Discussion
9	2	Understanding and comprehension	Human Immune Deficiency virus	Theoretical Lecture + Practical Lecture	Quiz
10	2	Understanding and comprehension	Orthomyxovirus	Theoretical Lecture	Homework
11	2	Understanding and comprehension	Paramyxovirus	Theoretical Lecture	Discussion
12	2	Understanding and comprehension	Rabies and other Neurotropic viruses	Theoretical Lecture	Quiz
13	2	Understanding and comprehension	Poxvirus	Theoretical Lecture + Practical Lecture	Homework
14	2	Understanding and comprehension	Coronavirus	Theoretical Lecture	Open Discussion

7. Course Evaluation

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

40 points for the annual effort, divided into 25 points for theory and 15 points for practical work. points for the final exam, divided into 35 points for theory and 25 points for practical work (60)	
8. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	Lippincott's Illustrated Reviews: . Microbiology,Third Edition
Main references (sources)	Lippincott's Illustrated Reviews: Microbiology,Third Edition
Recommended books and references (scientific journals, reports...)	Prescott, Harley and Klein -Biology-(Sixth Eddition)
Electronic References, Websites	-

Course Description Form

9. Course Name:	
Clinical Chemistry	
0. Course Code:	
MLB.3.4	
1. Semester / Year:	
2024-2025	
2. Description Preparation Date:	
26.7.2025	
3. Available Attendance Forms:	
Theoretical attendance in classrooms + practical laboratory work	
4. Number of Credit Hours (Total) / Number of Units (Total)	
Hours 4 / Number of units 6	
5. Course administrator's name (mention all, if more than one name)	
Name: Mohammed Diab Damnan Email: mohamed.dhiab@alfarabiuc.edu.iq	
6. Course Objectives	
Course Objectives	Course Objectives: General Objective: To provide basic knowledge and information in clinical chemistry and develop the student's ability and skill in pathological analysis. Specific Objective: To enable the student to perform clinical examinations and be familiar with the preparation of various solutions.
7. Teaching and Learning Strategies	
Strategy	It includes all teaching procedures and educational practices that aim to activate the role of the student and transform him from a recipient and listener of information to a main focus in his learning process, where learning takes place through work and research and the student's reliance on himself to obtain knowledge

Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2	Understanding and	MINERAL METABOLISM:	Theoretical Lecture	Discussion

		comprehension			
2	2	Understanding and comprehension	BLOOD GASES:	Theoretical Lecture + Practical Lecture	Homework
3	2	Understanding and comprehension	Diabetes mellitus	Theoretical Lecture	Quiz
4	2	Understanding and comprehension	function LIVER	Theoretical Lecture	Discussion
5	2	Understanding and comprehension	KIDNEY fuction	Theoretical Lecture	Quiz
6	2	Understanding and comprehension	Disorder in lipid metabolism	Theoretical Lecture	Homework
7	2	Understanding and comprehension	HEART enzymes	Theoretical Lecture	Written Exam
8	2	Understanding and comprehension	Pancreatic function ,exocrine,function,Pathology	Theoretical Lecture	Discussion
9	2	Understanding and comprehension	Serum protein components diseases	Theoretical Lecture + Practical Lecture	Quiz
10	2	Understanding and comprehension	TUMOR MARKERS	Theoretical Lecture	Homework
11	2	Understanding and comprehension	Enzymes isoenzymes patterns to pathology	Theoretical Lecture	Discussion
12	2	Understanding and comprehension	General aspect of hormone	Theoretical Lecture	Quiz
13	2	Understanding and comprehension	Estimation of serum Na, K, Li, Ca using:	Theoretical Lecture + Practical Lecture	Homework
14	2	Understanding and comprehension	General aspect of hormone	Theoretical Lecture	Open Discussion

9. Course Evaluation

The grade is distributed out of 100 based on the tasks assigned to the student, such as daily preparation, daily, oral, monthly, and written exams, reports, etc.
40 points for the annual effort, divided into 25 points for theory and 15 points for practical work.
points for the final exam, divided into 35 points for theory and 25 points for practical work (60)

0. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Clinical Chemistry: Principles, Techniques, and Correlations, Ninth Edition
Main references (sources)	Clinical Chemistry Principles, Techniques, and

	Correlations
Recommended books and references (scientific journals, reports...)	Medical Laboratory Science Review
Electronic References, Websites	

Course Description Form

121. Course Name:
Human genetics
122. Course Code:
MLB.3.5
123. Semester / Year:
2024-2025
124. Description Preparation Date:
26.7.2025
125. Available Attendance Forms:
Theoretical attendance in classrooms + practical laboratory work
126. Number of Credit Hours (Total) / Number of Units (Total)
Hours 5 / Number of units 7
127. Course administrator's name (mention all, if more than one name)
Name: Omar Jamal Ibrahim Email: omar.jamal@alfarabiuc.edu.iq
128. Course Objectives

Course Objectives	Course Objectives: General Objective: To provide students with theoretical, scientific, and practical training in the fundamentals of medical genetics and to impart the latest advanced scientific techniques to them, with the aim of enriching their knowledge of medical genetics, genetics, genetic engineering, and their application in technical medicine. Specific Objective: The course aims to provide a deep understanding of the human genome, genetics, and genetic diseases.

129. Teaching and Learning Strategies

Strategy	It includes all teaching procedures and educational practices that aim to activate the role of the student and transform him from a recipient and listener of information to a main focus in his learning process, where learning takes place through work and research and the student's reliance on himself to obtain knowledge

Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2	Understanding and comprehension	Cell division	Theoretical Lecture	Discussion
2	2	Understanding and comprehension	Mitosis	Theoretical Lecture +	Homework

				Practical Lecture	
3	2	Understanding and comprehension	Meiosis	Theoretical Lecture	Quiz
4	2	Understanding and comprehension	The chromosomes	Theoretical Lecture	Discussion
5	2	Understanding and comprehension	The chromosomal abnormalities	Theoretical Lecture	Quiz
6	2	Understanding and comprehension	Genetic disease due chromosomal abnormalities	Theoretical Lecture	Homework
7	2	Understanding and comprehension	Patter of inheritance Mendel's laws	Theoretical Lecture	Written Exam
8	2	Understanding and comprehension	Dominant inheritance	Theoretical Lecture	Discussion
9	2	Understanding and comprehension	Recessive inheritance	Theoretical Lecture + Practical Lecture	Quiz
10	2	Understanding and comprehension	Another type of inheritance	Theoretical Lecture	Homework
11	2	Understanding and comprehension	The genetic basis of sex X-linked inheritance –y linked inheritance	Theoretical Lecture	Discussion
12	2	Understanding and comprehension	Sex influenced traits	Theoretical Lecture	Quiz
13	2	Understanding and comprehension	Mutations –types of mutation –the genetic basis of mutation	Theoretical Lecture + Practical Lecture	Homework
14	2	Understanding and comprehension	Mutagens carcinogenic in the environment	Theoretical Lecture	Open Discussion

131. Course Evaluation

The grade is distributed out of 100 based on the tasks assigned to the student, such as daily preparation, daily, oral, monthly, and written exams, reports, etc.
40 points for the annual effort, divided into 25 points for theory and 15 points for practical work.
points for the final exam, divided into 35 points for theory and 25 points for practical work (60)

132. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Human Molecular Genetics
Main references (sources)	Molecular Biology of the Cell
Recommended books and references (scientific journals, reports...)	Medical Genetics
Electronic References, Websites	

Course Description Form

. Course Name:
Immunology
. Course Code:
MLB3.6
. Semester / Year:
2025/2024
. Description Preparation Date:
23/7/2025
. Available Attendance Forms:
Weekly (theoretical/practical)
. Number of Credit Hours (Total) / Number of Units (Total)
Hours: 4 Units: 4
. Course administrator's name (mention all, if more than one name)
Name: DR. Eman Shaker Mahmood Email: Emanshaker944@gmail.com
. Course Objectives

Course Objectives The aim of teaching clinical immunology is to introduce students to clinical immunology, its uses, modern classifications, and some common diseases.	The aim of teaching immunology is: 1- To be able to define clinical immunity. 2- to determine the immune mechanism responsible for the disease of common immune diseases to distinguish the various diagnostic methods as well. Differential tests for each disease..

. Teaching and Learning Strategies	
Strategy	- Explanation and clarification through lectures . - How to display scientific materials with data shows, smart boards. - Self-education by preparing reports in sick cases laboratories.

Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	hours 4 my opinion + practical	cognitive and emotional knowledge	Immunology: Definition and Classification of Immunity Sections, Natural and Acquired Immunity, Natural Immune Defenses	Lectures and labs	Exams, daily assignments and examples

2-3	hours 4 my opinion + practical	cognitive and emotional knowledge	The immune system, tissues and Lymphocytes , their origins, their recipients and their maturity stages . Primary and secondary lymphatic organs	Lectures and labs	Exams, daily assignments and examples
4	hours 4 my opinion + practical	cognitive and emotional knowledge	Single-nucleated cells are cells, matured, receptive, receptor, and phagocytosis display cells, inflammation, ,phagocytosis	Lectures and labs	Exams, daily assignments and examples
5	hours 4 my opinion + practical	cognitive and emotional knowledge	Antigens: Definition, Properties, Antigens, External and Internal Antigens	Lectures and labs	Exams, daily assignments and examples
6	hours 4 my opinion + practical	cognitive and emotional knowledge	Antigenic determinants: their definition , their specific antigenic determinants of T cells and the differences .between them	Lectures and labs	Exams, daily assignments and examples
7	hours 4 my opinion + practical	cognitive and emotional knowledge	Antibodies: Definition, composition of the antibody molecule, types, and properties, antibody synthesis and release, .monoclonal antibodies	Lectures and labs	Exams, daily assignments and examples
8	hours 4 my opinion + practical	cognitive and emotional knowledge	Monoclonal Antibodies: Definition, Manufacturing, and Uses	Lectures and labs	Exams, daily assignments and examples

9-10	hours 4 my opinion + practical	cognitive and emotional knowledge	Antigen and antigen reactions: their properties, their applications	Lectures and labs	Exams, daily assignments and examples
11	hours 4 my opinion + practical	cognitive and emotional knowledge	Immune response: primary and secondary, their characteristics and the differences between them, regulation of the immune response	Lectures and labs	Exams, daily assignments and examples
12	hours 4 my opinion + practical	cognitive and emotional knowledge	A complex system of histological congruence (MHC) : its definition , its types, its role in the presentation of antigens and its relationship . to organ rejection	Lectures and labs	Exams, daily assignments and examples
13	hours 4 my opinion + practical	cognitive and emotional knowledge	Supplementary: Definition, Activation, Activation Methods, Inhibitors, Supplementation Activation, Supplementary Deficiency Diseases and Deficiency. Properdain	Lectures and labs	Exams, daily assignments and examples
14	hours 4 my opinion + practical	cognitive and emotional knowledge	cytokine	Lectures and labs	Exams, daily assignments and examples

15-16	hours 4 my opinion + practical	cognitive and emotional knowledge	Clinical Immunity: Immunity Against Germs - Immunity Against Toxins.	Lectures and labs	Exams, daily assignments and examples
17	hours 4 my opinion + practical	cognitive and emotional knowledge	Immunity against fevers	Lectures and labs	Exams, daily assignments and examples
18	hours 4 my opinion + practical	cognitive and emotional knowledge	Immunity against parasites	Lectures and labs	Exams, daily assignments and examples
19	hours 4 my opinion + practical	cognitive and emotional knowledge	Immunity against fungi	Lectures and labs	Exams, daily assignments and examples
20-21	hours 4 my opinion + practical	cognitive and emotional knowledge	Immunity against tumors: definition of tumors, antigens related to tumors, their types and their Relationship to various tumors, and means of escaping from the .body's immunity	Lectures and labs	Exams, daily assignments and examples

22-23	hours 4 my opinion + practical	cognitive and emotional knowledge	Allergy: you know it, its different patterns, and the diseases . caused by it	Lectures and labs	Exams, daily assignments and examples
24-25	hours 4 my opinion + practical	cognitive and emotional knowledge	immune endurance	Lectures and labs	Exams, daily assignments and examples
26-27	hours 4 my opinion + practical	cognitive and emotional knowledge	Self-immunity: its definition, the means of the occurrence of autoimmunity, theories and patterns	Lectures and labs	Exams, daily assignments and examples
28	hours 4 my opinion + practical	cognitive and emotional knowledge	Types of natural and acquired immunodeficiency	Lectures and labs	Exams, daily assignments and examples
29-30	hours 4 my opinion + practical	cognitive and emotional knowledge	Vaccination, types of vaccines	Lectures and labs	Exams, daily assignments and examples

. Course Evaluation

-Short exams (10)

- Semester and final exams for practical and theoretical subjects (40)

- Interaction within the lecture hall (15)

- Reports (15)

- Summer training(20)

. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	Lectures prepared by the subject professor
Main references (sources)	Immunology
Recommended books and references (scientific journals, reports...)	Roit.Bros.male
Electronic References, Websites	www.harcourt-health.com

Course Description Form

3. Course Name:	
Advanced Laboratory Management	
4. Course Code:	
MLB.3.7	
5. Semester / Year:	
2024-2025	
6. Description Preparation Date:	
26.7.2025	
7. Available Attendance Forms:	
Theoretical attendance in classrooms + practical laboratory work	
8. Number of Credit Hours (Total) / Number of Units (Total)	
Hours 1 / Number of units 1	
9. Course administrator's name (mention all, if more than one name)	
Name: Mohammed Naseef Jassim Email: mohammed.nosaef@alfarabiuc.edu.iq	
0. Course Objectives	
Course Objectives	Course Objectives: General Objective: This course aims to develop participants' skills in modern principles of medical laboratory management. It also introduces participants to the importance of laboratory management and the methods of planning, organizing, and evaluating laboratories in light of modern medical organization practices. Specific Objective: The student will be able to identify pathogenic microbes (bacteria, fungi, viruses, and parasites) that infect various body systems.
1. Teaching and Learning Strategies	
Strategy	It includes all teaching procedures and educational practices that aim to activate the role . of the student and transform him from a recipient and listener of information to a main focus in his learning process, where learning takes place through work and research and the student's reliance on himself to obtain knowledge

Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	1	Understanding	Laboratory premises	Theoretical Lecture	Discussion

		and comprehension	General design objectiveLaboratory type and classification		
2	1	Understanding and comprehension	Laboratory management	Theoretical Lecture + Practical Lecture	Homework
3	1	Understanding and comprehension	Definition	Theoretical Lecture	Quiz
4	1	Understanding and comprehension	Mission of health laboratory services	Theoretical Lecture	Discussion
5	1	Understanding and comprehension	Planning - Definition - The planning function - strategic planning	Theoretical Lecture	Quiz
6	1	Understanding and comprehension	Organization - Definition - Structural organization	Theoretical Lecture	Homework
7	1	Understanding and comprehension	Directing - Definition - Directing and people - Motivation of staff	Theoretical Lecture	Written Exam
8	1	Understanding and comprehension	Leadership - Definition - Leadership style - Useful characteristics for effective leadership	Theoretical Lecture	Discussion
9	1	Understanding and comprehension	Controlling - Definition - Pre analytical control	Theoretical Lecture + Practical Lecture	Quiz
10	1	Understanding and comprehension	Laboratory communication with the administration	Theoretical Lecture	Homework
11	1	Understanding and comprehension	Data handling and data processing - Personal data of patient - Record keeping	Theoretical Lecture	Discussion
12	1	Understanding and comprehension	Laboratory equipment preventive maintenance programme - Purpose - Advantage	Theoretical Lecture	Quiz
13	1	Understanding and comprehension	Inventory control system for laboratory supplies - Work analysis chart - Items identification per laboratory section	Theoretical Lecture + Practical Lecture	Homework
14	1	Understanding and comprehension	Laboratory premises General design objectiveLaboratory type and classification	Theoretical Lecture	Open Discussion

3. Course Evaluation

The grade is distributed out of 100 based on the tasks assigned to the student, such as daily preparation, daily, oral, monthly, and written exams, reports, etc.
40 points for the annual effort, divided into 25 points for theory and 15 points for practical work.

points for the final exam, divided into 35 points for theory and 25 points for practical work (60)	
4. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	
Main references (sources)	Laboratory Management: Principles and Processes
Recommended books and references (scientific journals, reports...)	C linical Laboratory Management
Electronic References, Websites	http://www.socscidiss.bham.ac.uk/methodologies.html https://www.slideshare.net/collinsbrobbey/sample-study www.asbmb.org/asbmbtoday/asbmbtoday_article.aspx?id=489

Course Description Form

5. Course Name:	
English language	
6. Course Code:	
MLB.3.9	
7. Semester / Year:	
2024-2025	
8. Description Preparation Date:	
26.7.2025	
9. Available Attendance Forms:	
Theoretical attendance in classrooms	
0. Number of Credit Hours (Total) / Number of Units (Total)	
Hours 1 / Number of units 2	
1. Course administrator's name (mention all, if more than one name)	
Name: Mohammed Naseef Jassim Email: mohammed.nosaef@alfarabiuc.edu.iq	
2. Course Objectives	
Course Objectives	Course Objectives: General Objective: 1. To provide a clear overview of linguistics and its history. 2. To help the student identify some common linguistic concepts and the methods of acquiring both native and foreign languages. 3. To help the student understand the relationship between language, society, and other sciences. Specific Objective: To develop the ability to respond critically to the various views presented on topics of language and society.
3. Teaching and Learning Strategies	
Strategy	It includes all teaching procedures and educational practices that aim to activate the role of the student and transform him from a recipient and listener of information to a main focus in his learning process, where learning takes place through work and research and the student's reliance on himself to obtain knowledge

Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	1	Understanding and comprehension	History of linguistic and its origins	Theoretical Lecture	Discussion
2	1	Understanding and comprehension	Phonetics and phonology of English language	Theoretical Lecture	Homework
3	1	Understanding and comprehension	Syntax of English language	Theoretical Lecture	Quiz
3	1	Understanding and comprehension	Morphology of English language	Theoretical Lecture	Discussion
5	1	Understanding and comprehension	semantics	Theoretical Lecture	Quiz
6	1	Understanding and comprehension	pragmatics	Theoretical Lecture	Homework
7	1	Understanding and comprehension	Discourse analysis	Theoretical Lecture	Written Exam
8	1	Understanding and comprehension	First language acquisition	Theoretical Lecture	Discussion

5. Course Evaluation

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

6. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Oxford English language reference
Main references (sources)	Reference guide to english
Recommended books and references (scientific journals, reports...)	English handbook and study guide
Electronic References, Websites	

Course Description Form

. Course Name:
Clinical Immunology
. Course Code:
4.1MLB
. Semester / Year:
2025/2024
0. Description Preparation Date:
23/7/2025
1. Available Attendance Forms:
Weekly (theoretical/practical)
2. Number of Credit Hours (Total) / Number of Units (Total)
Hours: 6 Units: 6
3. Course administrator's name (mention all, if more than one name)
Name: DR. Eman Shaker Mahmood Email: Emanshaker944@gmail.com
4. Course Objectives

Course Objectives The aim of teaching clinical immunology is to introduce students to clinical immunology, its uses, modern classifications, and some common diseases.	The aim of teaching immunology is: 1- To be able to define clinical immunity. 2- to determine the immune mechanism responsible for the disease of common immune diseases to distinguish the various diagnostic methods as well. Differential tests for each disease..

5. Teaching and Learning Strategies

Strategy	- Explanation and clarification through lectures . - How to display scientific materials with data shows, smart boards. - Self-education by preparing reports in sick cases laboratories.

Course Structure

Week	**Hours**	**Required Learning Outcomes**	**Unit or subject name**	**Learning method**	**Evaluation method**
1	hours my 6 opinion + practical	cognitive and emotional knowledge	Rheumatic Diseases 1- Rheumatoid Arthritis	Lectures and labs	Exams, daily assignments and examples

2	hours my 6 opinion + practical	cognitive and emotional knowledge	2-Systemic Lupus Erythmatosus	Lectures and labs	Exams, daily assignments and examples
3	hours my 6 opinion + practical	cognitive and emotional knowledge	3- Ankylosing Spondylitis	Lectures and labs	Exams, daily assignments and examples
4	hours my 6 opinion + practical	cognitive and emotional knowledge	Sjogren's Syndrome	Lectures and labs	Exams, daily assignments and examples
5	hours my 6 opinion + practical	cognitive and emotional knowledge	Behcet's Disease	Lectures and labs	Exams, daily assignments and examples
5	hours my 6 opinion + practical	cognitive and emotional knowledge	Psoriatic Arthritis	Lectures and labs	Exams, daily assignments and examples
6	hours my 6 opinion + practical	cognitive and emotional knowledge	1.Gluten sensitive entero-pathy	Lectures and labs	Exams, daily assignments and examples
6	hours my 6 opinion + practical	cognitive and emotional knowledge	1.Pernicious Anemia	Lectures and labs	Exams, daily assignments and examples
6	hours my 6 opinion + practical	cognitive and emotional knowledge	1.Diabetes mellitus	Lectures and labs	Exams, daily assignments and examples
7	hours my 6 opinion + practical	cognitive and emotional knowledge	4. Ulcerative Colitis	Lectures and labs	Exams, daily assignments and examples

7	hours my 6 opinion + practical	cognitive and emotional knowledge	5.Crohn's Disease	Lectures and labs	Exams, daily assignments and examples
7	hours my 6 opinion + practical	cognitive and emotional knowledge	6.Helicobacter pylori Mucosa-associated lymphoid tissue lymphoma and Helicobacter pylori associated diseases	Lectures and labs	Exams, daily assignments and examples
8	hours my 6 opinion + practical	cognitive and emotional knowledge	7.Autoimmune Hepatitis	Lectures and labs	Exams, daily assignments and examples
9	hours my 6 opinion + practical	cognitive and emotional knowledge	8.Primary Biliary Cirrhosis	Lectures and labs	Exams, daily assignments and examples
9	hours my 6 opinion + practical	cognitive and emotional knowledge	9.Primary Sclerosing Cholangitis	Lectures and labs	Exams, daily assignments and examples

10	hours my 6 opinion + practical	cognitive and emotional knowledge	Renal diseases	Lectures and labs	Exams, daily assignments and examples
11	hours my 6 opinion + practical	cognitive and emotional knowledge	Circulating immune Complex situ immune In Complex (Formationb) b.(ANCA) Antineutrophil Cytoplasmic Autoantibodies and associated diseases	Lectures and labs	Exams, daily assignments and examples
12	hours my 6 opinion + practical	cognitive and emotional knowledge	a. T Lymphocyte mediated Renal Injury b.Immunological Mediators in Acute inflammation	Lectures and labs	Exams, daily assignments and examples
13	hours my 6 opinion + practical	cognitive and emotional knowledge	Nephrotic Syndrome	Lectures and labs	Exams, daily assignments and examples
14	hours my 6 opinion + practical	cognitive and emotional knowledge	Postinfection Glomerulo nephritis	Lectures and labs	Exams, daily assignments and examples

15	hours my 6 opinion + practical	cognitive and emotional knowledge	1.Lupus Nephritis 2. Henoch Schonlein Purpura	Lectures and labs	Exams, daily assignments and examples
16	hours my 6 opinion + practical	cognitive and emotional knowledge	Vasculitis-Associated Glomerular Lesion	Lectures and labs	Exams, daily assignments and examples
17	hours my 6 opinion + practical	cognitive and emotional knowledge	Respiratory Diseases: 1.Drug-induced Respiratory disease	Lectures and labs	Exams, daily assignments and examples
18	hours my 6 opinion + practical	cognitive and emotional knowledge	1.Eosinophilic Pneumonias 2.Occupational & Environmental lung Diseases	Lectures and labs	Exams, daily assignments and examples
19	6hours my opinion + practical	cognitive and emotional knowledge	Asthma	Lectures and labs	Exams, daily assignments and examples
20	6hours my opinion + practical	cognitive and emotional knowledge	Non-Allergic Bronchitis	Lectures and labs	Exams, daily assignments and examples
21-22	hours my 6 opinion + practical	cognitive and emotional knowledge	Hypersensitivity Diseases	Lectures and labs	Exams, daily assignments and examples

23	hours my 6 opinion + practical	cognitive and emotional knowledge	Autoimmune hemolytic anemia (AIHA)	Lectures and labs	Exams, daily assignments and examples
24	hours my 6 opinion + practical	cognitive and emotional knowledge	Eczema And Contact dermatitis	Lectures and labs	Exams, daily assignments and examples
25-26	hours my 6 opinion + practical	cognitive and emotional knowledge	Thyroid gland	Lectures and labs	Exams, daily assignments and examples
27-28	hours my 6 opinion + practical	cognitive and emotional knowledge	Tumor	Lectures and labs	Exams, daily assignments and examples
29-30	hours my 6 opinion + practical	cognitive and emotional knowledge	Transplantation	Lectures and labs	Exams, daily assignments and examples

107. Course Evaluation

-Short exams (10)

- Semester and final exams for practical and theoretical subjects (40)
- Interaction within the lecture hall (10)
- Reports (10)
- Graduation projects (20)

- Summer training(10)

8. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Lectures prepared by the subject professor
Main references (sources)	Immunology Clinical
Recommended books and references (scientific journals, reports...)	Roit.Bros.male
Electronic References, Websites	www.harcourt-health.com

Course Description Form

109. Course Name:
Diagnostic Microbiology
110. Course Code:
MLB4.2
111. Semester / Year:
2024-2025
112. Description Preparation Date:
24/ 7/ 2025
113. Available Attendance Forms:
In class + internet (weekly)
114. Number of Credit Hours (Total) / Number of Units (Total)
Hours (150) Units (8)
115. Course administrator's name (mention all, if more than one name)
Name: Sahar Ahmed Albayatti Email: sahar.albayatti@gmail.com
116. Course Objectives

Course Objectives	• Enable the student by the end of the year to diagnose all kinds of pathogenic bacteria • Enable the student to manage bacteriological laboratories. • Diagnose the microorganisms using the most contemporary methods mentioned by the WHO organization
117. Teaching and Learning Strategies	
Strategy	On this regard, we count on the following:- At the beginning of each lecture we remind the student about the previous one to make connection so that the student will have the fill picture of what is going on. Scientific terms filly explained so that its meaning will understood by average scientific level student. On each lecture we make sure to leave a space for free discussion and for Q&A. Before the end of each lecture feedback for the information given by the lecture is essential. Electronic communication with the students to disseminate the recorded lectures and information is essential.

6. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	4		Diagnostic Microbiology\ purpose and philosophy	Review with board and screen	Monthly exams & daily exams & mental questions

2	4		Laboratory safety: Biohazzards and microbiology in general	Review with board and screen	Monthly exams & daily exams & mental questions
3	4		Managing the clinical microbiology laboratory effective Managing the clinical microbiology laboratory effective Patient care in a cost	Review with board and screen	Monthly exams & daily exams & mental questions
5	4		Selection, collection and transport of specimens for microbiological examination	Review with board and screen	Monthly exams & daily exams & mental questions
6	4		Optical methods for laboratory diagnosis of infection diseases	Review with board and screen	Monthly exams & daily exams & mental questions
7	4		Cultivation and isolation of viable pathogens	Review with board and screen	Monthly exams & daily exams & mental questions
8	4		Microbiological methods for identification of microorganisms	Review with board and screen	Monthly exams & daily exams & mental questions
9	4		Nontraditional methods for identification of pathogens or their products	Review with board and screen	Monthly exams & daily exams & mental questions
10	4		Antibiotic susceptibility tests	Review with board and screen	Monthly exams & daily exams & mental questions
11	4		Methods for	Review with	Monthly

			identification of etiological agent of infectious disease	board and screen	exams & daily exams & mental questions
12	4		Diagnosis by organ system \ Blood stream infections	Review with board and screen	Monthly exams & daily exams & mental questions
13	4		Meningitis and other infections of the central nervous system	Review with board and screen	Monthly exams & daily exams & mental questions
14	4		Infection of the respiratory tract	Review with board and screen	Monthly exams & daily exams & mental questions
15	4		Infection of the urinary tract	Review with board and screen	Monthly exams & daily exams & mental questions
16	4		Genital tract infections	Review with board and screen	Monthly exams & daily exams & mental questions
17	4		Gastrointestinal tract infections	Review with board and screen	Monthly exams & daily exams & mental questions
18	4		Infections of the eyes, ears and sinuses	Review with board and screen	Monthly exams & daily exams & mental questions
19	4		Skin, soft tissue and wound infections	Review with board and screen	Monthly exams & daily exams & mental questions

20	4		Normal sterile body fluids, bone and bone marrow and solid tissue	Review with board and screen	Monthly exams & daily exams & mental questions
21	4		Laboratory methods for diagnosis of parasitic infections	Review with board and screen	Monthly exams & daily exams & mental questions
22	4		Laboratory methods in basic mycology	Review with board and screen	Monthly exams & daily exams & mental questions
23	4		Laboratory methods in basic virology	Review with board and screen	Monthly exams & daily exams & mental questions

7. Course Evaluation	
Quizzes 10- Assignments 10 – Projects\ lab. 10- Report 10- Medterm Exam 10 – Final Exam 50	
Learning and Teaching Resources	
Required textbooks (curricular books, if any)	Ministry curricular book
Main references (sources)	Note of Diagnostic Microbiology
Recommended books and references (scientific journals, reports...)	American Society for Microbiology
Electronic References, Websites	American Society for Microbiology , American Biological Safety Association

Course Description Form

157. Course Name:
Advanced Clinical Chemistry
158. Course Code:
MLB.4.3
159. Semester / Year:
2024-2025
160. Description Preparation Date:
26.7.2025
161. Available Attendance Forms:
Theoretical attendance in classrooms + practical laboratory work
162. Number of Credit Hours (Total) / Number of Units (Total)
Hours 6 / Number of units 8
163. Course administrator's name (mention all, if more than one name)
Name: Mohammed Diab Damnan Email: mohamed.dhiab@alfarabiuc.edu.iq
164. Course Objectives

Course Objectives	• The ability to use laboratory equipment and methods in clinical chemistry analysis. • Introducing the student to the basic principles related to pathological analysis.
165. Teaching and Learning Strategies	
Strategy	Using modern teaching methods, such as electronic whiteboards and display screens. Using discussion methods, daily exams, homework assignments, reports, and motivational questions

Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2	Understanding and comprehension	Chemical safety. .Biological safety	Theoretical Lecture	Discussion
2	2	Understanding and comprehension	fire safety	Theoretical Lecture + Practical Lecture	Homework
3	2	Understanding and comprehension	Collecting samples (urine, stool, and cerebrospinal fluid) from the body	Theoretical Lecture	Discussion
4	2	Understanding and comprehension	Quality Management: Quality Basics	Theoretical Lecture	Homework
5	2	Understanding and comprehension	TQM Fundamentals: Comprehensive Testing Process. Control of Analytical Variables	Theoretical Lecture	Written Exam
6	2	Understanding and comprehension	Problems in Biochemistry Calculus and Case	Theoretical Lecture + Practical	Discussion

			Studies	Lecture	
7	2	Understanding and comprehension	Case studies in clinical chemistry and its tests	Theoretical Lecture	Quiz

7. Course Evaluation
The grade is distributed out of 100 based on the tasks assigned to the student, such as daily preparation, daily, oral, monthly, and written exams, reports, etc. 40 points for the annual effort, divided into 25 points for theory and 15 points for practical work. points for the final exam, divided into 35 points for theory and 25 points for practical work (60)

168. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	
Main references (sources)	
Recommended books and references (scientific journals, reports...)	lehninger principles of biochemistry
Electronic References, Websites	Biochemistry for Advanced Biology

Course Description Form

Course Name:
Medical parasitology
9. Course Code:
MI.B4,4
0. Semester / Year:
Year
1. Description Preparation Date:
30-6-2025
2. Available Attendance Forms:
Theoritical and practical lectutres/ slide show and samples under Microscope
3. Number of Credit Hours (Total) / Number of Units (Total)
6 (2+4) Theoritical and Practical lectures
4. Course administrator's name (mention all, if more than one name)
Name : Assist prof. dr. Khaleel Ibrahim Rashid Email: drkhaleel1956@gmail.com
5. Course Objectives

Course Objectives	Parasites name and species Pathogenic parasites and disease name Transmission and Diagnosis
6. Teaching and Learning Strategies	
Strategy	Study pathogenic parasites Diseases caused by them Transmission and diagnosis approaches

Course Structure

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

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30	6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	Definitions in pasitology Parasites and Helmi9nthes Amoebea groups: E. histolyti E, coli Flagellates Groups: , Giardi Trichomonas Ciliat and es Groups: Balantidium coli Sporozoa Groups: Toxoplasma gondi Palantidium sp. Leishmania species: Leishmania Donavani..spp Helminthes Groups: Cestoda Group: Taenia saginata Taenia solium Diphyllobotherum Echinococcus Hymenolepis Trematoda Group : Scchistosoma, Fasciola Nematoda Group : Ascaric,Ancylostoma Trichuris trichura Trichenella spiralis, Strongyloides , Wuchereria bancrofti	Parasite Definitions N Protozoa M Metazoa Amoeba Entamoeba histolytica Entamoeba coli Flagellates Giardia Lu lumblia Ciliates Balantidium coli Leishmania, Metazoa: H elminthes T T. saginata T. solium Yllobthrium Echinococcus Hymenolepis Trematodes: Schistosoma s spp. Fasciola spp, Ascaris Ancylostoma Trichuris Trichenella Strongyloides Wuchereria	My theory and practical observations	Test with homework

8. Course Evaluation	
Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc 80 % because of repeated absent	
9. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	Medical biology
Main references (sources)	Parasite diseases
Recommended books and references (scientific journals, reports...)	Parasitology
Electronic References, Websites	Parasites and Helminthes

Course Description Form

0. Course Name:
Blood Transfusion
1. Course Code:
MLB4.5
2. Semester / Year:
2024-2025
3. Description Preparation Date:
24\7\2025-07-25
4. Available Attendance Forms:
In class + internet
5. Number of Credit Hours (Total) / Number of Units (Total)
Hours (60) Units (8)
6. Course administrator's name (mention all, if more than one name)
Name: Sahar Ahmed Albayatti Email: sahar.albayatti@gmail.com
7. Course Objectives

Course Objectives	• Provide fill description of what blood bank is. • Provide fill description of the blood transfusion process and what pathogens could transmit during this process.

8. Teaching and Learning Strategies

Strategy	On this regard, we count on the following:- 1. At the beginning of each lecture we remind the student about the previous one to make connection so that the student will have the fill picture of what is going on. 2. Scientific terms filly explained so that its meaning will understood by average scientific level student. 3. On each lecture we make sure to leave a space for free discussion and for Q&A. 4. Before the end of each lecture feedback for the information given by the lecture is essential. 5. Electronic communication with the students to disseminate the recorded lectures and information is essential.

Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	4	Understanding and comprehension	Introduction to blood banking	Review with board and screen	Monthly exams & daily exams & mental questions
2	4	Understanding and comprehension	Blood donation and	Review with board and	Monthly exams & daily exams &

			selection of donation	screen	mental questions
3	4	Understanding and comprehension	Lab. tests for donated blood	Review with board and screen	Monthly exams & daily exams & mental questions
4	4	Understanding and comprehension	The human blood groups	Review with board and screen	Monthly exams & daily exams & mental questions
5	4	Understanding and comprehension	Rh systems	Review with board and screen	Monthly exams & daily exams & mental questions
6	4	Understanding and comprehension	Hemolytic disease of newborn	Review with board and screen	Monthly exams & daily exams & mental questions
7	4	Understanding and comprehension	Complication of blood transfusion	Review with board and screen	Monthly exams & daily exams & mental questions
8	4	Understanding and comprehension	Transmission of diseases by blood transfusion	Review with board and screen	Monthly exams & daily exams & mental questions
9	4	Understanding and comprehension	Types of anticoagulants use in hematology	Review with board and screen	Monthly exams & daily exams & mental questions
10	4	Understanding and comprehension	Hemolytic anemia	Review with board and screen	Monthly exams & daily exams & mental questions
11	4	Understanding and comprehension	Platelets disorders	Review with board and screen	Monthly exams & daily exams & mental questions
12	4	Understanding and comprehension	Coagulating disorder	Review with board and screen	Monthly exams & daily exams & mental questions
13	4	Understanding and comprehension	Coombes test	Review with board and screen	Monthly exams & daily exams & mental questions

0. Course Evaluation	
Quizzes 10- Assignments 10 – Projects\ lab. 10- Report 10- Medterm Exam 10 – Final Exam 50	
1. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	Curricular guide
Main references (sources)	
Recommended books and references (scientific	• Hematology Basic Principles and

journals, reports...)	Practice. • Standards for Blood Banks & Blood Transfusion Services.
Electronic References, Websites	WHO organization and google

Course Description Form

9. Course Name:	
Histopathology	
0. Course Code:	
MLB.4.6	
1. Semester / Year:	
2024-2025	
2. Description Preparation Date:	
26.7.2025	
3. Available Attendance Forms:	
Theoretical attendance in classrooms + practical laboratory work	
4. Number of Credit Hours (Total) / Number of Units (Total)	
6hours of theoretical and practical work per week (7 units)	
5. Course administrator's name (mention all, if more than one name)	
Name: Ali Furat Abdul Sattar Email: ali.furat@alfarabiuc.edu.iq	
6. Course Objectives	
Course Objectives	• The ability to use laboratory equipment and laboratory methods to conduct analyses. • Introducing the student to the basic principles related to pathological analyses regarding tissue pathology.
7. Teaching and Learning Strategies	
Strategy	Scientific experiments. Smart board, the World Wide Web, Self-learning, skill mastery, problem-based learning Brainstorming, combining different strategies, and problem-solving methods

Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2	Understanding and comprehension	Lung (atelectasias, acute lung injury)	Theoretical Lecture	Discussion
2	2	Understanding and comprehension	Lung (chronic	Theoretical Lecture +	Homework

			bronchitis pulmonary embolism)	Practical Lecture	
3	2	Understanding and comprehension	Lung tumors	Theoretical Lecture	Quiz
4	2	Understanding and comprehension	Kidney (glomercular disease)	Theoretical Lecture	Discussion
5	2	Understanding and comprehension	Kidney (nephrotic syndrome, IgA nephropathy (Berger disease)	Theoretical Lecture	Quiz
6	2	Understanding and comprehension	Kidney tumors	Theoretical Lecture	Homework
7	2	Understanding and comprehension	Cancer of the oral cavity and tongue	Theoretical Lecture	Written Exam
8	2	Understanding and comprehension	Esophagus (lacivation, varices, esophageal carcinoma)	Theoretical Lecture	Discussion
9	2	Understanding and comprehension	Stomach (gastritis, ulcer, carcinoma)	Theoretical Lecture	Quiz
10	2	Understanding and comprehension	Large intestines (hemorrhoids, malabsorption syndrome)	Theoretical Lecture	Written Exam
11	2	Understanding and comprehension	Crohn disease	Theoretical Lecture	Discussion
12	2	Understanding and comprehension	Large intestines tumors	Theoretical Lecture	Quiz
13	2	Understanding and comprehension	Liver (hepatic infection, failure, cirrhosis)	Theoretical Lecture + Practical Lecture	Written Exam
14	2	Understanding and comprehension	Hepatic tumors		Discussion

9. Course Evaluation

The grade is distributed out of 100 based on the tasks assigned to the student, such as daily preparation, daily, oral, monthly, and written exams, reports, etc.
40 points for the annual effort, divided into 25 points for theory and 15 points for practical work.
points for the final exam, divided into 35 points for theory and 25 points for practical work (60)

0. Learning and Teaching Resources

Required textbooks (curricular books, if any)	

Main references (sources)	Fundamentals of pathology
Recommended books and references (scientific journals, reports...)	Robbins basic pathology
Electronic References, Websites	Pathology outlines

Course Description Form

1. Course Name:	
English language	
2. Course Code:	
MLB.4.7	
3. Semester / Year:	
2024-2025	
4. Description Preparation Date:	
26.7.2025	
5. Available Attendance Forms:	
Theoretical attendance in classrooms + practical laboratory work	
6. Number of Credit Hours (Total) / Number of Units (Total)	
Number of hours 1/Number of units 2	
7. Course administrator's name (mention all, if more than one name)	
Name: Ali Sarmed Majeed Email: ali.sarmad@alfarabiuc.edu.iq	
8. Course Objectives	
Course Objectives	
9. Teaching and Learning Strategies	
Strategy	.

Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	1	Understanding and comprehension	History of linguistic and its origins	theoretical lecture	Discussion
2	1	Understanding and comprehension	Phonetics and phonology of English language	theoretical lecture	Homework
3	1	Understanding and comprehension	Syntax of English language	theoretical lecture	Quiz
4	1	Understanding and comprehension	Morphology of English language	theoretical lecture	Discussion
5	1	Understanding and comprehension	semantics	theoretical lecture	Quiz
6	1	Understanding and comprehension	pragmatics	theoretical lecture	Homework

7	1	Understanding and comprehension	Discourse analysis	theoretical lecture	Written Exam
8	1	Understanding and comprehension	First language acquisition	theoretical lecture	Discussion

1. Course Evaluation	
The grade is distributed out of 100 based on the tasks assigned to the student, such as daily preparation, daily, oral, monthly, and written exams, reports, etc.	
2. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	Reference guide to english
Main references (sources)	Oxford English language reference
Recommended books and references (scientific journals, reports...)	English handbook and study guide
Electronic References, Websites	

Course Description Form

3. Course Name:	
Research methods	
4. Course Code:	
MLB.4.8	
5. Semester / Year:	
2024-2025	
6. Description Preparation Date:	
26.7.2025	
7. Available Attendance Forms:	
Theoretical attendance in classrooms	
8. Number of Credit Hours (Total) / Number of Units (Total)	
Number of hours 1/Number of units 1	
9. Course administrator's name (mention all, if more than one name)	
Name: Ali Sarmed Majeed Email: ali.sarmad@alfarabiuc.edu.iq	
0. Course Objectives	
Course Objectives	Course Objectives: General Objective: This course addresses the various methods and approaches used in scientific research. It reviews the importance of studying research methods in education and psychology, as well as the various research methods that can be used in the field of measurement and evaluation. Specific Objective: Introduce the student to the nature of the scientific method and the characteristics of scientific thinking.
1. Teaching and Learning Strategies	
Strategy	It includes all teaching procedures and educational practices that aim to activate the role of the student and transform him from a recipient and listener of information to a main focus in his learning process, where learning takes place through work and research and the student's reliance on himself to obtain

	.knowledge

Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	1	Understanding and comprehension	Definition of scientific research - scientific method - educational research - psychological research - educational research and its fields	Theoretical Lecture	Discussion
2	1	Understanding and comprehension	The problem with the search	Theoretical Lecture	Homework
3	1	Understanding and comprehension	Research methods	Theoretical Lecture	Quiz
4	1	Understanding and comprehension	Samples and methods of selection	Theoretical Lecture	Discussion
5	1	Understanding and comprehension	Data collection methods	Theoretical Lecture	Quiz
6	1	Understanding and comprehension	Data analysis and interpretation	Theoretical Lecture	Homework
7	1	Understanding and comprehension	Writing a research plan	Theoretical Lecture	Written Exam
8	1	Understanding and comprehension	Publishing scientific research	Theoretical Lecture	Discussion

3. Course Evaluation

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

4. Learning and Teaching Resources

Required textbooks (curricular books, if any)	
Main references (sources)	Journal of the College of Education for the Humanities Practice Hall Handbook for Writers
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	