



Ministry of Higher Education & Scientific Research
Scientific Supervision & Evaluation Authority
Quality Assurance & Academic Accreditation Dept.
Accreditation Section

Academic Program & Course Description Guide

Al-Farabi University

College of Health and Medical Technologies

Department of Medical Laboratory Techniques

2025-2026

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

File Preparation Date: 2025-2026

File Completion Date: 8/7/2026

Head of Department:

Dr. Ahmed F. L. Aygih

Scientific Assistant:

File audited by

Quality Assurance and University Performance Division

Name of the Director of the Quality Assurance and University Performance Division

Date:

Signature:

31/8/2026
Prof. Dr. A. H. Kadhim



Prof. Dr. A. H. Kadhim
The Director
Quality Assurance and University Performance Division

Dean's Approval:

1. Program Vision

The Department of Medical Laboratory Techniques seeks to be an academic and professional leader in Iraq and the region by preparing distinguished medical personnel who meet the highest standards of scientific competence and technical skills. We aspire to be a center of expertise in medical laboratory techniques and an active partner in supporting the healthcare system and keeping pace with global developments in a manner that serves society's aspirations and achieves sustainable development.

2. Program Mission

The Department of Medical Laboratory Techniques is committed to providing high-quality education based on the latest scientific curricula and applied technologies in an environment that encourages creativity and scientific research. We work to prepare qualified graduates with precise analytical skills and advanced research capabilities who can compete in the local and global labor markets. We are also committed to strengthening partnerships with healthcare institutions and serving the community through awareness programs and applied research that contribute to the development of the health sector.

3. Program Objectives

Since its establishment, the department has sought to excel in laboratory testing and disease diagnosis by preparing graduates for employment in institutions of the Ministry of Health and the Ministry of Science and Technology. The department aims to expand its activities into new fields of medical and therapeutic services by opening specialized teaching laboratories staffed by specialists and department graduates to provide diagnostic services to college personnel and members of the public.

General Objectives:

1. Qualify graduates who possess skills and knowledge that meet contemporary needs and labor-market requirements.
2. Recruit highly competent and professional faculty members who are recognized locally, regionally, and internationally.
3. Continue conducting and publishing rigorous scientific research that serves development plans and society.
4. Optimize the use of the department's financial and material resources while diversifying and maximizing them.

Educational Objectives of the Department:

1. Select educational experiences or curricular content.
2. Determine curricular classroom and extracurricular educational activities.
3. Determine appropriate teaching methods, approaches, and strategies.
4. Determine appropriate assessment methods and tools.

4. Program Accreditation

There is currently no program accreditation; however, the self-assessment plan and improvement plan have been completed, and the compliance plan will be completed.

5. Other External Influences

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

6. Program Structure

Notes *	Percentage	Credit Units	Number of Courses	Program Structure
Core	First Stage 10% Second Stage 20% Third Stage 30%	First Stage 23 Second Stage 26 Third Stage 50 Fourth Stage 53	First Stage 8 Second Stage 7 Third Stage 7 Fourth Stage 8	Institution Requirements

	Fourth Stage 40%			
Core	First Stage 10% Second Stage 20% Third Stage 30% Fourth Stage 40%	First Stage 23 Second Stage 26 Third Stage 50 Fourth Stage 53	First Stage 8 Second Stage 7 Third Stage 7 Fourth Stage 8	College Requirements
Core	First Stage 10% Second Stage 20% Third Stage 30% Fourth Stage 40%	First Stage 23 Second Stage 26 Third Stage 50 Fourth Stage 53	First Stage 8 Second Stage 7 Third Stage 7 Fourth Stage 8	Department Requirements
Core	First Stage 10% Second Stage 20% Third Stage 30% Fourth Stage 40%	First Stage 23 Second Stage 26 Third Stage 50 Fourth Stage 53	First Stage 8 Second Stage 7 Third Stage 7 Fourth Stage 8	Summer Training
-	-	-	-	Other

7. Program Description				
Credit Hours		Course or Module Name	Course or Module Code	Year / Level
Pra c.	Theory			First Stage
5	2	General Chemistry 1+2	MLB1.1	
-	2	Medical Terminology 1	MLB.1.2	
5	2	Human Biology 1+2	MLB1.3	
4	2	Laboratory Equipment 1+2	MLB1.4	
-	2	Professional Conduct 1	MLB1.5	
2	1	Computer Principles 1+2	MLB1.6	
-	2	Human Rights and Democracy 1	MLB1.7	
-	3	English Language 1	MLB 1.8	
5	2	Anatomy 2	MLB1.9	
-	2	Arabic Language	MLB1.10	
4	2	Medical Bacteriology 1+2	MLB2.1	Second Stage
4	2	Biochemistry 1+2	MLB2.2	
4	2	Human Physiology 1+2	MLB2.3	
4	2	Histology 1+2	MLB2.4	
4	2	Molecular Biology 1	MLB2.5	
4	2	Medical Parasitology and Entomology 1+2	MLB2.6	
-	2	Crimes of the Ba'ath Party 1	MLB2.7	
2	1	Descriptive Biostatistics 2	MLB2.8	
3	2	Histopathology	MLB3.1	
2	2	Hematology	MLB3.2	
2	2	Virology and	MLB3.3	

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

8. Expected Program Learning Outcomes	
Knowledge	
Describe the theoretical principles and scientific basis of the various tests and procedures used in medical laboratories, including clinical chemistry, hematology, microbiology, and immunology.	Theoretical Foundations of Laboratory Tests
Skills	
Apply standard laboratory procedures for collecting, preparing, preserving, and transporting various biological specimens safely and correctly.	Handling Biological Specimens
Operate and maintain various medical laboratory instruments efficiently and implement quality-control programs to ensure the accuracy and reliability of test results.	Practical Performance and Quality Control

Values	
Adhere to professional ethics, including maintaining the confidentiality of patient information and handling specimens and patients respectfully and professionally.	Professional Practice Ethics
Apply occupational safety and infection-control standards in the laboratory environment to prevent biological and chemical hazards and protect oneself and others.	Occupational Safety and Infection Control

9. Teaching and Learning Strategies
Active Learning: This is the core strategy of the program, in which students are encouraged to participate actively in the educational process rather than merely receive information. It aims to develop their critical-thinking and problem-solving abilities. Applications of active learning include the following: Problem-Based Learning: Students are presented with realistic problems or clinical cases and work in small groups to analyze the problem, identify what they need to learn, and search for possible solutions, thereby strengthening clinical reasoning and teamwork skills. Team-Based Learning: Students work in teams to solve tasks and answer questions, promoting cooperation and both individual and collective responsibility. Blended Learning: This approach combines traditional face-to-face education with online learning. It may include watching recorded lectures before attending class (the flipped-classroom model) and using class time for discussions and interactive activities. Self-Directed Learning: This strategy aims to develop the student's ability to take responsibility for learning, set educational goals, and independently seek sources of knowledge, an essential skill for lifelong learning in a continuously evolving field. Competency-Based Learning: The program focuses on ensuring that students acquire the specific competencies and skills required by the labor market. Students are assessed based on their ability to perform specific tasks according to clear standards. Teaching and Learning Methods (Applied Approaches) To implement the strategies above, a variety of teaching methods and approaches are used. A. Theoretical and Interactive Methods Interactive Lectures: Instead of traditional didactic lectures, lectures are designed to encourage participation through questions, audience-response systems, and brief discussions. Discussion Sessions and Seminars: These provide students with opportunities to discuss specific topics in depth, exchange views, and give presentations, thereby developing their communication skills.

Case Study: Real clinical cases are analyzed to connect theoretical knowledge with practical clinical applications and help students understand the full context of laboratory testing.

Flipped Classroom: Students review scientific material (such as videos or readings) before the lecture, while lecture time is devoted to applied activities and problem solving under faculty supervision.

B. Practical and Applied Methods

Practical Laboratory Training: This is the cornerstone of the program. Students spend substantial time in equipped laboratories applying techniques learned theoretically, training on instruments, and performing various tests.

Simulation and Virtual Reality: Simulation scenarios or virtual-reality technologies are used to train students in specific procedures within a safe and controlled environment, allowing them to learn from mistakes without causing harm.

Projects and Research Reports: Students are assigned short research projects or reports on selected topics to encourage scientific research, data analysis, and development of academic writing skills.

Field Training (Clinical Training/Internship): Students are placed in hospitals and real medical laboratories for a training period, where they work under specialist supervision to gain direct practical experience and become familiar with the actual 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, laboratory reports, and classroom participation.

Summative (Final) Assessment: Conducted at the end of a specified study period (such as mid-semester and end-of-semester) to measure the student's final achievement.

Examples include final examinations (theoretical and practical) and final projects.

Second: Assessment Methods by Learning Domain

Assessment of Knowledge and Understanding

Written Examinations: Including objective and essay questions.

Case-Study Analysis: To connect theoretical knowledge with practical application.

Reports and Presentations.

Assessment of Practical Skills

Objective Structured Practical Examination: A standardized practical examination that assesses skills at multiple stations.

Activity and Skills Logbook: 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 Assessment: By obtaining feedback from supervisors and peers.

Portfolio: To document and track professional and ethical development.

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

11. Teaching Staff						
Faculty Members						
Number of Staff		Special Requirements		Specialization		Academic Rank
Lecturer	Permanent Staff			Specific	General	
-	Permanent Faculty	-	-	Biotechnology	Philosophy	Assoc. Prof. Dr. Khalil Ibrahim Rashid
-	Permanent Faculty	-	-	Zoology	Life Sciences	Prof. Dr. Mohammed Abdulhadi Ghali
-	Permanent Faculty	-	-	Cardiovascular Physiology in Athletes	Human Physiology	Prof. Dr. Musa Mahmoud Marbat
-	Permanent Faculty	-	-	Biotechnology	Genetic Engineering	Lecturer Dr. Sahar Ahmed Abdulhussein
-	Permanent Faculty	-	-	Clinical Immunology	Life Sciences	Lecturer Dr. Iman Shakir Mahmoud
-	Permanent Faculty	-	-	Microbiology	Pathological Analyses	Asst. Lecturer Ali Sarmad Majeed
-	Permanent Faculty	-	-	Biotechnology	Biotechnology	Asst. Lecturer Ali Furat Abdul-Sattar
-	Permanent Faculty	-	-	Microbiology	Medical Laboratory Techniques	Asst. Lecturer Majid Jasim Naif
-	Permanent Faculty		-	Microbiology	Life Sciences	Asst. Lecturer Mohammed Nosaif Jasim
	Permanent Faculty	-		Clinical Biochemistry	Science	Asst. Lecturer Mohammed Dhiab Damnan
-	Permanent Faculty	-	-	Microbiology	Life Sciences	Asst. Lecturer Omar Jamal Ibrahim

Professional Development

Orientation of New Faculty Members

The main objectives of these programs center on several key aspects to ensure a smooth transition and successful integration.

Institutional and Cultural Integration: Introduce new faculty members to the university's vision, mission, core values, policies, regulations, and organizational structure.

Clarifying Roles and Expectations: Inform them of the duties and responsibilities assigned to them in academic, research, and administrative areas and clarify their rights and obligations.

Initial Professional Development: Provide 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: Facilitate professional networking with colleagues in the department and college and with various university administrations and supporting deanships.

Accelerating Productivity and Job Satisfaction: Help new members realize their potential quickly, strengthening their sense of belonging and job satisfaction and accelerating their academic and research contributions.

Professional Development of Faculty Members

Faculty professional development is a strategic and continuous process adopted by our academic institution to improve faculty members' skills, capabilities, and knowledge. This process is not limited to training; it includes all activities that contribute to their growth in their main areas: teaching, scientific research, and community service.

Importance of Professional Development

Faculty professional development is an essential necessity imposed by rapid scientific and technological developments. It is fundamental to ensuring the quality of higher education and universities' ability to achieve their mission and strategic objectives. Investing in faculty development 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 key objectives, most notably:

Improving the Quality of Teaching and Learning: Provide faculty members with the latest teaching and assessment strategies and encourage the use of modern educational technologies.

Enhancing Scientific Research Capabilities: Develop skills in writing research projects, publishing in reputable scientific journals, and keeping pace with developments in their specializations.

Developing Leadership and Administrative Skills: Prepare academic staff to assume leadership and administrative positions in the future.

Keeping Pace with Technological Developments: Train faculty members to employ modern technologies and information technology in teaching and scientific research.

Achieving Personal and Institutional Growth: Help faculty members grow and develop in their careers, contributing to job satisfaction and institutional commitment.

12. Admission Criterion

The Department of Medical Laboratory Techniques plays a pivotal role in the healthcare and educational system and works diligently to be an effective contributor to societal progress and development. This is achieved by providing advanced educational services to a broad segment of promising young people and contributing to rigorous scientific research. Students are admitted to the department through the central admission system supervised by the Ministry, which distributes students among public and private colleges.

The department's primary mission is to supply the labor market with graduates who possess the skills and high competence required for proficient work in various healthcare institutions.

Medical Laboratory Techniques is a cornerstone of medical diagnosis; the source states that approximately 70% of medical decisions depend directly on laboratory test results.

Governing Values and Principles

The department adopts a set of principles and values that govern its performance and guide its direction, including:

Promoting a Spirit of National Belonging: The department works to strengthen this value 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 at the Center of the Educational Process: The department believes that students are the country's true wealth and therefore must be protected and provided with all the knowledge and skills needed to enter the labor market with confidence and competence.

Student Body and Graduates

The department currently has 879 students distributed across the four study stages as follows:

First Stage: 346 students

Second Stage: 89 students

Third Stage: 77 students

Fourth Stage: 367 students

The department celebrated the graduation of its first cohort last year, with 78 graduates. The current academic year is expected to see 367 students graduate, providing a valuable addition to the health sector and medical laboratories in both the public and private sectors.

13. Main Sources of Information about the Program

Ministry Website

Department of Medical Laboratory Techniques

14. Program Development Plan

Our Vision: "Toward leadership and excellence in technical medical education and the preparation of innovative professional personnel who meet future healthcare needs."

This plan is based on four integrated strategic pillars intended to move the program to advanced levels of quality and excellence.

Pillar One: Updating Academic Content and Curricula

Keeping Pace with Developments: Periodic curriculum review to integrate the latest diagnostic technologies, such as genomics and molecular diagnostics.

Flexibility and Specialization: Introduce optional specialized tracks (such as Laboratory Quality Management and Toxicology) to meet students' interests and labor-market requirements.

Skills Integration: Strengthen soft skills (communication, professional ethics, and critical thinking) within the core courses.

Pillar Two: Enhancing the Educational Environment and Practical Training

Laboratory Development: Update and equip teaching laboratories with advanced simulation devices and virtual-reality technologies.

Effective Partnerships: Expand and deepen partnerships with hospitals and reference laboratories to ensure high-quality clinical training opportunities for students.

Competency-Based Assessment: Apply a practical assessment system focused on measuring students' mastery of essential skills accurately and objectively.

Pillar Three: Empowering Faculty and Supporting Scientific Research

Continuous Development: Provide ongoing professional-development programs for faculty members in modern teaching and advanced scientific research.

Promoting Applied Research: Encourage and support scientific research focused on solving local health problems and enhance publication in reputable international journals.

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

Advisory Council: Activate the role of the program's advisory council, which includes health-sector experts, to ensure alignment of program outcomes with labor-market needs.

Community Initiatives: Organize workshops, specialized seminars, and health-awareness campaigns to serve the local community and strengthen the department's leadership role.

This plan represents a road map to ensure the program remains at the forefront and graduates healthcare personnel who are not only technically qualified but also capable of leadership and development in their field.

Program Skills Matrix															
Required Program Learning Outcomes															
Values				Skills				Knowledge				Core or Elective	Course Name	Course Code	Year / Level
C4	C3	C2	C1	B4	B3	B2	B1	A4	A3	A2	A1	Core	Medical Terminology	MLB1.2	First Stage / First Semester
√	√	√	√		√	√	√			√	√	Core	Human Biology 1	MLB1.3	
		√	√			√	√			√	√	Core	Laboratory Equipment 1	MLB1.4	
	√	√	√			√	√				√	Core	Professional Conduct	MLB1.5	
			√				√			√	√	Core	Human Rights and Democracy	MLB1.7	
			√				√				√	Core	English Language	MLB1.8	
	√	√	√		√	√	√	√	√	√	√	Core	General Chemistry	MLB1.1	
	√	√	√		√	√	√	√	√	√	√	Core	General Chemistry 2	MLB1.1	First Stage / Second Semester
√	√	√	√			√	√		√	√	√	Core	Anatomy	MLB1.9	
		√	√	√	√		√	√		√	√	Core	Human Biology 2	MLB1.3	
√	√	√	√		√	√	√		√	√	√	Core	Laboratory Equipment 2	MLB1.4	
	√	√					√			√	√	Core	Computer Principles	MLB1.6	
	√	√					√			√	√	Core	Arabic Language	MLB1.10	
√	√	√			√	√	√		√	√	√	Core	Medical Bacteriology 1	MLB2.1	Second Stage / First Semester
		√	√		√		√		√	√	√	Core	Biochemistry 1	MLB2.2	
		√	√		√	√	√		√	√	√	Core	Human Physiology 1	MLB2.3	
		√	√			√	√		√	√	√	Core	Histology 1	MLB2.4	
	√	√	√		√	√	√			√	√	Core	Molecular Biology	MLB2.5	
√	√	√	√		√	√	√		√	√	√	Core	Medical	MLB2.6	
													Parasitology 1		

			√				√				√	Core	Crimes of the Ba'ath Party	MLB2.17	
	√	√	√		√	√	√		√	√	√	Core	Medical Bacteriology 2	MLB2.1	Second Stage / Second Semester
	√	√	√			√	√	√	√	√	√	Core	Biochemistry 2	MLB2.2	
	√	√	√		√	√		√	√	√	√	Core	Human Physiology 2	MLB2.3	
	√	√	√		√	√	√		√	√	√	Core	Histology 2	MLB2.4	
	√	√	√		√	√	√		√	√	√	Core	Medical Parasitology and Entomology 2	MLB2.6	
			√				√				√	Core	Descriptive Biostatistics	MLB2.11	
		√	√				√	√	√	√	√	Core	Histopathology	MLB3.1	Third Stage
	√	√	√			√		√		√	√	Core	Hematology	MLB3.2	
		√	√			√		√		√	√	Core	Virology and Mycology	MLB3.3	
	√	√	√		√	√		√	√	√	√	Core	Clinical Chemistry	MLB3.4	
	√	√		√	√	√			√	√	√	Core	Human Genetics	MLB3.5	
	√	√	√		√	√	√		√	√	√	Core	Immunology	MLB3.6	
√	√	√	√			√	√		√	√	√	Core	Advanced Laboratory Techniques	MLB3.7	
			√				√				√	Core	Computer Applications	MLB3.8	Fourth Stage
													English Language		
	√		√	√	√	√			√	√	√	Core	Clinical Immunology	MLB4.1	
	√	√	√			√	√		√		√	Core	Diagnostic Bacteriology	MLB4.2	
√	√	√		√	√	√		√		√	√	Core	Clinical Chemistry	MLB4.3	
												Core	Advanced	MLB4.4	

													Medical Parasitology		
	√	√	√		√	√	√		√	√	√	Core	Blood Transfusion	MLB4.5	
	√	√	√		√	√	√		√	√	√	Core	Histopathology	MLB4.6	
		√					√				√	Core	English Language	MLB4.7	
√	√	√	√	√	√	√	√	√	√	√	√	Core	Project	MLB4.9	
												Core	Laboratory Management + Research Methods Teaching	MLB4.8	

Course Description Form

1. Course Name					
General Chemistry 1+2					
2. Course Code					
MLB1.1					
3. Semester / Academic Year					
First and Second Semesters / 2025-2026					
4. Date This Description Was Prepared					
22.7.2026					
5. Available Attendance Modes					
Theoretical classroom attendance + practical laboratory sessions					
6. Total Study Hours / Total Credit Units					
30 hours / 8 credit units					
7. Name of Course Instructor (if more than one, list all names)					
Name: Asst. Lecturer Mohammed Dhiab Damnan Em mohamed.dhiab@alfarabiuc.edu.iq					
8. Course Objectives					
• Provide the student with basic concepts of general chemistry, including atomic structure, chemical bonds, and the periodic table. • Enable the student to understand types of chemical reactions and how to balance chemical equations. • Equip the student with basic practical skills for work in chemical laboratories, including the use of equipment and safe handling of chemicals. • Introduce the student to basic principles of analytical chemistry and calculations related to concentration and solutions.				Course Objectives	Learning Objectives
9. Teaching and Learning Strategies					
Theoretical lectures: explaining basic concepts and principles using presentation tools and the board. • Practical experiments: applying theoretical concepts through laboratory experiments and training students to write scientific reports. • Discussion sessions and exercises: solving problems and exercises to reinforce understanding and encourage active participation. Assignments and reports: assigning periodic homework and laboratory reports to assess students' understanding and development of practical skills.					Strategy
10. Course Structure					
Assessment Method	Learning Method	Unit or Topic Name	Required Learning Outcomes	Hours	Week
Discussion	Theoretical lecture	Introduction to Analytical Chemistry (atom, periodic table, bonds).	The student should identify the basic concepts of chemistry and the structure of matter.	2	1
Homework	Lecture and exercises	Solutions and methods of expressing concentration (molarity, normality).	The student should master methods of preparing standard solutions and calculating their concentrations.	2	2
Quiz	Lecture and exercises	Statistical treatment of data (accuracy, errors, standard	The student should be able to statistically evaluate	2	3

		deviation).	the accuracy of analytical results.		
Discussion	Theoretical lecture	Chemical equilibrium (equilibrium constant, influencing factors).	The student should understand the factors affecting the progress of chemical reactions.	2	4
Quiz	Lecture and training	Neutralization reactions (acid-base theories, pH, buffer solutions).	The student should distinguish between acids and bases and calculate pH.	2	5
Homework	-	Oxidation-reduction reactions and their applications.	The student should understand the principles of oxidation-reduction reactions.	2	6
Written examination	Theoretical lecture	Midterm Examination	-	2	7
Discussion	Lecture and training	Precipitation methods (precipitating agents, gravimetric calculations).	The student should identify separation methods and gravimetric analysis.	2	8
Quiz	Lecture and exercises	Spectroscopic analysis and the Beer-Lambert law.	The student should use the principles of spectroscopy in quantitative measurements.	2	9
Homework	Theoretical lecture	Organic chemistry (alkanes, alkenes, alcohols).	The student should distinguish between basic organic compounds and their reactions.	2	10
Discussion	Lecture and training	Aldehydes, ketones, and carboxylic acids.	The student should identify functional groups and their characteristic reactions.	2	11
Quiz	Theoretical lecture	Carbohydrates: definition, classification, and functions.	The student should understand the structure and biological function of carbohydrates.	2	12
Homework	Lecture and exercises	Lipids: definition, classification, and functions.	The student should understand the structure and biological function of lipids.	2	13
Open discussion	-	Amino acids and proteins: definition, structure, and functions.	The student should recognize the importance of proteins as structural and functional units.	2	14
Practical examination	-	Final review and practical examination	-	2	15

11. Course Assessment

The grade out of 100 is distributed according to the tasks assigned to the student, such as

daily preparation, daily, oral, monthly, and written examinations, reports, etc.
 40 marks for annual coursework, divided into 25 marks theoretical + 15 marks practical.
 60 marks for the final examination, divided into 35 marks theoretical + 25 marks practical.

12. Learning and Teaching Resources

-	Required Textbooks (curricular, if any)
1 - LEHNINGER .L ALBERT understanding chemistry by -2 George Pimentel	Main References (Sources)
-	Recommended Supporting Books and References (scientific journals, reports, etc.)
noor-book.com wikipedia.org mu.edu.iq mawdoo3.com ktbbh.com	Electronic References and Websites

Course Description Form

13. Course Name					
Medical Terminology 1					
14. Course Code					
MLB.1.2					
15. Semester / Academic Year					
2025-2026					
16. Date This Description Was Prepared					
22.7.2026					
17. Available Attendance Modes					
Theoretical classroom attendance					
18. Total Study Hours / Total Credit Units					
Total Hours: 2 / Total Units: 2					
19. Name of Course Instructor (if more than one, list all names)					
Name: Prof. Dr. Musa Mahmoud Marbat Email: musa.mahmoud@alfarabiuc.edu.iq					
20. Course Objectives					
- This course presents the fundamentals of medical terminology by explaining the basic elements that form medical terms and showing how these elements are combined to construct medical terminology, with appropriate examples. This is followed by a comprehensive explanation of the structural and functional organization of the human body, including its various body systems. - Specific Objective: Identify medical terminology, especially the terms used by the student during the stage of study.			Course Learning Objectives		
21. Teaching and Learning Strategies					
It includes all teaching procedures and educational practices aimed at activating the student's role and transforming the student from a passive recipient and listener into a central participant in the learning process, where learning takes place through work, research, and the student's reliance on self-directed acquisition of knowledge.					Strategy
22. Course Structure					
Assessment Method	Learning Method	Unit or Topic Name	Required Learning Outcomes	Hours	Week
Discussion	Theoretical lecture	Introduction and Definition of Medical Terminology	Comprehension	2	1
Homework	Theoretical lecture	Techniques for Building Medical Terms	Comprehension	2	2
Quiz	Theoretical lecture	Elements of Medical Terms: Word Roots, Suffixes, and Prefixes	Comprehension	2	3
Discussion	Theoretical lecture	Word Roots	Comprehension	2	4
Quiz	Theoretical	Common Prefixes	Comprehension	2	5

	lecture				
Homework	Theoretical lecture	Common Suffixes	Comprehension	2	6
Written examination	Theoretical lecture	Basic Terminology of Body Structure	Comprehension	2	7
Discussion	Theoretical lecture	Levels of Organization: Cell, Tissue, Organ, System	Comprehension	2	8
Quiz	Theoretical lecture	Anatomical Positions and Terms; Body Planes	Comprehension	2	9
Homework	Theoretical lecture	Body Parts and Cavities	Comprehension	2	10
Discussion	Theoretical lecture	Pathology and Abnormal Conditions: Tumors, Infections, and Inflammation	Comprehension	2	11
Quiz	Theoretical lecture	Symptoms, Diseases, and Diagnosis	Comprehension	2	12
Homework	Theoretical lecture	Diagnostic Procedures	Comprehension	2	13
Open discussion	-	Therapeutic Procedures	Comprehension	2	14

23. Course Assessment

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

24. Learning and Teaching Resources

The language of medicine	Required Textbooks (curricular, if any)
Medical terminology	Main References (Sources)
Essentials of anatomy and physiology	Recommended Supporting Books and References (scientific journals, reports, etc.)
	Electronic References and Websites

Course Description Form

25. Course Name					
Human Biology 1+2					
26. Course Code					
MLB.1.3					
27. Semester / Academic Year					
2025-2026					
28. Date This Description Was Prepared					
22.7.2026					
29. Available Attendance Modes					
Theoretical classroom attendance and laboratory attendance					
30. Total Study Hours / Total Credit Units					
Total Hours: 7 / Total Units: 4					
31. Name of Course Instructor (if more than one, list all names)					
Name: Asst. Lecturer Ali Furat Abdul-Sattar Email: ali.furat@alfarabiuc.edu.iq					
32. Course Objectives					
- Provides a clear overview of living organisms through knowledge of their structure and functions. - Specific Objective: Focus on analyzing the structure and functions of genetic material.			Course Learning Objectives		
33. Teaching and Learning Strategies					
It includes all teaching procedures and educational practices aimed at activating the student's role and transforming the student from a passive recipient and listener into a central participant in the learning process, where learning takes place through work, research, and the student's reliance on self-directed acquisition of knowledge.					Strategy
34. Course Structure					
Assessment Method	Learning Method	Unit or Topic Name	Required Learning Outcomes	Hours	Week

Discussion	Theoretical lecture	Biology	Comprehension	2	1
Homework	Theoretical lecture	Importance of Studying Biology; Definition of Biology	Comprehension	2	2
Quiz	Theoretical lecture	Selected Branches of Biology	Comprehension	2	3
Discussion	Theoretical lecture	Characteristics of Living Organisms	Comprehension	2	4
Quiz	Theoretical lecture	Evolution, Adaptation, Respiration, Homeostasis, Metabolism, Anabolism, Catabolism	Comprehension	2	5
Homework	Theoretical lecture	Response to External Factors; Reproduction	Comprehension	2	6
Written examination	Theoretical lecture	Kingdoms of Living Organisms	Comprehension	2	7
Discussion	Theoretical lecture	Classification of Living Organisms; Taxonomic Categories; Five-Kingdom Classification Scheme	Comprehension	2	8
Quiz	Theoretical lecture	Chemistry of Life (Polymer Biology; Levels of Organization: Lipids, Carbohydrates, Proteins, Amino Acids)	Comprehension	2	9
Homework	Theoretical lecture	Cell Structure and Function; Animal Cells	Comprehension	2	10
Discussion	Theoretical lecture	Cell Wall, Cell Membrane, Cytoplasmic Matrix, Nucleus, Endoplasmic Reticulum, Golgi Apparatus, Cilia, Flagella, Plant Cells	Comprehension	2	11
Quiz	Theoretical lecture	Comparison Between Animal and Plant Cells, Plants, etc.	Comprehension	2	12
Homework	Theoretical lecture	Prokaryotic Cells and Eukaryotic Cells: Differences, Characteristics, and Comparison	Comprehension	2	13
Open discussion	-	Cell Life Cycle (Mitosis), Nuclear Division,	Comprehension	2	14

		Cytoplasmic Division			
35. Course Assessment					
The grade out of 100 is distributed according to the tasks assigned to the student, such as daily preparation, daily, oral, monthly, and written examinations, reports, etc. 40 marks for annual coursework, divided into 25 marks theoretical + 15 marks practical. 60 marks for the final examination, divided into 35 marks theoretical + 25 marks practical.					
36. Learning and Teaching Resources					
Glenco-Biology-Dynamic of Life(Megraw .2008)			Required Textbooks (curricular, if any)		
.Mader-Biology-Injury into Life (Nine Edition)			Main References (Sources)		
Prescott, Harley and Klein -Biology-(Sixth Eddition)			Recommended Supporting Books and References (scientific journals, reports, etc.)		
-			Electronic References and Websites		

Course Description Form

37. Course Name	
Laboratory Equipment 1+2	
38. Course Code	
MLB.1.4	
39. Semester / Academic Year	
2025-2026	
40. Date This Description Was Prepared	
22.7.2026	
41. Available Attendance Modes	

Theoretical classroom attendance and laboratory attendance					
42. Total Study Hours / Total Credit Units					
Total Hours: 6 / Total Units: 4					
43. Name of Course Instructor (if more than one, list all names)					
Name: Asst. Lecturer Ali Sarmad Majeed Email: ali.sarmad@alfarabiuc.edu.iq					
44. Course Objectives					
<u>General Objective: The course aims to enable the student to identify the types of laboratory equipment.</u> Specific Objective: The student identifies the scientific theories on which these instruments operate.			Course Learning Objectives		
45. Teaching and Learning Strategies					
It includes all teaching procedures and educational practices aimed at activating the student's role and transforming the student from a passive recipient and listener into a central participant in the learning process, where learning takes place through work, research, and the student's reliance on self-directed acquisition of knowledge.					Strategy
46. Course Structure					
Assessment Method	Learning Method	Unit or Topic Name	Required Learning Outcomes	Hours	Week
Discussion	Theoretical lecture	General Introduction	Comprehension	2	1
Homework	Theoretical + Practical Lecture	Microscope	Comprehension	2	2
Quiz	Theoretical lecture	Phase-Contrast Microscope Dark-Field Microscope	Comprehension	2	3
Discussion	Theoretical lecture	Fluorescence Microscope: Parts and Principles Structure and Uses Care and Safety	Comprehension	2	4
Quiz	Theoretical lecture	Electron Microscope Parts and Principle Magnification and Resolution Uses Instruction Sheet	Comprehension	2	5
Homework	Theoretical lecture	Photometer and Spectrometer Parts and Principle Uses	Comprehension	2	6
Written examination	Theoretical + Practical Lecture	Spectrophotometer Parts and Principle	Comprehension	2	7
Discussion	Theoretical lecture	Chromatography Apparatus (Chromatography) Principle and Types	Comprehension	2	8
Quiz	Theoretical lecture	Column Chromatography	Comprehension	2	9
Homework	Theoretical + Practical	Microbiological Safety Cabinet	Comprehension	2	10

	Lecture	Types of Safety Cabinets			
Discussion	Theoretical lecture	Autoclave Principle and Uses	Comprehension	2	11
Quiz	Theoretical lecture	General Introduction Polymerase Chain Reaction (PCR) Device	Comprehension	2	12
Homework	Theoretical lecture	Continuous-Flow Analyzers Centrifugal Analyzers	Comprehension	2	13
Open discussion	Theoretical + Practical Lecture	DNA Sequencer Ultraviolet Illumination Device	Comprehension	2	14

47. Course Assessment

The grade out of 100 is distributed according to the tasks assigned to the student, such as daily preparation, daily, oral, monthly, and written examinations, reports, etc.
40 marks for annual coursework, divided into 25 marks theoretical + 15 marks practical.
60 marks for the final examination, divided into 35 marks theoretical + 25 marks practical.

48. Learning and Teaching Resources

Principles of laboratory instruments	Required Textbooks (curricular, if any)
Configurable professional lab notebooks	Main References (Sources)
Laboratory equipment book	Recommended Supporting Books and References (scientific journals, reports, etc.)
-	Electronic References and Websites

Course Description Form

49. Course Name					
Professional Conduct 1					
50. Course Code					
MLB.1.5					
51. Semester / Academic Year					
2025-2026					
52. Date This Description Was Prepared					
22.7.2026					
53. Available Attendance Modes					
Theoretical classroom attendance					
54. Total Study Hours / Total Credit Units					
Total Hours: 2 / Total Units: 2					
55. Name of Course Instructor (if more than one, list all names)					
Name: Asst. Lecturer Majid Jasim Naif Email: majid.jassim@alfarabiuc.edu.iq					
56. Course Objectives					
• Enable the student to understand the appropriate manner of dealing with patients, instruments, and equipment in the workplace. • Specific Objective: Prepare the graduate for professional conduct in dealing with the profession and achieving harmony with oneself and the professional environment (the patient and companions, healthcare workers, and medical devices).			Course Learning Objectives		
57. Teaching and Learning Strategies					
It includes all teaching procedures and educational practices aimed at activating the student's role and transforming the student from a passive recipient and listener into a central participant in the learning process, where learning takes place through work, research, and the student's reliance on self-directed acquisition of knowledge.					Strategy
58. Course Structure					
Assessment Method	Learning Method	Unit or Topic Name	Required Learning Outcomes	Hours	Week
Discussion	Theoretical lecture	Principles of Professional Ethics Through Stages of Civilizational Development	Comprehension	2	1
Homework	Theoretical lecture	Basic Ethics of the Profession	Comprehension	2	2
Quiz	Theoretical lecture	Behavioral Patterns: Humanistic, Interactive, and Group-Based	Comprehension	2	3
Discussion	Theoretical lecture	Communication Methods: Verbal and Nonverbal	Comprehension	2	4
Quiz	Theoretical lecture	Behavioral Attitudes and Tendencies	Comprehension	2	5
Homework	Theoretical lecture	Values, Customs, and Traditions	Comprehension	2	6

Written examination	Theoretical lecture	Personality Types and How to Deal with Them	Comprehension	2	7
Discussion	Theoretical lecture	Conditions for Improving Mental Well-Being	Comprehension	2	8
Quiz	Theoretical lecture	Conditions for Professional Adjustment and the Associated Work Relationship	Comprehension	2	9
Homework	Theoretical lecture	Job Description of the Graduate's Work	Comprehension	2	10
Discussion	Theoretical lecture	Behavior in Dealing with the Patient	Comprehension	2	11
Quiz	Theoretical lecture	Behavior in Dealing with Medical Devices and Equipment	Comprehension	2	12
Homework	Theoretical lecture	Occupational Safety	Comprehension	2	13
Open discussion	Theoretical lecture	Applications in Professional Conduct	Comprehension	2	14

59. Course Assessment

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

60. Learning and Teaching Resources

Professional Conduct for Health Technologies	Required Textbooks (curricular, if any)
Islamic Code for the Medical Profession	Main References (Sources)
Professional Conduct for Physicians, Raji Abbas Al-Tikriti	Recommended Supporting Books and References (scientific journals, reports, etc.)
-	Electronic References and Websites

Course Description Form

61. Course Name					
Computer Principles 1+2					
62. Course Code					
MLB.1.6					
63. Semester / Academic Year					
2025-2026					
64. Date This Description Was Prepared					
22.7.2026					
65. Available Attendance Modes					
Theoretical classroom attendance					
66. Total Study Hours / Total Credit Units					
3 hours / 2 credit units					
67. Name of Course Instructor (if more than one, list all names)					
Name: Asst. Lecturer Majid Jasim Naif Email: majid.jassim@alfarabiuc.edu.iq					
68. Course Objectives					
• Teach the student the basic rules of computer use and management to help in completing projects, printing materials, preparing statistics and charts, creating presentations, designing engineering drawings, and other tasks. • Specific objective: teach the student to use computers because the Internet plays a role in many fields, including education, scientific research, trade, and marketing through electronic correspondence, web pages, and online communication.			Course Learning Objectives		
69. Teaching and Learning Strategies					
It includes all teaching procedures and educational practices aimed at activating the student's role and transforming the student from a passive recipient and listener into a central participant in the learning process, where learning takes place through work, research, and the student's reliance on self-directed acquisition of knowledge.					Strategy
70. Course Structure					
Assessment Method	Learning Method	Unit or Topic Name	Required Learning Outcomes	Hours	Week
Discussion	Theoretical lecture	Computer cycle, generations, data, and information	Comprehension	2	1
Homework	Theoretical lecture	Computer characteristics, fields of use, and components	Comprehension	2	2
Quiz	Theoretical lecture	Types and classification of computers	Comprehension	2	3

Discussion	Theoretical lecture	Computer components: hardware, input devices, and output devices	Comprehension	2	4
Quiz	Theoretical lecture	Computer architecture and software	Comprehension	2	5
Homework	Theoretical lecture	Setup systems and personal computers	Comprehension	2	6
Written examination	Theoretical lecture	Computer platforms and factors to consider when purchasing a computer	Comprehension	2	7
Discussion	Theoretical lecture	Main characteristics of personal computers and chapter questions	Comprehension	2	8
Quiz	Theoretical lecture	Ethics of electronic work, types of violations, and computer security	Comprehension	2	9
Homework	Theoretical lecture	Intellectual property and electronic piracy	Comprehension	2	10
Discussion	Theoretical lecture	Electronic piracy and its types	Comprehension	2	11
Quiz	Theoretical lecture	Sources of piracy and the most common security risks	Comprehension	2	12
Homework	Theoretical lecture	Malware - computer viruses	Comprehension	2	13
Open discussion	Theoretical lecture	Damage caused by viruses and their characteristics	Comprehension	2	14

71. Course Assessment

The grade out of 100 is distributed according to the tasks assigned to the student, such as daily preparation, daily, oral, monthly, and written examinations, reports, etc.
40 marks for annual coursework, divided into 25 marks theoretical + 15 marks practical.
60 marks for the final examination, divided into 35 marks theoretical + 25 marks practical.

72. Learning and Teaching Resources

Computer Fundamentals and Office Applications - Ministry of Higher Education and Scientific Research - Research and Development Department	Required Textbooks (curricular, if any)
Yusr Al-Mustafa Science Series: "Computer and Internet Fundamentals"	Main References (Sources)
Computing Fundamentals, Innovative training works USA, Inc, 2006	Recommended Supporting Books and References (scientific journals, reports, etc.)

-	Electronic References and Websites
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Course Description Form

73. Course Name:	
Anatomy 2	
74. Course Code	
MLB1.9	
75. Semester / Academic Year	
2025-2026	
76. Date This Description Was Prepared	
2025 / 7 / 23	
77. Available Attendance Modes	
Weekly (Theoretical + Practical)	
78. Total Study Hours / Total Credit Units	
Theoretical (2), Practical (5), Credit Units (4)	
79. Name of Course Instructor (if more than one, list all names)	
Name: Prof. Dr. Mohammed Abdulhadi Ghali Email: mohammed.zyarah@gmail.com	
Course Objectives	
- Recognize the importance of anatomy in relation to the student's scientific and professional development. - Identify and describe the anatomical planes of the human body. - Identify the locations of the major organs of the body and describe their tissue components.	Course Learning Objectives
81. Teaching and Learning Strategies	
- Explain the importance of studying human anatomy. - Define anatomical planes and use them to describe the relative locations of	Strategy

body organs.					
- Discuss the anatomical locations of the major organs, including how they relate to clinical conditions such as pain. - Describe the types of tissues that make up each organ, with emphasis on their structural and functional characteristics. - Engage students in questions related to the topic.					
82. Course Structure					
Assessment Method	Learning Method	Unit or Topic Name	Required Learning Outcomes	Hours	Week
Attendance Discussion	Screen Presentation	Introduction to Anatomy		2	1
		Levels of Organization		2	2
		Anatomical Positions		2	3
		Body Regions and Cavities		2	4
		Body Planes and Sections		2	5
		Directional Terms		2	6
		Tissues and Membranes		2	7
		Epithelial and Connective		2	8
		Tissues		2	9
		Muscular and Nervous		2	10
		Tissues		2	11
		Digestive Tract		2	12
		Accessory Glands		2	13
		Respiratory System		2	14
		Blood		2	15
		Circulatory System			
		Nervous System			
83. Course Assessment					
Attendance: 5; Discussion: 5; Two monthly examinations: 90, converted to 25% + 15 practical + 60 final.					
84. Learning and Teaching Resources					
			Required Textbooks (curricular, if any)		
Gartner , L.P., & Hiatt, J.L. (2022) “ Color Textbook of Histology” 5 th ed. Elsevier Vaughn,P. (2016) Anatomy and physiology			Main References (Sources)		
			Recommended Supporting Books and References (scientific journals, reports, etc.)		
Google and chat GPT			Electronic References and Websites		

Course Description Form

85. Course Name	
Arabic Language	
86. Course Code	
MLB.1.10	
87. Semester / Academic Year	
2025-2026	
88. Date This Description Was Prepared	
22.7.2026	
89. Available Attendance Modes	
Theoretical classroom attendance	
90. Total Study Hours / Total Credit Units	
30 study hours, 2 × 15 weeks 2 credit units	
91. Name of Course Instructor (if more than one, list all names)	
Name: Asst. Lecturer Majid Jasim Naif Email: majid.jassim@alfarabiuc.edu.iq	
92. Course Objectives	
Understand Arabic grammar rules.	Course Learning Objectives

• The student should be able to construct correct sentences and successfully identify correct language usage and diagnose errors when present.					
93. Teaching and Learning Strategies					
It includes all teaching procedures and educational practices aimed at activating the student's role and transforming the student from a passive recipient and listener into a central participant in the learning process, where learning takes place through work, research, and the student's reliance on self-directed acquisition of knowledge.					Strategy
94. Course Structure					
Assessment Method	Learning Method	Unit or Topic Name	Required Learning Outcomes	Hours	Week
Board-based test Board	Theoretical lecture	Writing Hamzat al-Qat'	Strengthen the student's knowledge of the topic.	2	1
Oral examination	Theoretical lecture	Punctuation marks and punctuation in sentences	Strengthen the student's knowledge of the topic.	2	2
Oral examination	Theoretical lecture	-	Strengthen the student's knowledge of the topic.	2	3
Oral examination	Theoretical lecture	Writing the Arabic letters Dad and Dha	Strengthen the student's knowledge of the topic.	2	4
Oral examination	Theoretical lecture	Writing Alif Maqsura / Soft Alif	Strengthen the student's knowledge of the topic.	2	5
Homework	Theoretical lecture	Writing Ta Marbuta	Strengthen the student's knowledge of the topic.	2	6
Preparation for the examination	-	Writing Open Ta + how to look up words in the dictionary	Strengthen the student's knowledge of the topic.	2	7
Oral examination	Theoretical lecture	Distinctive markers of the verb - The particle	Strengthen the student's knowledge of the topic.	2	8
Written examination	-	End-of-Semester Examination First	Student assessment	2	9
Homework	Theoretical lecture	Verb Classification - The Verb Past Tense	Strengthen the student's knowledge of the topic.	2	10
Homework	Theoretical lecture	Present Tense + Verb Imperative	Strengthen the student's knowledge of the topic.	2	11
Homework	Theoretical lecture	Indeclinable and Declension-Inflected Forms	Strengthen the student's knowledge of the topic.	2	12
Homework	Theoretical lecture	Particles - Their Types and their	Strengthen the student's knowledge of the topic.	2	13

		functions			
Homework	Theoretical lecture	Numbers	Strengthen the student's knowledge of the topic.	2	14
Homework	Theoretical lecture	Linguistic Corrections	Strengthen the student's knowledge of the topic.	2	15
95. Course Assessment					
The grade out of 100 is distributed according to the tasks assigned to the student, such as daily preparation, daily, oral, monthly, and written examinations, reports, etc.					
96. Learning and Teaching Resources					
Al-Wajiz fi al-Lugha al-Arabiyya by Dr. Muhi Hilal Al-Sarhan • Arabic Language for Non-Specialists by Prof. Hamid Mukhlif Al-Hiti and Prof. Abdulqadir Hassan • Sharh Ibn Aqil - Alfiyyat Ibn Malik • Al-Minhaj fi Qawa'id al-Lugha wa al-I'rab by Al-Antaki			Required Textbooks (curricular, if any)		
			-	Main References (Sources)	
			-	Recommended Supporting Books and References (scientific journals, reports, etc.)	
Wikipedia.com				Electronic References and Websites	

Course Description Form

97. Course Name					
Medical Bacteriology 1+2					
98. Course Code					
MLB.2.1					
99. Semester / Academic Year					
2025-2026					
100. Date This Description Was Prepared					
22.7.2026					
101. Available Attendance Modes					
Theoretical classroom attendance + laboratories					
102. Total Study Hours / Total Credit Units					
6 hours / 4 credit units					
103. Name of Course Instructor (if more than one, list all names)					
Name: Asst. Lecturer Omar Jamal Ibrahim Email: omar.jamal@alfarabiuc.edu.iq					
104. Course Objectives					
- Enable the student to identify pathogenic microorganisms, how they are diagnosed, the diseases they cause, and methods of controlling them. - Specific Objective: Identify the epidemiology and symptoms of microbial diseases and the control measures for each disease.			Course Learning Objectives		
105. Teaching and Learning Strategies					
It includes all teaching procedures and educational practices aimed at activating the student's role and transforming the student from a passive recipient and listener into a central participant in the learning process, where learning takes place through work, research, and the student's reliance on self-directed acquisition of knowledge.					Strategy
106. Course Structure					
Assessment Method	Learning Method	Unit or Topic Name	Required Learning Outcomes	Hours	Week
Discussion	Theoretical lecture	Introduction Classification of bacteria	Comprehension	2	1
Homework	Theoretical + Practical Lecture	Structure and function of bacteria	Comprehension	2	2
Quiz	Theoretical lecture	Growth and death of bacteria	Comprehension	2	3
Discussion	Theoretical lecture	Culturing of bacteria and media types	Comprehension	2	4
Quiz	Theoretical lecture	Bacterial Physiology (Bacterial metabolism).	Comprehension	2	5
Homework	Theoretical lecture	Nutrient cycles and regulation)	Comprehension	2	6
Written	Theoretical +	- Bacterial genetics.	Comprehension	2	7

examination	Practical Lecture				
Discussion	Theoretical lecture	- Genetic material.	Comprehension	2	8
Quiz	Theoretical lecture	- Plasmids, replication, mutation and genetic recombination.	Comprehension	2	9
Homework	Theoretical + Practical Lecture	- Microbial virulence factors and pathogenesis of bacterial infection.	Comprehension	2	10
Discussion	Theoretical lecture	- Microflora.	Comprehension	2	11
Quiz	Theoretical lecture	- Chemotherapy and antibiotic resistance.	Comprehension	2	12
Homework	Theoretical lecture	- Vaccination.	Comprehension	2	13
Open discussion	Theoretical + Practical Lecture	-Gram positive cocci: Staphylococcus, Streptococcus and enterococcus.	Comprehension	2	14
Discussion	Theoretical + Practical Lecture	Gram positive spore forming bacilli (Clostridium and Bacillus)	Comprehension	2	15
Discussion	Theoretical + Practical Lecture	- Gram positive non spore forming bacilli (Listeria and corynbacterium)	Comprehension	2	16
Open discussion	Theoretical + Practical Lecture	- Gram negative cocci: Neiseria	Comprehension	2	17

107. Course Assessment

The grade out of 100 is distributed according to the tasks assigned to the student, such as daily preparation, daily, oral, monthly, and written examinations, reports, etc.
 40 marks for annual coursework, divided into 25 marks theoretical + 15 marks practical.
 60 marks for the final examination, divided into 35 marks theoretical + 25 marks practical.

108. Learning and Teaching Resources

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.	Required Textbooks (curricular, if any)
Medical Microbiology and Immunology, Warren Levinson, thirteenth edition,McGraw Hill Education.	Main References (Sources)

-	Recommended Supporting Books and References (scientific journals, reports, etc.)
Wikipedia.com	Electronic References and Websites

Course Description Form

109. Course Name					
Biochemistry 1+2					
110. Course Code					
MLB.2.2					
111. Semester / Academic Year					
2025-2026					
112. Date This Description Was Prepared					
22.7.2026					
113. Available Attendance Modes					
Theoretical classroom attendance + laboratories					
114. Total Study Hours / Total Credit Units					
6 hours / 4 credit units					
115. Name of Course Instructor (if more than one, list all names)					
Name: Asst. Lecturer Mohammed Dhiab Damnan Em mohamed.dhiab@alfarabiuc.edu.iq					
116. Course Objectives					
General Objective: Provide basic concepts and information in clinical chemistry and develop the student's ability and skills in medical laboratory analyses. <u>Specific Objective: Enable the student to perform clinical tests and be familiar with preparing different solutions.</u>			Course Learning Objectives		
117. Teaching and Learning Strategies					
It includes all teaching procedures and educational practices aimed at activating the student's role and transforming the student from a passive recipient and listener into a central participant in the learning process, where learning takes place through work, research, and the student's reliance on self-directed acquisition of knowledge.					Strategy
118. Course Structure					
Assessment Method	Learning Method	Unit or Topic Name	Required Learning Outcomes	Hours	Week
Discussion	Theoretical lecture	INTRODUCTION TO METABOLISM	Comprehension	2	1

Homework	Theoretical + Practical Lecture	enzymes and Isoenzymes	Comprehension	2	2
Quiz	Theoretical lecture	CARBOHYDRATE METABOLISM	Comprehension	2	3
Discussion	Theoretical lecture	TCA cycle	Comprehension	2	4
Quiz	Theoretical lecture	Fructose & Galactose metabolism	Comprehension	2	5
Homework	Theoretical lecture	Glycogen metabolism	Comprehension	2	6
Written examination	Theoretical + Practical Lecture	Blood glucose and its regulation	Comprehension	2	7
Discussion	Theoretical lecture	PROTEIN METABOLISM	Comprehension	2	8
Quiz	Theoretical lecture	LIPID METABOLISM	Comprehension	2	9
Homework	Theoretical + Practical Lecture	Lipoprotein metabolism	Comprehension	2	10
Discussion	Theoretical lecture	NUCLEOTIDE METABOLISM	Comprehension	2	11
Quiz	Theoretical lecture	Hemoglobin synthesis and types	Comprehension	2	12
Homework	Theoretical lecture	Electrolytes	Comprehension	2	13
Open discussion	Theoretical + Practical Lecture	Toxicity	Comprehension	2	14

119. Course Assessment

The grade out of 100 is distributed according to the tasks assigned to the student, such as daily preparation, daily, oral, monthly, and written examinations, reports, etc.
 40 marks for annual coursework, divided into 25 marks theoretical + 15 marks practical.
 60 marks for the final examination, divided into 35 marks theoretical + 25 marks practical.

120. Learning and Teaching Resources

Clinical Chemistry: Principles, Techniques, and Correlations, Ninth Edition	Required Textbooks (curricular, if any)
Clinical Chemistry Principles, Techniques, and Correlations	Main References (Sources)
-	Recommended Supporting Books and References (scientific journals, reports, etc.)
Medical Laboratory Science Review	Electronic References and Websites

Course Description Form

121. Course Name	
Human Physiology 1+2	
122. Course Code	
MLB.2.3	
123. Semester / Academic Year	
2025-2026	
124. Date This Description Was Prepared	
22.7.2026	
125. Available Attendance Modes	
Theoretical classroom attendance + laboratories	
126. Total Study Hours / Total Credit Units	
6 hours / 4 credit units	
127. Name of Course Instructor (if more than one, list all names)	
Name: Prof. Dr. Musa Mahmoud Marbat Email: musa.mahmoud@alfarabiuc.edu.iq	
128. Course Objectives	
Course objectives: General objective: introduce the student to the components of body cells and the different components of blood to prepare the student for future professional practice. Specific objective: study the organs of the living organism and the systems they form.	Course Learning Objectives
129. Teaching and Learning Strategies	
It includes all teaching procedures and educational practices aimed at activating the student's role and transforming the student from a passive recipient and	Strategy

listener into a central participant in the learning process, where learning takes place through work, research, and the student's reliance on self-directed acquisition of knowledge.					
130. Course Structure					
Assessment Method	Learning Method	Unit or Topic Name	Required Learning Outcomes	Hours	Week
Discussion	Theoretical lecture	General Introduction to Physiology	Comprehension	2	1
Homework	Theoretical + Practical Lecture	Cell Physiology: General Functions, Cell Membrane Transport	Comprehension	2	2
Quiz	Theoretical lecture	General Idea about Body fluids: Types, Composition, and Functions. Unit of Measurement, Conversion and Conversion factor.	Comprehension	2	3
Discussion	Theoretical lecture	RBCs: Definition, Structure, and Normal Value; Hb Definition, Structure, and Normal Value; Blood Groups.	Comprehension	2	4
Quiz	Theoretical lecture	Erythropoiesis, Homeostasis, Death and Disposal.	Comprehension	2	5
Homework	Theoretical lecture	White Blood Cells: Classification, Specific Function, Normal Value.	Comprehension	2	6
Written examination	Theoretical + Practical Lecture	Platelet: Definition, Function, Normal Value, Thrombopoiesis and Hemostasis.	Comprehension	2	7
Discussion	Theoretical lecture	Heart Physiology: Conductive System, Cardiac Output (Mechanics and Control), and Factor Affecting.	Comprehension	2	8
Quiz	Theoretical lecture	Anatomical positions and terms, planes of body	Comprehension	2	9
Homework	Theoretical + Practical Lecture	Lymphatic Physiology:	Comprehension	2	10
Discussion	Theoretical lecture	Pathology and abnormal conditions:	Comprehension	2	11

		tumors, infections and inflammations			
Quiz	Theoretical lecture	Respiratory Physiology:	Comprehension	2	12
Homework	Theoretical lecture	External Respiration,	Comprehension	2	13
Open discussion	Theoretical + Practical Lecture	Lung Volumes:	Comprehension	2	14
131. Course Assessment					
The grade out of 100 is distributed according to the tasks assigned to the student, such as daily preparation, daily, oral, monthly, and written examinations, reports, etc. 40 marks for annual coursework, divided into 25 marks theoretical + 15 marks practical. 60 marks for the final examination, divided into 35 marks theoretical + 25 marks practical.					
132. Learning and Teaching Resources					
Medical physiology			Required Textbooks (curricular, if any)		
Guyton and Hall Textbook of Medical Physiology			Main References (Sources)		
Fundamentals of Anatomy and Physiology			Recommended Supporting Books and References (scientific journals, reports, etc.)		
-			Electronic References and Websites		

Course Description Form

133. Course Name:	
Histology 1+2	
134. Course Code	
MLB2.4	
135. Semester / Academic Year	
2026-2025	
136. Date This Description Was Prepared	
2025 / 7 / 23	
137. Available Attendance Modes	
Weekly (Theoretical + Practical)	
138. Total Study Hours / Total Units	
.139	
Theoretical (2), Practical (4), Total Units (4)	
140. Name of Course Instructor (if more than one, list all names)	
Name: Prof. Dr. Mohammed Abdulhadi Ghali Email: mohammed.zyarah@ gmail.com.	
141. Course Objectives	
- Introduce the student to the importance of histology as one of the essential foundations for studying medical and life sciences.	Course Learning Objectives

- Enable the student to identify the types of tissues in the body and understand the relationship between their structure and function. - Scientifically prepare the student to understand advanced subjects such as hematology, histopathology, physiology, and immunology.					
142. Teaching and Learning Strategies					
1. Introduce the student to the importance of histology, its basic concepts, and its role in understanding the structure and function of body systems. 2. Discuss the different types of tissues in body organs, with emphasis on their relationships to organ functions. 3. Explain the structural and functional relationships among tissues within a single organ and among organs of the same system, and the integration among different body systems. 4. Encourage critical thinking by asking questions and discussing answers, with emphasis on correcting misconceptions. 5. Integrate practical aspects using the light microscope with the theoretical component.					Strategy
1 - Course Structure					
Assessment Method	Learning Method	Unit or Topic Name	Required Learning Outcomes	Hours	Week
Attendance Discussion	Screen Presentation	Introduction to Histology		2	1
		Epithelial Tissues		4	2+3
		Connective Tissue		4	4+5
		Cartilage		2	6
		Bone and Ossification		4	7+8
		Joints		2	9
		Muscle Tissue		2	10
		Nervous Tissue		2	11
		Nervous System		4	12+13
		Integumentary System		4	14+15
		Digestive Tract		6	16+17+18
		Accessory Glands		2	19
		Respiratory System		4	20+21
		Urinary System		4	22+23
		Circulatory System		4	24+25
		Lymphatic System		4	26+27
		Special Sense Organs		6	28+29+30
2 - Course Assessment					
Attendance: 5; Discussion: 5; Two monthly examinations: 90, converted to 25% + 15 practical + 60 final.					
3 - Learning and Teaching Resources					
			Required Textbooks (curricular, if any)		
Gartner , L.P., & Hiatt, J.L. (2022) “ Color Textbook of Histology” 5 th ed. Elsevier Junqueira’s Basic Histology (2023) Text and Atlas ,17 th edition			Main References (Sources)		

-	Recommended Supporting Books and References (scientific journals, reports, etc.)
Google and chat GPT	Electronic References and Websites

Course Description Form

143. Course Name	
Molecular Biology 1	
144. Course Code	
	MLB.2.5
145. Semester / Academic Year	
	2025-2026
146. Date This Description Was Prepared	
	22.7.2026
147. Available Attendance Modes	
Theoretical classroom attendance + laboratories	
148. Total Study Hours / Total Credit Units	
6 hours / 4 credit units	

149. Name of Course Instructor (if more than one, list all names)					
Name: Asst. Lecturer Ali Furat Abdul-Sattar Email: ali.furat@alfarabiuc.edu.iq					
150. Course Objectives					
Course Objective - General Objective: Introduce the student to the molecular components of body cells to prepare the student for future professional practice. Specific Objective: Focus on analyzing the structure and functions of genetic material.			Course Learning Objectives		
151. Teaching and Learning Strategies					
It includes all teaching procedures and educational practices aimed at activating the student's role and transforming the student from a passive recipient and listener into a central participant in the learning process, where learning takes place through work, research, and the student's reliance on self-directed acquisition of knowledge.					Strategy
152. Course Structure					
Assessment Method	Learning Method	Unit or Topic Name	Required Learning Outcomes	Hours	Week
Discussion	Theoretical lecture	Introduction in Molecular Biology Structure of DNA & RNA DNA as the vehicle of inheritance	Comprehension	2	1
Homework	Theoretical + Practical Lecture	DNA replication and transcription	Comprehension	2	2
Quiz	Theoretical lecture	Gene expression and regulation	Comprehension	2	3
Discussion	Theoretical lecture	Post transcriptional modification	Comprehension	2	4
Quiz	Theoretical lecture	Translation and protein synthesis	Comprehension	2	5
Homework	Theoretical lecture	Post translation modifications. Inhibitors of translation	Comprehension	2	6
Written examination	Theoretical + Practical Lecture	Repair of DNA – types of damages, repair	Comprehension	2	7
Discussion	Theoretical lecture	Gene mutation and chromosomal aberrations. Cause of mutation-chemical and physical agents.	Comprehension	2	8
Quiz	Theoretical lecture	Recombinant- DNA technology, Role of restriction endonucleases, plasmid and cosmid	Comprehension	2	9

		cloning vectors			
Homework	Theoretical + Practical Lecture	Gene and Gene Action ,DNA,RNA Structures.	Comprehension	2	10
Discussion	Theoretical lecture	Disorders of Cell growth & carcinogenesis	Comprehension	2	11
153. Course Assessment					
The grade out of 100 is distributed according to the tasks assigned to the student, such as daily preparation, daily, oral, monthly, and written examinations, reports, etc. 40 marks for annual coursework, divided into 25 marks theoretical + 15 marks practical. 60 marks for the final examination, divided into 35 marks theoretical + 25 marks practical.					
154. Learning and Teaching Resources					
Molecular Biology & Genetics			Required Textbooks (curricular, if any)		
Cell and Molecular Biology			Main References (Sources)		
The Basics of Molecular Biology			Recommended Supporting Books and References (scientific journals, reports, etc.)		
-			Electronic References and Websites		

Course Description Form

155. Course Name
Medical Parasitology and Entomology 1+2
156. Course Code
MI.B2.6
157. Semester / Academic Year
Second Semester

158. Date This Description Was Prepared					
2025-6-30					
159. Available Attendance Modes					
Theoretical classroom attendance					
160. Total Study Hours / Total Credit Units					
6 hours (2 theoretical + 4 practical), Total Units: 4					
161. Name of Course Instructor (if more than one, list all names)					
Name: Assoc. Prof. Dr. Khalil Ibrahim Rashid Email: dr khaleel1956@gmail.com					
162. Course Objectives					
Study and identify types of pathogenic parasites. Types of diseases and their transmission Diagnosis and Treatment			Course Objectives:		
163. Teaching and Learning Strategies					
Theoretical and Practical Lectures Slides and Specimens of Pathogenic Parasites Discussion of Student Research and Reports					Strategy
164. Course Structure					
Assessment Method	Learning Method	Unit or Topic Name	Required Learning Outcomes	Hours	
Daily Quiz with Homework Assignment Quiz with Homework Assignment Quiz with Assignment	Theoretical Instruction and Practical Observations Theoretical Instruction and Practical Observations	Description, Life Cycle, Pathogenic State, Transmission, and Treatment Description, Life Cycle, Pathogenic State, Transmission, and Treatment Description, Life Cycle, Pathogenic State, Transmission, and Treatment Description, Life Cycle, Pathogenic State, Transmission, and Treatment Description, Life Cycle, Pathogenic State, Transmission, and Treatment Description, Life Cycle, Pathogenic State, Transmission, and Treatment Description, Life Cycle, Pathogenic State, Transmission, and Treatment Description, Life Cycle, Pathogenic State, Transmission, and Treatment Description, Life Cycle, Pathogenic State, Transmission, and Treatment Description, Life Cycle, Pathogenic State, Transmission, and Treatment Description, Life Cycle, Pathogenic State, Transmission, and Treatment Description, Life Cycle, Pathogenic State, Transmission, and Treatment Description, Life Cycle, Pathogenic State, Transmission, and Treatment Description, Life Cycle, Pathogenic State, Transmission, and Treatment Description, Life Cycle, Pathogenic State, Transmission, and Treatment Description, Life Cycle, Pathogenic State, Transmission, and Treatment Description, Life Cycle, Pathogenic State, Transmission, and Treatment Description, Life Cycle, Pathogenic State, Transmission, and Treatment Description, Life Cycle, Pathogenic State, Transmission, and Treatment Description, Life Cycle, Pathogenic State, Transmission, and Treatment Description, Life Cycle, Pathogenic State, Transmission, and Treatment Description, Life Cycle, Pathogenic State, Transmission, and Treatment	Pathogenic Helminths	6	1
			Helminths	6	2
			Identification of Cestoda	6	3
			Taenia saginata	6	4
			Taenia solium	6	5
			Diphyllobothrium	6	6
			Echinococcus	6	7
			Identification of	6	8
			Trematoda / Hymenolepis	6	9
			Scchistosoma,	6	10
			Fasciola	6	11
			Identification of	6	11
			Nematoda	6	12
			Ascaris,	6	12
			Ancylostoma,	6	13
			Trichuris trichura	6	13
			Trichenella spiralis,	6	14
			Strongyloides ,	6	14
			Wuchereria bancrofti	6	15
			Entamology	6	15
			Medical insects	6	
			Mosquitoes	6	
			Flies	6	
				6	

Quiz with Assignment Quiz with Assignment Quiz with Assignment Quiz with Assignment Quiz with Assignment Quiz with Assignment Quiz with Assignment Quiz with Assignment Quiz with Assignment	Instruction and Practical Observations Theoretical Instruction and Practical Observations Theoretical Instruction and Practical Observations Theoretical Instruction and Practical Observations Theoretical Instruction and Practical Observations Theoretical Instruction and Practical Observations Theoretical Instruction and Practical Observations Theoretical Instruction and Practical Observations Theoretical Instruction and Practical Observations	Pathogenic State Description, Diagnosis, Host, Life Cycle, and Pathogenic State Description, Diagnosis, and Disease			
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165. Course Assessment

The grade is distributed out of 100 according to tasks assigned to the student, such as daily preparation, daily, oral, monthly, and written examinations, reports, etc. Assessment: 80% due to repeated absence.

166. Learning and Teaching Resources

Medical Biology Textbook	Required Textbooks (curricular, if any)
Medical Parasitology Helminthology	Main References (Sources)
Parasitic Diseases	Recommended Supporting Books and References (scientific journals, reports, etc.)
Parasitology/Helminthology Website	Electronic References and Websites

Course Description Form

167. Course Name					
Histopathology					
168. Course Code					
MLB.3.1					
169. Semester / Academic Year					
2025-2026					
170. Date This Description Was Prepared					
22.7.2026					
171. Available Attendance Modes					
Theoretical classroom attendance + laboratories					
172. Total Study Hours / Total Credit Units					
Total Hours: 5 / Total Units: 7					
173. Name of Course Instructor (if more than one, list all names)					
Name: Asst. Lecturer Ali Sarmad Majeed Email: ali.sarmad@alfarabiuc.edu.iq					
174. Course Objectives					
General Objective: Continuously develop the teaching of histopathology and microbiology scientifically for laboratory-analysis students by using modern teaching methods, building a solid foundation for acquiring future clinical and scientific research skills, and preparing an appropriate scientific basis for understanding subjects taught in later stages. Specific Objective: Teach Histopathology practically using modern educational methods to prepare the student for future clinical and research study.			Course Learning Objectives		
175. Teaching and Learning Strategies					
It includes all teaching procedures and educational practices aimed at activating the student's role and transforming the student from a passive recipient and listener into a central participant in the learning process, where learning takes place through work, research, and the student's reliance on self-directed acquisition of knowledge.					Strategy
176. Course Structure					
Assessment Method	Learning Method	Unit or Topic Name	Required Learning Outcomes	Hours	Week
Discussion	Theoretical lecture	Introduction, cell constituents	Comprehension	2	1

Homework	Theoretical + Practical Lecture	Inflammation, Repair & Degeneration Acute Inflammation	Comprehension	2	2
Quiz	Theoretical lecture	Chronic Inflammation	Comprehension	2	3
Discussion	Theoretical lecture	Repair, healing & Regeneration	Comprehension	2	4
Quiz	Theoretical lecture	Retrograde, changes, Degeneration	Comprehension	2	5
Homework	Theoretical lecture	Atrophy Necrosis, cloudy swelling	Comprehension	2	6
Written examination	Theoretical + Practical Lecture	Gangrene	Comprehension	2	7
Discussion	Theoretical lecture	Criteria used for cytopathological diagnosis of cancer	Comprehension	2	8
Quiz	Theoretical lecture	Changes in the cytoplasm in malignancy Changes in the nucleus in malignancy	Comprehension	2	9
Homework	Theoretical + Practical Lecture	Changes in cell as a general in malignancy	Comprehension	2	10
Discussion	Theoretical lecture	Nomenclature of tumors	Comprehension	2	11
Quiz	Theoretical lecture	Fixation & Fixatives Theoretical aspects of Fixation Most common fixatives in common use	Comprehension	2	12
Homework	Theoretical lecture	Fixation for special substances Specializes Techniques for individual tissue & fixation Arte fact	Comprehension	2	13
Open discussion	Theoretical + Practical Lecture	Tissue processing Fixation ,dehydration ,clearing ,embedding	Comprehension	2	14
Quiz	Theoretical + Practical Lecture	Factors influencing rate of impregnation Agitation ,heat,viscosity,ultrasonics,vacuum	Comprehension	2	15
Homework	Theoretical + Practical Lecture	Microtomy and paraffin section	Comprehension	2	16
Discussion	Theoretical lecture	Staining of tissue sections Hematoxylin ,eosin ,connective tissue ,stains	Comprehension	2	17

177. Course Assessment

The grade out of 100 is distributed according to the tasks assigned to the student, such as daily preparation, daily, oral, monthly, and written examinations, reports, etc.
40 marks for annual coursework, divided into 25 marks theoretical + 15 marks practical.
60 marks for the final examination, divided into 35 marks theoretical + 25 marks practical.

178. Learning and Teaching Resources	
Histopathology	Required Textbooks (curricular, if any)
Practical histopathology	Main References (Sources)
Histology of pathology	Recommended Supporting Books and References (scientific journals, reports, etc.)
-	Electronic References and Websites

Course Description Form

179. Course Name	
Hematology	
180. Course Code	
MLB.3.2	
181. Semester / Academic Year	
2025-2026	
182. Date This Description Was Prepared	
22.7.2026	
183. Available Attendance Modes	
Theoretical classroom attendance + laboratories	
184. Total Study Hours / Total Credit Units	
Total Hours: 4 / Total Units: 3	
185. Name of Course Instructor (if more than one, list all names)	
Name: Prof. Dr. Musa Mahmoud Marbat Email: musa.mahmoud@alfarabiuc.edu.iq	
186. Course Objectives	
General Objective: Give the student a broad and up-to-date understanding of hematology and the normal and abnormal ranges of blood components, in addition to the changes that occur with various diseases. Specific Objective: Establish a good knowledge base in hematology so that the student can keep pace with the medical community in which the graduate will work in the future.	Course Learning Objectives
187. Teaching and Learning Strategies	
It includes all teaching procedures and educational practices aimed at activating the student's role and transforming the student from a passive recipient and listener into a central participant in the learning process, where learning takes place through work, research, and the student's reliance on self-directed	Strategy

acquisition of knowledge.

188. Course Structure

Assessment Method	Learning Method	Unit or Topic Name	Required Learning Outcomes	Hours	Week
Discussion	Theoretical lecture	Introduction of hematology(	Comprehension	2	1
Homework	Theoretical + Practical Lecture	Hemopoiesis, erythropoiesis , morphology of RBCs,	Comprehension	2	2
Quiz	Theoretical lecture	Hemoglobin	Comprehension	2	3
Discussion	Theoretical lecture	Anemia	Comprehension	2	4
Quiz	Theoretical lecture	Iron metabolism , iron deficiency anemia	Comprehension	2	5
Homework	Theoretical lecture	Megaloblastic anemia	Comprehension	2	6
Written examination	Theoretical + Practical Lecture	Folatedeficiency (causes, diagnosis	Comprehension	2	7
Discussion	Theoretical lecture	Hemolytic anemia	Comprehension	2	8
Quiz	Theoretical lecture	Anatomical positions and terms, planes of body	Comprehension	2	9
Homework	Theoretical + Practical Lecture	Thalassemia	Comprehension	2	10
Discussion	Theoretical lecture	Sickle cell anemia	Comprehension	2	11
Quiz	Theoretical lecture	Aplastic anemia	Comprehension	2	12
Homework	Theoretical lecture	Polycythemia	Comprehension	2	13
Open discussion	Theoretical + Practical Lecture	White blood cells	Comprehension	2	14

189. Course Assessment

The grade out of 100 is distributed according to the tasks assigned to the student, such as daily preparation, daily, oral, monthly, and written examinations, reports, etc.
40 marks for annual coursework, divided into 25 marks theoretical + 15 marks practical.
60 marks for the final examination, divided into 35 marks theoretical + 25 marks practical.

190. Learning and Teaching Resources

Clinical hematology atlas	Required Textbooks (curricular, if any)
Hematology case review	Main References (Sources)
Hematology	Recommended Supporting Books and References (scientific journals, reports, etc.)
-	Electronic References and Websites

Course Description Form

1. Course Name	
Virology and Mycology	
2. Course Code	
MLB.3.3	
3. Semester / Academic Year	
2025-2026	
4. Date This Description Was Prepared	
22.7.2026	
5. Available Attendance Modes	
Theoretical classroom attendance + laboratories	
6. Total Study Hours / Total Credit Units	
Total Hours: 4 / Total Units: 3	
7. Name of Course Instructor (if more than one, list all names)	
Name: Asst. Lecturer Ruqaiya Saad Jasim Email: ruqaiya.saad@alfarabiuc.edu.iq	
8. Course Objectives	
Course Objective - General Objective: Provide a clear understanding of living organisms through knowledge of their structure and functions. Specific Objective: Focus on analyzing the structure	Course Learning Objectives

and functions of genetic material.					
9. Teaching and Learning Strategies					
It includes all teaching procedures and educational practices aimed at activating the student's role and transforming the student from a passive recipient and listener into a central participant in the learning process, where learning takes place through work, research, and the student's reliance on self-directed acquisition of knowledge.					Strategy
10. Course Structure					
Assessment Method	Learning Method	Unit or Topic Name	Required Learning Outcomes	Hours	Week
Discussion	Theoretical lecture	General properties of Viruses.	Comprehension	2	1
Homework	Theoretical + Practical Lecture	Structure, Classification and Nomenclature of the Viruses.	Comprehension	2	2
Quiz	Theoretical lecture	Atypical Virus-like agents (Prions, Defective viruses, Pseudovirion and Virioids).	Comprehension	2	3
Discussion	Theoretical lecture	Viral Genetic and Molecular & Viral Replication	Comprehension	2	4
Quiz	Theoretical lecture	Viral Pathogenesis and Transmission	Comprehension	2	5
Homework	Theoretical lecture	Immunity & Laboratory Diagnosis of Viruses.	Comprehension	2	6
Written examination	Theoretical + Practical Lecture	Herpes virus	Comprehension	2	7
Discussion	Theoretical lecture	Hepatitis virus	Comprehension	2	8
Quiz	Theoretical lecture	Human Immune Deficiency virus	Comprehension	2	9
Homework	Theoretical + Practical Lecture	Orthomyxovirus	Comprehension	2	10
Discussion	Theoretical lecture	Paramyxovirus	Comprehension	2	11
Quiz	Theoretical lecture	Rabies and other Neurotropic viruses	Comprehension	2	12
Homework	Theoretical lecture	Poxvirus	Comprehension	2	13
Open discussion	Theoretical + Practical Lecture	Coronavirus	Comprehension	2	14
11. Course Assessment					
The grade out of 100 is distributed according to the tasks assigned to the student, such as daily preparation, daily, oral, monthly, and written examinations, reports, etc. 40 marks for annual coursework, divided into 25 marks theoretical + 15 marks practical. 60 marks for the final examination, divided into 35 marks theoretical + 25 marks practical.					

12. Learning and Teaching Resources	
Lippincott's Illustrated Reviews: . Microbiology,Third Edition	Required Textbooks (curricular, if any)
Lippincott's Illustrated Reviews: Microbiology,Third Edition	Main References (Sources)
Prescott, Harley and Klein -Biology-(Sixth Eddition)	Recommended Supporting Books and References (scientific journals, reports, etc.)
-	Electronic References and Websites

Course Description Form

191. Course Name	
Clinical Chemistry	
192. Course Code	
	MLB.3.4
193. Semester / Academic Year	
	2025-2026
194. Date This Description Was Prepared	
	22.7.2026
195. Available Attendance Modes	
Theoretical classroom attendance + laboratories	
196. Total Study Hours / Total Credit Units	

Total Hours: 4 / Total Units: 6					
197. Name of Course Instructor (if more than one, list all names)					
Name: Asst. Lecturer Mohammed Dhiab Damnan Em mohamed.dhiab@alfarabiuc.edu.iq					
198. Course Objectives					
Course Objective - General Objective: Provide basic concepts and information in clinical chemistry and develop the student's ability and skills in medical laboratory analyses. Specific Objective: Enable the student to perform clinical tests and be familiar with preparing different solutions.			Course Learning Objectives		
199. Teaching and Learning Strategies					
It includes all teaching procedures and educational practices aimed at activating the student's role and transforming the student from a passive recipient and listener into a central participant in the learning process, where learning takes place through work, research, and the student's reliance on self-directed acquisition of knowledge.					Strategy
200. Course Structure					
Assessment Method	Learning Method	Unit or Topic Name	Required Learning Outcomes	Hours	Week
Discussion	Theoretical lecture	MINERAL METABOLISM:	Comprehension	2	1
Homework	Theoretical + Practical Lecture	BLOOD GASES:	Comprehension	2	2
Quiz	Theoretical lecture	Diabetes mellitus	Comprehension	2	3
Discussion	Theoretical lecture	function LIVER	Comprehension	2	4
Quiz	Theoretical lecture	KIDNEY fuction	Comprehension	2	5
Homework	Theoretical lecture	Disorder in lipid metabolism	Comprehension	2	6
Written examination	Theoretical + Practical Lecture	HEART enzymes	Comprehension	2	7
Discussion	Theoretical lecture	Pancreatic function ,exocrine,function,Pathology	Comprehension	2	8
Quiz	Theoretical lecture	Serum protein components diseases	Comprehension	2	9
Homework	Theoretical + Practical Lecture	TUMOR MARKERS	Comprehension	2	10
Discussion	Theoretical lecture	Enzymes isoenzymes patterns to pathology	Comprehension	2	11
Quiz	Theoretical lecture	General aspect of hormone	Comprehension	2	12
Homework	Theoretical	Estimation of serum Na, K, Li,	Comprehension	2	13

	lecture	Ca using:			
Open discussion	Theoretical + Practical Lecture	General aspect of hormone	Comprehension	2	14
201. Course Assessment					
The grade out of 100 is distributed according to the tasks assigned to the student, such as daily preparation, daily, oral, monthly, and written examinations, reports, etc. 40 marks for annual coursework, divided into 25 marks theoretical + 15 marks practical. 60 marks for the final examination, divided into 35 marks theoretical + 25 marks practical.					
202. Learning and Teaching Resources					
Clinical Chemistry: Principles, Techniques, and Correlations, Ninth Edition			Required Textbooks (curricular, if any)		
Clinical Chemistry Principles, Techniques, and Correlations			Main References (Sources)		
Medical Laboratory Science Review			Recommended Supporting Books and References (scientific journals, reports, etc.)		
-			Electronic References and Websites		

Course Description Form

203. Course Name
Human Genetics
204. Course Code
MLB.3.5

205.	Semester / Academic Year				
				2025-2026	
206.	Date This Description Was Prepared				
				22.7.2026	
207.	Available Attendance Modes				
Theoretical classroom attendance + laboratories					
208.	Total Study Hours / Total Credit Units				
Total Hours: 5 / Total Units: 7					
209.	Name of Course Instructor (if more than one, list all names)				
Name: Asst. Lecturer Omar Jamal Ibrahim Email: omar.jamal@alfarabiuc.edu.iq					
210.	Course Objectives				
Course Objective - General Objective: Train students theoretically, scientifically, and practically in the foundations of medical genetics and transfer the latest advanced scientific technologies to them in order to enrich their knowledge of medical genetics, genes, genetic engineering, and their uses in technical medicine. Specific Objective: The course aims to provide an in-depth understanding of the human genome, modes of inheritance, and genetic diseases.			Course Learning Objectives		
211.	Teaching and Learning Strategies				Strategy
It includes all teaching procedures and educational practices aimed at activating the student's role and transforming the student from a passive recipient and listener into a central participant in the learning process, where learning takes place through work, research, and the student's reliance on self-directed acquisition of knowledge.					
212. Course Structure					
Assessment Method	Learning Method	Unit or Topic Name	Required Learning Outcomes	Hours	Week
Discussion	Theoretical lecture	Cell division	Comprehension	2	1
Homework	Theoretical + Practical Lecture	Mitosis	Comprehension	2	2
Quiz	Theoretical lecture	Meiosis	Comprehension	2	3
Discussion	Theoretical lecture	The chromosomes	Comprehension	2	4
Quiz	Theoretical lecture	The chromosomal abnormalities	Comprehension	2	5
Homework	Theoretical lecture	Genetic disease due chromosomal abnormalities	Comprehension	2	6
Written examination	Theoretical + Practical Lecture	Patter of inheritance Mendel's laws	Comprehension	2	7
Discussion	Theoretical lecture	Dominant inheritance	Comprehension	2	8

Quiz	Theoretical lecture	Recessive inheritance	Comprehension	2	9
Homework	Theoretical + Practical Lecture	Another type of inheritance	Comprehension	2	10
Discussion	Theoretical lecture	The genetic basis of sex X-linked inheritance –y linked inheritance	Comprehension	2	11
Quiz	Theoretical lecture	Sex influenced traits	Comprehension	2	12
Homework	Theoretical lecture	Mutations –types of mutation – the genetic basis of mutation	Comprehension	2	13
Open discussion	Theoretical + Practical Lecture	Mutagens carcinogenic in the environment	Comprehension	2	14

213. Course Assessment

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

40 marks for annual coursework, divided into 25 marks theoretical + 15 marks practical.

60 marks for the final examination, divided into 35 marks theoretical + 25 marks practical.

214. Learning and Teaching Resources

Human Molecular Genetics	Required Textbooks (curricular, if any)
Molecular Biology of the Cell	Main References (Sources)
Medical Genetics	Recommended Supporting Books and References (scientific journals, reports, etc.)
-	Electronic References and Websites

Course Description Form

5. Course Name	
Immunology	
6. Course Code	
MLB3.6	
7. Semester / Academic Year	
2024/2025	
8. Date This Description Was Prepared	
2025/7/23	
9. Available Attendance Modes	
Weekly (Theoretical / Practical)	
10. Total Study Hours / Total Credit Units	
Hours: 4 / Units: 4	
1. Name of Course Instructor (if more than one, list all names)	
Name: Lecturer Dr. Iman Shakir Mahmoud Email: Emanshaker944@gmail.com	
2. Course Objectives	
The objective of teaching basic immunology is to: 1. Enable the student to define clinical immunology. 2. Identify the immune mechanism responsible for the pathogenesis of common immune diseases. Distinguish the different diagnostic methods as well as the important differential tests for each disease.	Course Learning Objectives Teaching Clinical Immunology aims to introduce the student to clinical immunology, its uses, modern classifications, and some common diseases.
3. Teaching and Learning Strategies	
Explanation and clarification through lectures. Presentation of scientific material using display devices, data show projectors, and smart boards. Self-learning through preparing reports on laboratory disease cases.	Strategy

Course Structure					
Method Assessment	Method Teaching	Unit / Topic Name	Learning Outcomes Required	Hours	Week
Examinations, daily assignments, and examples	Lectures and laboratories using varied visual aids	Immunology: Definition and classification of branches of immunity; innate and acquired immunity; factors and defenses of innate immunity.	Cognitive, Affective, and Qualifying	4 Hours Theoretical + Practical	1
Examinations, daily assignments, and examples	Lectures and laboratories using varied visual aids	The immune system; lymphoid tissues and cells; their origin, receptors, and stages of maturation; primary and secondary lymphoid organs.	Cognitive, Affective, and Qualifying	4 Hours Theoretical + Practical	3-4
Examinations, daily assignments, and examples	Lectures and laboratories using varied visual aids	Mononuclear Cells Phagocytic Cells Origin, maturation, receptors, types, and cells Antigen-presenting cells (APC), inflammation, and phagocytosis	Cognitive, Affective, and Qualifying	4 Hours Theoretical + Practical	4
Examinations, daily assignments, and examples	Lectures and laboratories using varied visual aids	Antigen: Definition, properties, types of antigens, and presentation of exogenous and endogenous antigens.	Cognitive, Affective, and Qualifying	4 Hours Theoretical + Practical	5
Examinations, daily assignments, and examples	Lectures and laboratories using varied visual aids	Antigenic Determinants: Definition, properties, and antigenic determinants for T cells and B cells and the differences between them.	Cognitive, Affective, and Qualifying	4 Hours Theoretical + Practical	6
Examinations, daily assignments, and examples	Lectures and laboratories using varied visual aids	Antibodies: Definition Antibody molecular structure, classes and properties, antibody synthesis and release Monoclonal Antibodies	Cognitive, Affective, and Qualifying	4 Hours Theoretical + Practical	7
Examinations, daily assignments, and examples	Lectures and laboratories using varied visual aids	Monoclonal Antibodies: Definition, production, and uses	Cognitive, Affective, and Qualifying	4 Hours Theoretical + Practical	8

Examinations, daily assignments, and examples	Lectures and laboratories using varied visual aids	Antibody-Antigen Reactions and Antigen: Their Characteristics Applications	Cognitive, Affective, and Qualifying	4 Hours Theoretical + Practical	10-9
Examinations, daily assignments, and examples	Lectures and laboratories using varied visual aids	Immune Response: Primary and Secondary Their characteristics and differences; regulation of the immune response	Cognitive, Affective, and Qualifying	4 Hours Theoretical + Practical	11
Examinations, daily assignments, and examples	Lectures and laboratories using varied visual aids	Major Histocompatibility Complex MHC: Definition, classes, role in antigen presentation, and relationship to organ rejection.	Cognitive, Affective, and Qualifying	4 Hours Theoretical + Practical	12
Examinations, daily assignments, and examples	Lectures and laboratories using varied visual aids	Complement: Definition, activation, activation pathways, inhibitors of complement activation, and complement-deficiency diseases and deficiency; properdin.	Cognitive, Affective, and Qualifying	4 Hours Theoretical + Practical	13
Examinations, daily assignments, and examples	Lectures and laboratories using varied visual aids	Cytokines	Cognitive, Affective, and Qualifying	4 Hours Theoretical + Practical	14
Examinations, daily assignments, and examples	Lectures and laboratories using varied visual aids	Clinical Immunology Immunity Against Bacteria [Bacterial Immunity] - Immunity Against Toxins	Cognitive, Affective, and Qualifying	4 Hours Theoretical + Practical	16-15
Examinations, daily assignments, and examples	Lectures and laboratories using varied visual aids	Immunity Against Viruses	Cognitive, Affective, and Qualifying	4 Hours Theoretical + Practical	17
Examinations, daily assignments, and examples	Lectures and laboratories using varied visual aids	Immunity Against Parasites	Cognitive, Affective, and Qualifying	4 Hours Theoretical + Practical	18
Examinations, daily assignments, and examples	Lectures and laboratories using varied visual aids	Immunity Against Fungi	Cognitive, Affective, and Qualifying	4 Hours Theoretical + Practical	19

Examinations, daily assignments, and examples	Lectures and Laboratories; Visual Aids	Tumor Immunity Definition of tumors, tumor-associated antigens, their types and relationship to different tumors, and mechanisms of escape from the body's immune response.	Cognitive, Affective, and Qualifying	4 Hours Theoretical + Practical	21	20
Examinations, daily assignments, and examples	Lectures and Laboratories; Visual Aids	Allergy Definition, different types, and diseases resulting from them.	Cognitive, Affective, and Qualifying	4 Hours Theoretical + Practical	23	22
Examinations, daily assignments, and examples	Lectures and Laboratories; Visual Aids	Immune Tolerance	Cognitive, Affective, and Qualifying	4 Hours Theoretical + Practical	25	24
Examinations, daily assignments, and examples	Lectures and Laboratories; Visual Aids	Autoimmunity: Definition, mechanisms leading to autoimmunity, theories, and patterns.	Cognitive, Affective, and Qualifying	4 Hours Theoretical + Practical	27	26
Examinations, daily assignments, and examples	Lectures and Laboratories; Visual Aids	Types of natural and acquired immunodeficiency and their theories.	Cognitive, Affective, and Qualifying	4 Hours Theoretical + Practical		28
Examinations, daily assignments, and examples	Lectures and Laboratories; Visual Aids	Vaccination and Types of Vaccines	Cognitive, Affective, and Qualifying	4 Hours Theoretical + Practical	30	29

5. Course Assessment

Short Examinations (Quizzes) (10)
Semester and Final Examinations for Practical and Theoretical Subjects (40)
Interaction Within the Lecture Hall (15)
Reports (15)
Summer Training (20)

6. Learning and Teaching Resources

Course handouts prepared by the course instructor	Required Textbooks (curricular, if any)
Immunology	Main References (Sources)
[Unclear reference text in source]	Recommended Supporting Books and References (scientific journals, reports, etc.)

www.harcourt-health.com	Electronic References and Websites
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Course Description Form

227. Course Name					
Advanced Laboratory Management					
228. Course Code					
MLB.3.7					
229. Semester / Academic Year					
2025-2026					
230. Date This Description Was Prepared					
22.7.2026					
231. Available Attendance Modes					
Theoretical classroom attendance + laboratories					
232. Total Study Hours / Total Credit Units					
Hours: 1 / Units: 1					
233. Name of Course Instructor (if more than one, list all names)					
Name: Asst. Lecturer Mohammed Nosaif Jasim Email: mohammed.nosaef@alfarabiuc.edu.iq					
234. Course Objectives					
Course Objective - General Objective: This course aims to develop participants' skills in modern foundations of medical laboratory management and introduce them to the importance of laboratory management and methods for planning, organizing, and evaluating laboratories in light of modern applications in medical organizations. Specific Objective: Enable the student to identify pathogenic microorganisms (bacteria, fungi, viruses, and parasites) that infect different body systems.				Course Learning Objectives	
235. Teaching and Learning Strategies					
It includes all teaching procedures and educational practices aimed at activating the student's role and transforming the student from a passive recipient and listener into a central participant in the learning process, where learning takes place through work, research, and the student's reliance on self-directed acquisition of knowledge.					Strategy
236. Course Structure					
Assessment Method	Learning Method	Unit or Topic Name	Required Learning Outcomes	Hours	Week

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

237. Course Assessment

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

40 marks for annual coursework, divided into 25 marks theoretical + 15 marks practical.

60 marks for the final examination, divided into 35 marks theoretical + 25 marks practical.

238. Learning and Teaching Resources

	Required Textbooks (curricular, if any)
Laboratory Management: Principles and Processes	Main References (Sources)
C linical Laboratory Management	Recommended Supporting Books and References (scientific journals, reports, etc.)

http://www.socscidiss.bham.ac.uk/methodologies.html https://www.slideshare.net/collinsbrobbey/sample-study www.asbmb.org/asbmbtoday/asbmbtoday_article.aspx?id=489	Electronic References and Websites
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Course Description Form

239. Course Name	
English Language	
240. Course Code	
MLB.3.9	
241. Semester / Academic Year	
2025-2026	
242. Date This Description Was Prepared	
22.7.2026	
243. Available Attendance Modes	
Theoretical classroom attendance	
244. Total Study Hours / Total Credit Units	
1 hour / 2 credit units	
245. Name of Course Instructor (if more than one, list all names)	
Name: Asst. Lecturer Mohammed Nosaif Jasim Email: mohammed.nosaef@alfarabiuc.edu.iq	
246. Course Objectives	
Course objectives: General objective: 1. Provide a clear overview of linguistics and its history. 2. Help the student recognize common linguistic concepts and the process of acquiring the mother tongue and a foreign language. 3. Help the student understand the relationship between language, society, and other sciences. Specific objective: develop the ability to respond critically to different views presented on topics of language and society.	Course Learning Objectives
247. Teaching and Learning Strategies	
It includes all teaching procedures and educational practices aimed at activating the student's role and transforming the student from a passive recipient and listener into a central participant in the learning process, where learning takes place through work, research, and the student's reliance on self-directed acquisition of knowledge.	Strategy

248. Course Structure					
Assessment Method	Learning Method	Unit or Topic Name	Required Learning Outcomes	Hours	Week
Discussion	Theoretical lecture	History of linguistic and its origins	Comprehension	1	1
Homework	Theoretical lecture	Phonetics and phonology of English language	Comprehension	1	2
Quiz	Theoretical lecture	Syntax of English language	Comprehension	1	3
Discussion	Theoretical lecture	Morphology of English language	Comprehension	1	4
Quiz	Theoretical lecture	semantics	Comprehension	1	5
Homework	Theoretical lecture	pragmatics	Comprehension	1	6
Written examination	Theoretical lecture	Discourse analysis	Comprehension	1	7
Discussion	Theoretical lecture	First language acquisition	Comprehension	1	8
249. Course Assessment					
The grade out of 100 is distributed according to the tasks assigned to the student, such as daily preparation, daily, oral, monthly, and written examinations, reports, etc.					
250. Learning and Teaching Resources					
Oxford English language reference			Required Textbooks (curricular, if any)		
Reference guide to english			Main References (Sources)		
English handbook and study guide			Recommended Supporting Books and References (scientific journals, reports, etc.)		
=			Electronic References and Websites		

Course Description Form

251. Course Name	Clinical Immunology
252. Course Code	MLB4.1
253. Semester / Academic Year	2024/2025
254. Date This Description Was Prepared	2025/7/23
255. Available Attendance Modes	Weekly (Theoretical / Practical)
256. Total Study Hours / Total Credit Units	Hours: 6 / Units: 6
257. Name of Course Instructor (if more than one, list all names)	Name: Lecturer Dr. Iman Shakir Mahmoud Email: Emanshaker944@gmail.com

258. Course Objectives

The objective of teaching basic immunology is to:

1. Enable the student to define clinical immunology.
 2. Identify the immune mechanism responsible for the pathogenesis of common immune diseases.
- Distinguish the different diagnostic methods as well as the important differential tests for each disease.

Course Learning Objectives

Teaching Clinical Immunology aims to introduce the student to clinical immunology, its uses, modern classifications, and some common diseases.

259. Teaching and Learning Strategies

Explanation and clarification through lectures.
Presentation of scientific material using display devices, data show projectors, and smart boards.
Self-learning through preparing reports on laboratory disease cases.

Strategy

260. Course Structure

Method Assessment	Method Teaching	Unit / Topic Name	Learning Outcomes Required	Hours	Week
Examinations, daily assignments, and examples	Lectures and laboratories using varied visual aids	(All diseases include: definition of the disease, clinical symptoms, causative agent, immune mechanism, pathogenesis, and treatment.) Rheumatic Diseases 1. Rheumatoid Arthritis	Cognitive, Affective, and Qualifying	6 Hours Theoretical + Practical	1
Examinations, daily assignments, and examples	Lectures and laboratories using varied visual aids	2. Lupus Erythematosus	Cognitive, Affective, and Qualifying	6 Hours Theoretical + Practical	2

Examinations, daily assignments, and examples	Lectures and laboratories using varied visual aids	3. Rheumatoid Spondylitis	Cognitive, Affective, and Qualifying	6 Hours Theoretical + Practical	3	
Examinations, daily assignments, and examples	Lectures and laboratories using varied visual aids	4. Sjogren Syndrome	Cognitive, Affective, and Qualifying	6 Hours Theoretical + Practical	4	
Examinations, daily assignments, and examples	Lectures and laboratories using varied visual aids	5. Behcet Disease	Cognitive, Affective, and Qualifying	6 Hours Theoretical + Practical	5	
Examinations, daily assignments, and examples	Lectures and laboratories using varied visual aids	6. Psoriatic Arthritis	Cognitive, Affective, and Qualifying	6 Hours Theoretical + Practical	5	

Examinations, daily assignments, and examples	Lectures and laboratories using varied visual aids	Diseases of the Gastrointestinal Tract and Liver: 1. Gluten-Sensitive Enteropathy	Cognitive, Affective, and Qualifying	6 Hours Theoretical + Practical	6
Examinations, daily assignments, and examples	Lectures and laboratories using varied visual aids	2. Pernicious Anemia	Cognitive, Affective, and Qualifying	6 Hours Theoretical + Practical	6
Examinations, daily assignments, and examples	Lectures and laboratories using varied visual aids	3. Diabetes Mellitus	Cognitive, Affective, and Qualifying	6 Hours Theoretical + Practical	6
Examinations, daily assignments, and examples	Lectures and laboratories using varied visual aids	4. Ulcerative Colitis	Cognitive, Affective, and Qualifying	6 Hours Theoretical + Practical	
Examinations, daily assignments, and examples	Lectures and laboratories using varied visual aids	5. Crohn Disease	Cognitive, Affective, and Qualifying	6 Hours Theoretical + Practical	

Examinations, daily assignments, and examples	Lectures and laboratories using varied visual aids	6. Mucosa-Associated Lymphoid Tissue Lymphoma and Helicobacter pylori-associated diseases	Cognitive, Affective, and Qualifying	6 Hours Theoretical + Practical	7
Examinations, daily assignments, and examples	Lectures and laboratories using varied visual aids	7. Autoimmune Hepatitis	Cognitive, Affective, and Qualifying	6 Hours Theoretical + Practical	8
Examinations, daily assignments, and examples	Lectures and laboratories using varied visual aids	8. Primary Biliary Cirrhosis	Cognitive, Affective, and Qualifying	6 Hours Theoretical + Practical	9
Examinations, daily assignments, and examples	Lectures and laboratories using varied visual aids	9. Primary Sclerosing Cholangitis	Cognitive, Affective, and Qualifying	6 Hours Theoretical + Practical	9
Examinations, daily assignments, and examples	Lectures and laboratories using varied visual aids	Kidney Diseases: Immune Mechanisms of Renal Injury: a) Antibody-Mediated Mechanisms:	Cognitive, Affective, and Qualifying	6 Hours Theoretical + Practical	10
Examinations, daily assignments, and examples	Lectures and Laboratories; Visual Aids	1. Circulating Immune Complexes	Cognitive, Affective, and Qualifying	6 Hours Theoretical + Practical	11
		2. b) In-situ immune-complex formation; anti-neutrophil cytoplasmic antibodies (ANCA) and associated diseases:			
Examinations, daily assignments, and examples	Lectures and Laboratories; Visual Aids	T-Lymphocyte-Mediated Renal Injury T Cells Immune Mediators in Acute Inflammation	Cognitive, Affective, and Qualifying	6 Hours Theoretical + Practical	12

Examinations, daily assignments, and examples	Lectures and Laboratories; Visual Aids	Selected Kidney Diseases: Primary Glomerulonephritis: 1. Membranous Glomerulonephritis (Nephrotic Syndrome)	Cognitive, Affective, and Qualifying	6 Hours Theoretical + Practical	13
Examinations, daily assignments, and examples	Lectures and Laboratories; Visual Aids	2. Post-Infectious Glomerulonephritis 3. IgA Nephropathy	Cognitive, Affective, and Qualifying	6 Hours Theoretical + Practical	14
Examinations, daily assignments, and examples	Lectures and Laboratories; Visual Aids	b) Glomerulonephritis Associated with Systemic Diseases:	Cognitive, Affective, and Qualifying	6 Hours Theoretical + Practical	15
		1. Lupus Nephritis 2. Henoch-Schonlein Purpura:			
Examinations, daily assignments, and examples	Lectures and Laboratories; Visual Aids	c) Renal Lesions Associated with Vasculitis: Anti-Glomerular Basement Membrane Disease	Cognitive, Affective, and Qualifying	6 Hours Theoretical + Practical	16
Examinations, daily assignments, and examples	Lectures and Laboratories; Visual Aids	Respiratory System Diseases 1. Drug-Induced Respiratory Diseases Caused by Drugs	Cognitive, Affective, and Qualifying	6 Hours Theoretical + Practical	17
Examinations, daily assignments, and examples	Lectures and Laboratories; Visual Aids	Eosinophilic Pneumonia	Cognitive, Affective, and Qualifying	6 Hours Theoretical + Practical	18
		Environmental and Occupational Lung Diseases			
Examinations, daily assignments, and examples	Lectures and Laboratories; Visual Aids	4. Asthma	Cognitive, Affective, and Qualifying	6 Hours Theoretical + Practical	19
Examinations, daily assignments, and examples	Lectures and Laboratories; Visual Aids	5. Allergic Bronchitis	Cognitive, Affective, and Qualifying	6 Hours Theoretical + Practical	20
Examinations, daily assignments, and examples	Lectures and Laboratories; Visual Aids	Hypersensitivity Disorders Hypersensitivity to drugs (such as penicillin), insect stings, airborne dust, pollen, and others.	Cognitive, Affective, and Qualifying	6 Hours Theoretical + Practical	21-22

Examinations, daily assignments, and examples	Lectures and Laboratories; Visual Aids	Red Blood Cell Lysis and Anemia Conditions Hemolytic Anemia and White Blood Cell Lysis	Cognitive, Affective, and Qualifying	6 Hours Theoretical + Practical	23
Examinations, daily assignments, and examples	Lectures and Laboratories; Visual Aids	Eczema and Contact Dermatitis	Cognitive, Affective, and Qualifying	6 Hours Theoretical + Practical	24
Examinations, daily assignments, and examples	Lectures and Laboratories; Visual Aids	Endocrine Glands (Autoimmune Thyroid Diseases, Immune Infertility)	Cognitive, Affective, and Qualifying	6 Hours Theoretical + Practical	25-26
Examinations, daily assignments, and examples	Lectures and Laboratories; Visual Aids	Tumors and Tumor Markers	Cognitive, Affective, and Qualifying	6 Hours Theoretical + Practical	27-28
Examinations, daily assignments, and examples	Lectures and Laboratories; Visual Aids	Graft-versus-Host Rejection and Transplantation	Cognitive, Affective, and Qualifying	6 Hours Theoretical + Practical	29-30

261. Course Assessment

Short Examinations (Quizzes) (10)
Semester and Final Examinations for Practical and Theoretical Subjects (40)
Interaction Within the Lecture Hall (10)
Reports (10)
Graduation Projects (20)
Summer Training (10)

262. Learning and Teaching Resources

Course handouts prepared by the course instructor	Required Textbooks (curricular, if any)
Clinical Immunology	Main References (Sources)
[Unclear reference text in source]	Recommended Supporting Books and References (scientific journals, reports, etc.)
www.harcourt-health.com	Electronic References and Websites

Course Description Form

263. Course Name					
Diagnostic Bacteriology					
264. Course Code					
MLB4.2					
265. Semester / Academic Year					
2026-2025					
266. Date This Description Was Prepared					
2025/7/24					
267. Available Attendance Modes					
Weekly (Theoretical)					
268. Total Study Hours / Total Credit Units					
Hours: 150 / Units: 8					
269. Name of Course Instructor (if more than one, list all names)					
Name: Lecturer Dr. Sahar Ahmed Abdulhussein Email: sahar.albayatti@gmail.com					
270. Course Objectives					
Enable the student, by the end of the academic year, to diagnose all types of pathogenic bacteria. Enable the student to manage bacteriology laboratories. Diagnose microorganisms using all modern methods specified in World Health Organization manuals.				Course Learning Objectives	
271. Teaching and Learning Strategies					
In this aspect, we rely on the following: 1. Begin by reminding the student of a brief summary of the previous lecture and linking it to current lecture. This is intended to form a clear picture for the student of what will be covered. 2. Explain scientific topics in depth within limits appropriate to the average scientific level students. 3. Leave room for questions, answers, and open discussion. 4. Ensure feedback and review of information before the end of the lecture. 5. Communicate electronically with students to publish recorded and written lectures through university's official website.					Strategy
6. Course Structure					
Assessment Method	Learning Method	Unit or Topic Name	Required Learning Outcomes	Hours	Week
Daily and Monthly Examinations and Brainstorming	Presentation Using the Board and Screen	Diagnosis of Microorganisms Purpose and Philosophy	Cognitive, Affective, and Qualifying	4	1

Daily and Examinations Brainstorming	Monthly and	Presentation Using the Board and Screen	Laboratory Safety General Safety Considerations Biological Hazards and Good Practices Classification of Biological Materials According to Risk Level Precautions and Prevention Methods	Cognitive, Affective, and Qualifying	4 2
		Presentation Using the Board and Screen	Effective Management of a Clinical Microbiology Laboratory Efficient and Economical Laboratory Management Rapid and Cost-Effective Diagnostic Strategies	Cognitive, Affective, and Qualifying	4 3
Daily and Examinations Brainstorming	Monthly and	Presentation Using the Board and Screen	Selection, Collection, and Transport of Specimens for Laboratory Diagnosis, Including: Anaerobic Methods for Specimen Collection Anaerobic Methods for Specimen Transport	Cognitive, Affective, and Qualifying	4 4
Daily and Examinations Brainstorming	Monthly and	Presentation Using the Board and Screen	Visual Methods for Diagnosing Infectious Diseases in Laboratories Direct Examination of Freshly Collected Specimens Preparation of Smears and Stains for Microscopic Examination Differential Stains for Parasites Differential Stains for Blood Smears Special Stains for Tissue Sections Fungal Stains	Cognitive, Affective, and Qualifying	4 5

		Presentation Using the Board and Screen	Culture and Recovery of Viable Pathogens Identify methods of preparation and characteristics of selected commonly used culture media.	Cognitive, Affective, and Qualifying	4	6
Daily and Examinations Brainstorming	Monthly and	Presentation Using the Board and Screen	Methods for Differentiating and Identifying Microorganisms Basic Methods for Identifying Pathogenic Microorganisms Rapid Biochemical Tests Conventional Biochemical Methods	Cognitive, Affective, and Qualifying	4	7
Daily and Examinations Brainstorming	Monthly and	Presentation Using the Board and Screen	Nonconventional Methods for Identifying Pathogens or Their Products ELISA PCR	Cognitive, Affective, and Qualifying	4	8
		Presentation Using the Board and Screen	Antibiotic Susceptibility Tests Disk Diffusion Method Using Antibiotic Disks MIC VITC	Cognitive, Affective, and Qualifying	4	9
Daily and Examinations Brainstorming	Monthly and	Presentation Using the Board and Screen	Laboratory Methods for Identifying the Causative Agents of Infectious Diseases <i>Staphylococci</i> <i>Streptococci</i> <i>Neisseria</i> Other bacteria	Cognitive, Affective, and Qualifying	4	10
Daily and Examinations Brainstorming	Monthly and	Presentation Using the Board and Screen	Diagnosis of Systemic Organ Infections Bloodstream Infections Causes Type of Bacteremia	Cognitive, Affective, and Qualifying	4	11
		Presentation Using the Board and Screen	Meningitis and Central Nervous System Infections General Considerations Laboratory Diagnosis Screening Protocol Bacterial Culture	Cognitive, Affective, and Qualifying	4	12
Daily and Examinations Brainstorming	Monthly and	Presentation Using the Board and Screen	Respiratory Tract Infections General Considerations and Anatomy of the Respiratory System Normal Resident Bacteria	Cognitive, Affective, and Qualifying	4	13

		(Flora) Mechanisms of Infection			
		Urinary Tract Infections General Considerations Anatomy of the Urinary Tract Normal Resident Bacteria of the Urinary Tract Types of Urinary Tract Infections Laboratory Diagnosis	Cognitive, Affective, and Qualifying	4	14
Daily and Examinations Brainstorming	Monthly and	Presentation Using the Board and Screen Reproductive System Anatomy Resident Bacteria Sexually Transmitted Diseases and Others Causative Agents Laboratory Diagnosis	Cognitive, Affective, and Qualifying	4	15
Daily and Examinations Brainstorming	Monthly and	Presentation Using the Board and Screen Gastrointestinal Tract Infections General Considerations Gastroenteritis Laboratory Diagnosis	Cognitive, Affective, and Qualifying	4	16
Daily and Examinations Brainstorming	Monthly and	Presentation Using the Board and Screen Infections of the Eye, Ear, and Sinuses Anatomy Resident Microorganisms Collection, Transport, and Laboratory Culture of Specimens and Identification of Causative Agents Other Diagnostic Methods	Cognitive, Affective, and Qualifying	4	17
Daily and Examinations Brainstorming	Monthly and	Presentation Using the Board and Screen Skin, Soft-Tissue, and Wound Infections General Considerations Laboratory Diagnosis	Cognitive, Affective, and Qualifying	4	18
Board and Screen; Daily and Monthly Examinations and Brainstorming		Presentation Using the Board and Screen Body Fluids, Bones, Bone Marrow, and Solid Tissues Specimen Collection and Transport to the Laboratory Direct Examination Bacterial Culture	Cognitive, Affective, and Qualifying	4	19

Daily and Monthly Examinations and Brainstorming	Presentation Using the Board and Screen	Laboratory Methods for Diagnosing Parasitic Diseases Specimen Collection and Transport Specimen Processing Microscopic Examination	Cognitive, Affective, and Qualifying	4	20
Daily and Monthly Examinations and Brainstorming	Presentation Using the Board and Screen	Laboratory Methods for Diagnosing Fungal Infections Specimen Collection and Transport Laboratory Diagnosis	Cognitive, Affective, and Qualifying	4	21
Board and Screen; Daily and Monthly Examinations and Brainstorming	Presentation Using the Board and Screen	Laboratory Methods for Diagnosing Viral Infections Selection and Collection of Appropriate Specimens Specimen Transport and Storage Specimen Processing Laboratory Diagnosis	Cognitive, Affective, and Qualifying	4	22
7. Course Assessment					
1. Interactive Assessment (Direct Dialogue) (5) 2. Individual Assessment (Homework) (5) 3. Periodic Written Examinations (10) 4. Semester Examinations (30) 5. Final Examinations (50)					
6. Learning and Teaching Resources					
Ministerial Course Package			Required Textbooks (curricular, if any)		
Note of Diagnostic Microbiology			Main References (Sources)		
Journals Published by the American Society Microbiology (ASM)			Recommended Supporting Books and References (scientific journals, reports, etc.)		
American Biological ,American Society for Microbiology Safety Association			Electronic References and Websites		

Course Description Form

272. Course Name
Advanced Clinical Chemistry
273. Course Code

MLB.4.3					
274. Semester / Academic Year					
2025-2026					
275. Date This Description Was Prepared					
22.7.2026					
276. Available Attendance Modes					
Theoretical classroom attendance					
277. Total Study Hours / Total Credit Units					
Total Hours: 6 / Total Units: 8					
278. Name of Course Instructor (if more than one, list all names)					
Name: Asst. Lecturer Mohammed Dhiab Damnan Email: mohamed.dhiab@alfarabiuc.edu.iq					
279. Course Objectives					
Ability to use instruments and laboratory methods in clinical chemical analyses. Introduce the student to the basic principles related to medical laboratory analyses.			Course Learning Objectives		
280. Teaching and Learning Strategies					
Use modern educational methods such as electronic boards and display screens. Use discussion methods, daily examinations, homework, reports, and stimulating questions.				Strategy	
281. Course Structure					
Assessment Method	Learning Method	Unit or Topic Name	Required Learning Outcomes	Hours	Week
Discussion	Theoretical lecture	Chemical Safety. Biological Safety.	Comprehension	2	1
Homework	Theoretical + Practical Lecture	Fire Safety	Comprehension	2	2
Discussion	Theoretical lecture	Collection of specimens (urine, stool, and cerebrospinal fluid) from the body	Comprehension	2	3
Homework	Theoretical lecture	Quality Management: Fundamentals of Quality	Comprehension	2	4
Written examination	Theoretical + Practical Lecture	Fundamentals of Total Quality Management; the total testing process; control of analytical variables.	Comprehension	2	5
Discussion	Theoretical lecture	Biochemistry Calculation Problems and Case Studies	Comprehension	2	6
Quiz	Theoretical lecture	Case Studies in Clinical Chemistry and Its Tests	Comprehension	2	7
282. Course Assessment					
The grade out of 100 is distributed according to the tasks assigned to the student, such as daily preparation, daily, oral, monthly, and written examinations, reports, etc. Forty marks for annual coursework are divided into 25 marks theoretical + 15 marks practical; the 60-mark final examination is divided into 35 marks theoretical + 25 marks practical.					
283. Learning and Teaching Resources					

	Required Textbooks (curricular, if any)
	Main References (Sources)
lehniger principles of biochemistry	Recommended Supporting Books and References (scientific journals, reports, etc.)
Biochemistry for Advanced Biology	Electronic References and Websites

Course Description Form

284. Course Name					
Medical Parasitology					
285. Course Code					
MI.B4.4					
286. Semester / Academic Year					
Annual					
287. Date This Description Was Prepared					
2025-6-30					
288. Available Attendance Modes					
Theoretical classroom attendance					
289. Total Study Hours / Total Credit Units					
6 hours (2 theoretical + 4 practical), Total Units: 4					
290. Name of Course Instructor (if more than one, list all names)					
Name: Assoc. Prof. Dr. Khalil Ibrahim Rashid Email: dr.khaleel1956@gmail.com					
291. Course Objectives					
Study and identify types of pathogenic parasites. Types of diseases and their transmission Diagnosis and Treatment			Course Objectives:		
292. Teaching and Learning Strategies					
Theoretical and Practical Lectures Slides and Specimens of Pathogenic Parasites Discussion of Student Research and Reports					Strategy
293. Course Structure					
Assessment Method	Learning Method	Unit or Topic Name	Required Learning Outcomes	Hours	
Daily Quiz with Homework Assignment Quiz with Homework Assignment Quiz with	Theoretical Instruction and Practical Observations Theoretical Instruction and Practical Observations;	Introduction to Parasitology	Definitions and Terminology	6	1
		Groups of Parasites	Types of Parasites and Worms	6	2
		Entamoeba	Amoebae Group	6	3
		Amoebic Diseases	Entamoeba histolytica	6	4
			Amoeba	6	5
				6	6
				6	7
			E. coli	6	8

Assignment	Theoretical	Flagellate	Flagellates: Giardia	6	9
Quiz with	Instruction	Diseases	Trichomas	6	10
Assignment	and Practical		Leishmania: Types	6	11
Quiz with	Observations	Types of	Leishmania	6	12
Assignment	Theoretical	Leishmania and	donavani	6	13
Quiz with	Instruction	the Diseases	Ciliates Group	6	14
Assignment	and Practical	They Cause	Balantidium coli	6	15
Quiz with	Observations		Sporozoa Group	6	16
Assignment	Theoretical	Ciliate Diseases	Toxoplasma gondi	6	17
Quiz with	Instruction		Palantidium sp.	6	18
Assignment	and Practical	Sporozoan		6	19
Quiz with	Observations	Diseases	Pathogenic Helminths	6	20
Assignment	Theoretical	According to	Helminths	6	21
Quiz with	Instruction	Type	Identification of Cestoda	6	22
Assignment	and Practical		Taenia saginata	6	23
Quiz with	Observations	Description,	Taenia solium	6	24
Assignment	Theoretical	Diagnosis, Life	Diphyllobothrium	6	25
Quiz with	Instruction	Cycle,	Echinococcus	6	26
Assignment	and Practical	Pathogenic State,	Hymenolepis	6	27
Quiz with	Observations	Transmission,	Identification of	6	28
Assignment	Theoretical	and Treatment	Trematoda	6	29
Quiz with	Instruction	Description,	Scchistosoma,	6	30
Assignment	and Practical	Diagnosis, Life	Fasciola		
Quiz with	Observations	Cycle,	Identification of		
Assignment	Theoretical	Pathogenic State,	Nematoda		
Quiz with	Instruction	Transmission,	Ascaris,		
Assignment	and Practical	and Treatment	Ancylostoma,		
Quiz with	Observations	Description,	Trichuris trichura		
Assignment	Theoretical	Diagnosis, Life	Trichenella spiralis,		
Quiz with	Instruction	Cycle,	Strongyloides ,		
Assignment	and Practical	Pathogenic State,	Wuchereria bancrofti		
Quiz with	Observations	Transmission,			
Assignment	Theoretical	and Treatment			
Quiz with	Instruction	Description,			
Assignment	and Practical	Diagnosis, Life			
Quiz with	Observations	Cycle,			
Assignment	Theoretical	Pathogenic State,			
Quiz with	Instruction	Transmission,			
Assignment	and Practical	and Treatment			
Quiz with	Observations	Description,			
Assignment	Theoretical	Diagnosis, Life			
Quiz with	Instruction	Cycle,			
Assignment	and Practical	Pathogenic State,			
Quiz with	Observations	Transmission,			
Assignment	Theoretical	and Treatment			
Quiz with	Instruction	Description,			
Assignment	and Practical	Diagnosis, Life			
Quiz with	Observations	Cycle,			
Assignment	Theoretical	Pathogenic State,			
Quiz with	Instruction	Transmission,			
Assignment	and Practical	and Treatment			
Quiz with	Observations	Description,			

Assignment Quiz with Assignment Quiz with Assignment Quiz with Assignment Quiz with Assignment Quiz with Assignment	Theoretical Instruction and Practical Observations Theoretical Instruction and Practical Observations Theoretical Instruction and Practical Observations	Diagnosis, Life Cycle, Pathogenic State, Transmission, and Treatment			
294. Course Assessment					
The grade is distributed out of 100 according to tasks assigned to the student, such as daily preparation, daily, oral, monthly, and written examinations, reports, etc. Assessment: 80% due to repeated absence.					
295. Learning and Teaching Resources					
Medical Biology Textbook			Required Textbooks (curricular, if any)		
Medical Parasitology			Main References (Sources)		
Parasitic Diseases			Recommended Supporting Books and References (scientific journals, reports, etc.)		
Parasitology Websites			Electronic References and Websites		

Course Description Form

296. Course Name	
Blood Transfusion	
297. Course Code	
MLB4.5	
298. Semester / Academic Year	
2026-2025	
299. Date This Description Was Prepared	
2025/7/24	
300. Available Attendance Modes	
Weekly (Theoretical)	
301. Total Study Hours / Total Credit Units	
Hours: 06 / Units: 8	
302. Name of Course Instructor (if more than one, list all names)	
Name: Lecturer Dr. Sahar Ahmed Abdulhussein Email: sahar.albayatti@gmail.com	
303. Course Objectives	
• Provide a complete overview of the blood bank. • Provide a complete overview of everything that occurs during blood transfusion and donation and diseases acquired through blood transfusion.	Course Learning Objectives
304. Teaching and Learning Strategies	
In this aspect, we rely on the following: 8. Begin by reminding the student of a brief summary of the previous lecture and linking it to current lecture.	Strategy

This is intended to form a clear picture for the student of what will be covered. 9. Explain scientific topics in depth within limits appropriate to average scientific levels. 10. Leave room for questions, answers, and open discussion. 11. Ensure feedback and review of information before the end of the lecture. 12. Communicate electronically with students to publish recorded and written lectures through university's official website.					
13. Course Structure					
Assessment Method	Learning Method	Unit or Topic Name	Required Learning Outcomes	Hours	Week
Daily, Monthly, Semester, and Annual Examinations in Addition to Brainstorming	Presentation Using the Board and Screen	Introduction to the Blood Bank • Blood Bank Management • Blood Bank Units • Conditions for Blood Storage and Transport		4	1
Daily, Monthly, Semester, and Annual Examinations in Addition to Brainstorming	Presentation Using the Board and Screen	Blood Donation and Donor Selection • Conditions Required for Donor		4	2
Daily, Monthly, Semester, and Annual Examinations in Addition to Brainstorming	Presentation Using the Board and Screen	Tests Performed on Blood Acceptance or Rejection		4	3
Daily, Monthly, Semester, and Annual Examinations in Addition to Brainstorming	Presentation Using the Board and Screen	Human Blood Groups		4	4
Daily, Monthly, Semester, and Annual Examinations in Addition to Brainstorming	Presentation Using the Board and Screen	Rh System		4	5
Daily, Monthly, Semester, and Annual Examinations in Addition to Brainstorming	Presentation Using the Board and Screen	Hemolysis in Newborns • Causes • Symptoms and Diagnosis • Treatment		4	6

Daily, Monthly, Semester, and Annual Examinations in Addition to Brainstorming	Presentation Using the Board and Screen	Complications Accompany Blood Transfusion • Immediate and Delayed Problems • Types and Causes • Methods of Prevention		4	7
Daily, Monthly, Semester, and Annual Examinations in Addition to Brainstorming	Presentation Using the Board and Screen	Diseases Transmitted Through Blood Transfusion • AIDS		4	8
Daily, Monthly, Semester, and Annual Examinations in Addition to Brainstorming	Presentation Using the Board and Screen	Types of Anticoagulants Used		4	9
Daily, Monthly, Semester, and Annual Examinations in Addition to Brainstorming	Presentation Using the Board and Screen	Hemolytic Disease		4	10
Daily, Monthly, Semester, and Annual Examinations in Addition to Brainstorming	Presentation Using the Board and Screen	Platelet Disorders		4	11
Daily, Monthly, Semester, and Annual Examinations in Addition to Brainstorming	Presentation Using the Board and Screen	Blood Coagulation Disorders		4	12
Daily, Monthly, Semester, and Annual Examinations in Addition to Brainstorming	Presentation Using the Board and Screen	Coombs Test		4	13

14. Course Assessment

7. Interactive Assessment (Direct Dialogue) (5)
8. Individual Assessment (Homework) (5)
9. Periodic Written Examinations (10)
10. Semester Examinations (30)
11. Final Examinations (50)

12. Learning and Teaching Resources

Proposed Curriculum Only	Required Textbooks (curricular, if any)
• Hematology Basic Principles and Practice. • Standards for Blood Banks & Blood Transfusion Services.	Main References (Sources)
Official Instructions Issued by the Ministry of Health	Recommended Supporting Books and References (scientific journals, reports, etc.)
WHO and Google	Electronic References and Websites

Course Description Form

305. Course Name					
Histopathology					
306. Course Code					
MLB.4.6					
307. Semester / Academic Year					
2025-2026					
308. Date This Description Was Prepared					
22.7.2026					
309. Available Attendance Modes					
Theoretical Classroom Attendance + Practical					
310. Total Study Hours / Total Credit Units					
6 Theoretical/Practical Hours Weekly (7 Units)					
311. Name of Course Instructor (if more than one, list all names)					
Name: Asst. Lecturer Ali Furat Abdul-Sattar Email: ali.furat@alfarabiuc.edu.iq					
312. Course Objectives					
Ability to use laboratory instruments and laboratory methods to perform analyses. Introduce the student to the basic principles related to medical laboratory analyses concerning histopathological diseases.				Course Learning Objectives	
313. Teaching and Learning Strategies					
Scientific Experiments; Smart Board; World Wide Web Self-Learning, Skill Mastery, and Learning Based on Mastering Problems Brainstorming, Combining Different Strategies, and Problem-Solving Method				Strategy	
314. Course Structure					
Assessment Method	Learning Method	Unit or Topic Name	Required Learning Outcomes	Hours	Week
Discussion	Theoretical lecture	Lung (atelectasias, acute lung injury)	Comprehension	2	1
Homework	Theoretical + Practical Lecture	Lung (chronic bronchitis pulmonary embolism)	Comprehension	2	2
Quiz	Theoretical lecture	Lung tumors	Comprehension	2	3
Discussion	Theoretical lecture	Kidney (glomerular disease)	Comprehension	2	4
Quiz	Theoretical lecture	Kidney (nephrotic syndrome, IgA nephropathy (Berger disease))	Comprehension	2	5
Homework	Theoretical lecture	Kidney tumors	Comprehension	2	6
Written examination	Theoretical + Practical Lecture	Cancer of the oral cavity and tongue	Comprehension	2	7

Discussion	Theoretical lecture	Esophagus (lacivation, varices, esophageal carcinoma)	Comprehension	2	8
Quiz	Theoretical lecture	Stomach (gastritis, ulcer, carcinoma)	Comprehension	2	9
Written examination	Theoretical lecture	Large intestines (hemorrhoids, malabsorption syndrome)	Comprehension	2	10
Discussion	Theoretical lecture	Crohn disease	Comprehension	2	11
Quiz	Theoretical + Practical Lecture	Large intestines tumors	Comprehension	2	12
Written examination	Theoretical + Practical Lecture	Liver (hepatic infection, failure, cirrhosis)	Comprehension	2	13
Discussion	Theoretical + Practical Lecture	Hepatic tumors	Comprehension	2	14

315. Course Assessment

The grade out of 100 is distributed according to the tasks assigned to the student, such as daily preparation, daily, oral, monthly, and written examinations, reports, etc. Forty marks for annual coursework are divided into 25 marks theoretical + 15 marks practical; the 60-mark final examination is divided into 35 marks theoretical + 25 marks practical.

316. Learning and Teaching Resources

	Required Textbooks (curricular, if any)
Fundamentals of pathology	Main References (Sources)
Robbins basic pathology	Recommended Supporting Books and References (scientific journals, reports, etc.)
Pathology outlines	Electronic References and Websites

Course Description Form

317. Course Name
English Language
318. Course Code
MLB.4.7
319. Semester / Academic Year
2025-2026
320. Date This Description Was Prepared
22.7.2026
321. Available Attendance Modes

Theoretical classroom attendance					
322. Total Study Hours / Total Credit Units					
Total Hours: 1 / Total Units: 2					
323. Name of Course Instructor (if more than one, list all names)					
Name: Asst. Lecturer Ali Sarmad Majeed Email: ali.sarmad@alfarabiuc.edu.iq					
324. Course Objectives					
Course objectives: General objective: 1. Provide a clear overview of linguistics and its history. 2. Help the student recognize common linguistic concepts and the process of acquiring the mother tongue and a foreign language. 3. Help the student understand the relationship between language, society, and other sciences.				Course Learning Objectives	
325. Teaching and Learning Strategies					
It includes all teaching procedures and educational practices aimed at activating the student's role and transforming the student from a passive recipient and listener into a central participant in the learning process, where learning takes place through work, research, and the student's reliance on self-directed acquisition of knowledge.					Strategy
326. Course Structure					
Assessment Method	Learning Method	Unit or Topic Name	Required Learning Outcomes	Hours	Week
Discussion	Theoretical lecture	History of linguistic and its origins	Comprehension	1	1
Homework	Theoretical lecture	Phonetics and phonology of English language	Comprehension	1	2
Quiz	Theoretical lecture	Syntax of English language	Comprehension	1	3
Discussion	Theoretical lecture	Morphology of English language	Comprehension	1	4
Quiz	Theoretical lecture	semantics	Comprehension	1	5
Homework	Theoretical lecture	pragmatics	Comprehension	1	6
Written examination	Theoretical lecture	Discourse analysis	Comprehension	1	7
Discussion	Theoretical lecture	First language acquisition	Comprehension	1	8
327. Course Assessment					
The grade out of 100 is distributed according to the tasks assigned to the student, such as daily preparation, daily, oral, monthly, and written examinations, reports, etc.					
328. Learning and Teaching Resources					
Reference guide to english			Required Textbooks (curricular, if any)		
Oxford English language reference			Main References (Sources)		
English handbook and study guide			Recommended Supporting Books and		

	References (scientific journals, reports, etc.)
-	Electronic References and Websites

Course Description Form

329. Course Name					
Research Methods					
330. Course Code					
MLB.4.8					
331. Semester / Academic Year					
2025-2026					
332. Date This Description Was Prepared					
22.7.2026					
333. Available Attendance Modes					
Theoretical classroom attendance					
334. Total Study Hours / Total Credit Units					
Total Hours: 1 / Total Units: 1					
335. Name of Course Instructor (if more than one, list all names)					
Name: Asst. Lecturer Ali Sarmad Majeed Email: ali.sarmad@alfarabiuc.edu.iq					
336. Course Objectives					
Course Objective - General Objective: This course addresses the multiple methods and approaches used in scientific research and reviews the importance of studying research methodology in education and psychology, as well as the different research approaches that can be used in measurement and evaluation. Specific Objective: Introduce the student to the nature of the scientific method and the characteristics of scientific thinking.				Course Learning Objectives	
337. Teaching and Learning Strategies					
It includes all teaching procedures and educational practices aimed at activating the student's role and transforming the student from a passive recipient and listener into a central participant in the learning process, where learning takes place through work, research, and the student's reliance on self-directed acquisition of knowledge.					Strategy
338. Course Structure					
Assessment Method	Learning Method	Unit or Topic Name	Required Learning Outcomes	Hours	Week
Discussion	Theoretical lecture	Definition of Scientific Research - Scientific Method - Educational	Comprehension	1	1

		Research - Psychological Research - Educational Research and Its Fields			
Homework	Theoretical lecture	The Research Problem	Comprehension	1	2
Quiz	Theoretical lecture	Research Methodologies	Comprehension	1	3
Discussion	Theoretical lecture	Samples and Sampling Methods	Comprehension	1	4
Quiz	Theoretical lecture	Data Collection Methods	Comprehension	1	5
Homework	Theoretical lecture	Data Analysis and Interpretation	Comprehension	1	6
Written examination	Theoretical lecture	Writing a Research Plan	Comprehension	1	7
Discussion	Theoretical lecture	Publishing Scientific Research	Comprehension	1	8

339. Course Assessment

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

340. Learning and Teaching Resources

-	Required Textbooks (curricular, if any)
Journal of the College of Education for Humanities Practice Hall Handbook for Writers.	Main References (Sources)
-	Recommended Supporting Books and References (scientific journals, reports, etc.)
-	Electronic References and Websites

