Academic Program Description Form

University Name: .....

Faculty/Institute: **Al–ma'mon University College**

Scientific Department: .**Medical Laboratory Techniques Department**

Academic or Professional Program Name: **Bachelor**

Final Certificate Name: ..**B.Sc. in. Medical Laboratory Techniques**

Academic System: (**annually are 3rd and 4th grades whereas 1st and 2nd grades are courses system**)

Description Preparation Date: **13/2/2024**

File Completion Date: **16/4/2024**

Signature:

Head of Department Name:

Professor DR.

Mohammad A. Alfaham

Date: **16/4 /2024**

Signature:

Scientific Associate Name:

Professor DR.Ali Gassan Ahmad

Date: **16/4/2024**

The file is checked by:

Department of Quality Assurance and University Performance

Director of the Quality Assurance and University Performance Department: **DR. Muhannad Emad Abdel Sattar**

Date: **16/4/2024**

Signature:

Approval of the Dean

1. Program Vision

To be for knowledge and extend support for a verity of different cultures for the sake of improving the quality of teaching.

2. Program Mission

The program mission is to prepare the trained technicians to support the Hospitals and health centers as well as to graduate the efficient researchers to carry on the scientific march to our country.

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3. Program Objectives

This program seeks to create technical assets capable of working in medical laboratories, perform routine analyses, regular chemical checkups, check liquids, and turn on and maintain the lab's devices.

4. Program Accreditation

Obtained accreditation from the Ministry of Higher Education and Scientific Research.

5. Other external influences

World Wide Web, graduation projects, summer training, medical analyses laboratories, and field increases.

6. Program Structure

Program Structure	Number of	Credit hours	Percentage	Reviews*

	Courses			
Institution Requirements				
College Requirements				
Department Requirements	47	198	1%	
Summer Training				Satisfied
Other				

* This can include notes whether the course is basic or optional.

7. Program Description

Year/Level	Course Code	Course Name	Credit Hours	
			Theoretical	Practical
First Year(first Semester)	ML1101	GENERAL Chemistry1	2	5
	ML1102	Medical Terminology	2	-
	ML1103	Human Biology1	2	5
	ML1104	Laboratory instruments1	2	4
	ML1105	Medical Ethics	2	–
	ML1106	Computer Applications1	1	2
	ML1107	Human rights and Democracy	1	-
	ML1108	English language	3	-
First Year(Second semester)	ML1201	GENERAL Chemistry2	2	5
	ML1202	Anatomy	2	5
	ML1203	Human biology2	2	5
	ML1204	Laboratory Instruments2	2	4
	ML1205	Computer Applications2	1	2

	ML1206	Arabic Language	2	-
	ML1207	Crimes of extinct Baath Party	1	-
Second Year(First Semester)	ML2101	Medical Bacteriology1	2	4
	ML2102	Biochemistry1	2	4
	ML2103	Human physiology1	2	4
	ML2104	Histology1	2	4
	ML2105	Molecular Biology1	2	4
	ML2106	Medical Parasitology1	2	4
	ML2107	The Crimes of the Baath Regime in Iraq	2	–
Second Year(Second Semester)	ML2201	Medical Bacteriology2	2	4
	ML2202	Biochemistry2	2	4
	ML2203	Human physiology2	2	4
	ML2204	Histology2	2	4
	ML2205	Medical Parasitology& Entomology2	2	4
	ML2206	Descriptive Biostatistics	1	2
Third Year	ML301	Histopathology	2	3
	ML302	Hematology	2	2
	ML303	Virology& Mycology	2	2
	ML304	Clinical Chemistry	2	2
	ML305	Human Genetics	2	3
	ML306	Immunology	2	2

	ML307	Advanced laboratory techniques	2	2
	ML308	Computer Applications	1	2
	ML309	English Language	1	–
Fourth Year	ML401	Clinical Immunology	2	4
	ML402	Diagnostic Microbiology	2	4
	ML403	Advance Clinical biochemistry	2	4
	ML404	Parasitology	2	4
	ML405	Blood transfusion	2	4
	ML406	Pathology	1	5
	ML407	Research project	–	5
	ML408	Lab. Management& Methodology	1	–
	ML409	Professional Ethics	1	–
	ML4010	English Language	1	–

8. Expected learning outcomes of the program	
Knowledge	
The students upon graduation should be able to: 1. Perform lab work that includes all analysis and Laboratory checkups. 2. Prepare and sanitize all agricultural media and check the diet within what includes food contaminants. 3. Turns on and maintains the laboratory's medical technologies used for medical analysis. 4. Works in the Information Desk, which includes receiving samples, Blood Phlebotomy, guide patients, submit results, and maintain containment works.	Learning Outcomes Statement 1
Skills	

After the program ends, the student should be able to: 1. Think on a correct business basis. 2. Work as a team. 3. To provide all needed laboratory analysis and personal checkups in the lab. 4. Use the modern technologies within the lab for analysis.	Learning Outcomes Statement 2
1. Work as a team. 2. Maintain the manners and ethics demanded by the university. 3. Obtain information and accept knowledge. 4. Love the work demanded of them.	Learning Outcomes Statement 3
Ethics	
General skills and knowledge, and other skills related to personal growth. 1. The ability to voice and hear an opinion during the lecture. 2. Debating during the lecture	Learning Outcomes Statement 4

3. Run experiments through giving students homework. 4. Lead the group through tasking a student to collect said homework.	
Learning Outcomes 5	Learning Outcomes Statement 5

9. Teaching and Learning Strategies

Network, smart boards, projects, movies, and smart learning.

10. Evaluation methods

Exams, ministry evaluation, quizzes, mid-terms, final term, and final exam.

11. Faculty

Faculty Members

Academic Rank	Specialization		Special Requirements/Skills (if applicable)		Number of the teaching staff	
	General	Special			Staff	Lecturer
Professor Dr. Mohammed A. Alfaham	Microbiology	Bacteriology			←	
Professor Dr Ali Mohammed Khalaf.	Chemistry	Electrochemistry			←	
Lecturer Dr. Sadik .A Abdallah.	Chemistry	Biochemistry			←	

Lecturer Dr.Hazim A.Ali	Medicine	Bacteriology			←	
Assistant Lecturer Suad T.Ali	Chemistry	Biochemistry			←	
Assistant Lecturer Ahmed A.Sharif	Chemistry	Biochemistry			←	
Assistant Lecturer Aeraf H.Abdulwahab	Biology	Bacteriology			←	
Assistant Lecturer Bassma A.Ali	Veterinary Medicine	Histopathology			←	
Assistant Lecturer Youssi f N.Abbas	Chemistry	Biochemistry			←	
Assistant Lecturer Adnan F.Hassan	Chemistry	Biochemistry			←	
Assistant Lecturer Maab S.Jameel	Veterinary Medicine	Parasitiology			←	
Duha A.Abbas	Physiology	Human Physiology			←	
Lecturer Dr.Salma G.Adnan	Medicine	Histopathology				←
Lecturer DrShimaa M.Ali	Microbiology	Bacteriology				←
Lecturer Dr.Sarmed M.Hashim	Veterinary Medicine	Medicines &Toxins				←
Assistant Lecturer Ali Q.AbdulQader	Business Management					←

Professional Development

Mentoring new faculty members

Observing the success rates, observing the professors from the department, meetings, and making workshops.

Professional development of faculty members

Make seminars, workshops, partnerships with public universities, use modern teaching strategies, and depend on research and modern books.

1. **Acceptance Criterion**
Direct enrollment, practical and based on the instructions from the Ministry of Higher Education and Scientific Research.

2. **The most important sources of information about the program**
Books, research, World Wide Web.

3. Program Development Plan
Make seminars, workshops, partnerships with public universities

Year/Level	Course Name	Basic or optional	Knowledge				Skills				Ethics				General Skills			
			1A	A2	A3	A4	B1	B2	B3	B4	C1	C2	C3	C4	D 1	D 2	D 3	D4
THIRD YEAR	HISTOPATHOLOGY	BASIC	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←
	Advanced laboratory techniques	BASIC	←	←			←	←	←	←	←	←	←	←	←	←	←	←
	Human Genetics	BASIC	←	←	←		←			←	←			←	←		←	←
	Hematology	BASIC	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←
	Virology & Mycology	BASIC	←	←	←	←	←	←	←		←	←	←	←	←	←	←	←
	Clinical Chemistry	BASIC	←	←	←	←	←	←	←		←	←			←	←		
	Immunology	BASIC	←	←	←	←		←	←	←	←	←	←	←	←			
	Computer Application	OPTIONAL	←	←				←	←						←	←		
	English Language	OPTIONAL	←	←				←	←		←				←			

Year/Level	Course Name	Basic or optional	Knowledge				Skills				Ethics				المهارات العامة والتأهيلية المنقولة(المهارات الأخرى المتعلقة بقابلية التوظيف والتطور الشخصي)			
			1A	A2	A3	A4	B1	B2	B3	B4	C1	C2	C3	C4	D	D	D	D4

Year/Level	Course Name	Basic or optional	Knowledge				Skills				Ethics				المهارات العامة والتأهيلية المنقولة(المهارات الأخرى المتعلقة بقابلية التوظيف والتطور الشخصي)			
	Pathology	BASIC	←	←	←	←	←	←	←	←	←	←	←	←				
FOURTH YEAR	Diagnostic Microbiology	BASIC	←	←			←	←	←	←	←	←	←	←	←	←	←	←
	Parasitology	BASIC	←	←	←		←			←	←			←	←		←	←
	Advance Clinical biochemistry	BASIC	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←
	Clinical Immunology	BASIC	←	←	←	←	←	←	←		←	←	←	←	←	←	←	←
	Blood transfusion	BASIC	←	←	←	←	←	←	←		←	←			←	←		
	Research Project	BASIC	←	←	←	←		←	←	←	←	←	←	←	←			
	Lab.Management&Methodology	OPTIONAL	←	←				←	←						←	←		
	English Language	OPTIONAL	←	←				←	←						←	←		
	Professional Ethics	OPTIONAL	←	←				←	←		←				←			

			1A	A2	A3	A4	B1	B2	B3	B4	C1	C2	C3	C4	D 1	D 2	D 3	D4
FIRST YEAR " FIRST SEMESTE R"	GENERAL Chemistry1	BASIC	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←
	Medical Terminology	BASIC	←	←			←	←	←	←	←	←	←	←	←	←	←	←
	Human Biology1	BASIC	←	←	←		←			←	←			←	←		←	←
	Laboratory instruments1	BASIC	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←
	Medical Ethics	OPTIONAL	←	←		←	←		←		←	←		←	←	←	←	←
	Computer Applications1	OPTIONAL	←	←	←		←		←		←	←			←	←		
	Human rights and Democracy	OPTIONAL	←	←	←	←		←	←	←	←	←	←	←	←			
	English language	OPTIONAL	←	←				←	←						←	←		
FIRST YEAR "SECOND	GENERAL Chemistry2	BASIC	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←
	Anatomy	BASIC	←	←			←	←	←	←	←	←	←	←	←	←	←	←

SEMESTER"	Human biology2	BASIC	←	←	←		←			←	←			←	←		←	←
	Laboratory Instruments2	BASIC	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←
	Computer Applications2	OPTIONAL	←	←		←	←		←		←	←		←	←	←	←	←
	Arabic Language	OPTIONAL	←	←	←		←		←		←	←			←	←		
	Crimes of extinct Baath Party	OPTIONAL	←	←	←	←		←	←	←	←	←	←	←	←			
SECOND YEAR "FIRST SEMESTER"	Medical Bacteriology1	BASIC	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←
	Biochemistry1	BASIC	←	←	←	←	←	←	←		←	←	←	←	←	←	←	←
	Human physiology1	BASIC	←	←	←	←	←	←	←		←	←			←	←		
	Histology1	BASIC	←	←	←	←		←	←	←	←	←	←	←	←			
	Molecular Biology1	BASIC	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←

	Medical Parasitology1	**BASIC**	←	←	←	←	←	←	←		←	←	←	←	←	←	←	←
	The Crimes of the Baath Regime in Iraq	**OPTIONAL**	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←
SECOND YEAR " SECOND SEMESTE R"	**Medical Bacteriology2**	**BASIC**	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←
	Biochemistry2	**BASIC**	←	←	←	←	←	←	←		←	←	←	←	←	←	←	←
	Human physiology2	**BASIC**	←	←	←	←	←	←	←		←	←			←	←		
	Histology2	**BASIC**	←	←	←	←		←	←	←	←	←	←	←	←			
	Medical Parasitology and Entomology2	**BASIC**	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←
	Discriptive Biostatistics	**OPTIONAL**	←	←		←		←	←		←	←	←	←				

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

Course Description Form

1. Course Name:	
Computer Principles	
2. Course Code:	
ML1106	
3. Semester / Year:	
Semester 1, year 1 (2023–2024)	
4. Description Preparation Date:	
8/4/2024	
5. Available Attendance Forms:	
In-person (lectures - practical lab)	
6. Number of Credit Hours (Total) / Number of Units (Total)	
60 contact hours (2 theoretical + 2 practical) + 3 exam hours	
7. Course administrator's name (mention all, if more than one name)	
Name: Reem Ziad Shoulek Email: reem.z.shoulek@almamonuc.edu.iq	
8. Course Objectives	
Course Objectives	**- Understanding the importance of computers and their classification.** **– Understanding the physical and programming entity of the computer.** **– Understanding the binary counting system and the difference between it and the decimal counting system and how to convert between them.** **– Understanding computer operating systems, their importance, the relationship between operating systems and the tasks performed by them, and their accessories.**
9. Teaching and Learning Strategies	
Strategy	**A. Cognitive Objectives:** **1. Students will learn about Windows operating systems.** **2. Students will learn how to use email.** **3. Students will learn how to use Microsoft Office applications.** **B. Skill Objectives:** **1. Students will use the computer and identify its internal and external**

	components. **2. Students will learn about desktop components and icons.** **3. Students will learn about the Windows operating system and its important commands.** **C. Affective and Values Objectives:** **- Ability to simulate theoretical material with practical experience.** **- Ability to diagnose problems and propose different alternatives for their solution.** **- Ability to link environmental variables and analyze the relationship between them.** **- Enhancing self-confidence and personality formation.**

10. Course Structure

[The course structure is detailed, covering various topics each week, along with learning and assessment methods.]

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2 lecture 2 lab.	**theoretical Lecturers, practical application o computers**	**the importance of computers and their classification**	Brainstorming strategy	daily homework, discussions ,quizz exams
2	2 lecture 2 lab.	**theoretical Lecturers, practical application o computers**	**the computer materialism components**	Teamwork strategy	daily homework, discussions ,quizz exams
3	2 lecture 2 lab.	**theoretical Lecturers, practical application o computers**	**the computer software components**	Project strategy	daily homework, discussions ,quizz exams
4	2 lecture 2 lab.	**theoretical Lecturers, practical application o computers**	**the binary numbering system**	Discussion strategy	daily homework, discussions ,quizz exams
5	2 lecture 2 lab.	**theoretical Lecturers, practical application o computers**	**the decimal numbering system, and converting between binary and decimal systems**	Teamwork strategy	daily homework, discussions ,quizz exams
6	2 lecture 2 lab.	**theoretical Lecturers, practical application o computers**	**operating systems**	Brainstorming strategy	daily homework, discussions ,quizz exams
7	2 lecture 2 lab.	**theoretical Lecturers, practical application o computers**	**programming languages**	Discussion strategy	daily homework, discussions ,quizz exams
8	2 lecture 2 lab.	**theoretical Lecturers, practical application o computers**	**getting to know the desktop and icons**	Teamwork strategy	daily homework, discussions ,quizz exams

9	2 lecture 2 lab.	**theoretical Lecturers, practical application o computers**	**getting to know the parts of the task bar**	Teamwork strategy	daily homework, discussions ,quizz exams
10	2 lecture 2 lab.	**theoretical Lecturers, practical application o computers**	**getting to know the parts of the motherboard**	Discussion strategy	daily homework, discussions ,quizz exams
11	2 lecture 2 lab.	**theoretical Lecturers, practical application o computers**	**getting to know the ROM and RAM and the difference between them**	Discussion strategy	daily homework, discussions ,quizz exams
12	2 lecture 2 lab.	**theoretical Lecturers, practical application o computers**	**getting to know some of the commands that serve while dealing with the computer**	Brainstorming strategy	daily homework, discussions ,quizz exams
13	2 lecture 2 lab.	**theoretical Lecturers, practical application o computers**	**getting to know about the importance of mouse while dealing with the computer**	Brainstorming strategy	daily homework, discussions ,quizz exams
14	2 lecture 2 lab.	**theoretical Lecturers, practical application o computers**	**introduction into the Word application, its importance and the most important commands**	Teamwork strategy	daily homework, discussions ,quizz exams
15	2 lecture 2 lab.	**theoretical Lecturers, practical application o computers**	**introduction into the Excel application, its importance and the most important commands**	Teamwork strategy	daily homework, discussions ,quizz exams

11. Course Evaluation

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

Midterm Exam (25 theoretical marks + 15 practical marks)

Final Exam (35 theoretical marks + 25 practical marks)

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	1- Introduction to windows 2-Introduction to the operating syste 3- Hardware and software fundamentals 4- Office Desktop Programmers
Main references (sources)	
Recommended books and references	-

(scientific journals, reports…)	
Electronic References, Websites	Tech Boomers website

Course Description Form

13. Course Name: Laboratory Instrumentation1+2	
14. Course Code:ML1104	
15. Semester:2023-2024	
Quarterly	
16. Description Preparation Date:10-2-2024	
17.Available Attendance Forms: weekly In person lectures	
18.Number of Credit Hours (Total) / Number of Units (Total)	
90 Credit Hours for each semester / Units 4	
19. Course administrator's name (mention all, if more than one name)	
Name: Adnan fliyh Hassan Email: Adnanfliyh 98@gmel.com	
20. Course Objectives	
Course Objectives1- to understand the types of Laboratory equipment used in analyses. 2-Accuracy of operation of laboratory equipment 3-How to operate laboratory devices	
Teaching and Learning Strategies: Brainstorming strategy Modeling learning strategy Group work or cooperative learning strategy Discussion strategy Project strategy A strategy for problem solving or problem-based learning Story Learning strategy. Combining different strategies	

1. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Method Learning	Evaluation method
1.	2+4hours Theoretical& Practical	Understanding and assimilation	Ordinary Microscope	Lectures Discussion Daily quiz	Exam and Quiz and reports
2.	2+4hours Theoretical& Practical	Understanding and assimilation	Light Microscope Types-Lens	Discussion	Oral and written Examination
3.	2+4hours Theoretical& Practical	Understanding and assimilation	Parts-Principle -safety	Discussion	Oral and written Examination
4.	2+4hours Theoretical& Practical	Understanding and assimilation	Types Light Microscope	Discussion	Oral and written Examination
5.	2+*4hours Theoretical& Practical	Understanding and assimilation	Partes	Discussion	Oral and written Examination
6.	2+4hours Theoretical& Practical	Understanding and assimilation	Principle	Discussion	Oral and written Examination
7.	2+4hours Theoretical& Practical	Understanding and assimilation	Applications	Discussion	Oral and written Examination
8.	2+4hours Theoretical& Practical	Understanding and assimilation	Electron Microscopes Parts-principle	Discussion	Oral and written Examination
9-10	2+4hours Theoretical& Practical	Understanding and assimilation	Spectrophotometer Parts	Discussion	Oral and written Examination
11	2+4hours Theoretical& Practical	Understanding and assimilation	Principle-Calibration	Discussion	Oral and written Examination
12	2+4hours Theoretical& Practical	Understanding and assimilation	Cenrtrifug Parts-types-principle	Discussion	Oral and written Examination
13	2+4hours Theoretical& Practical	Understanding and assimilation	Aytoclave -principle	Discussion	Oral and written Examination
14	2+4hours Theoretical& Practical	Understanding and assimilation	Microbiological Cabinet Incubator	**Cooperative Learning**	Oral and written Examination
15	2+4hours Theoretical& Practical	Understanding and assimilation	Balance-types-parts	Brainstorming strategy	Oral and written Examination
Second Semester					

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

1-2	2+4hours Theoretical& Practical	Understanding and assimilation	Microtome Types of microtome -	Project strategy	Oral and written Examination
3	2+4hours Theoretical& Practical	Understanding and assimilation	Water bath Principle-Parts-Types-Applications	Discussion strategy	Oral and written Examination
4	64hours Theoretical& Practical	Understanding and assimilation	Hot Air Oven	Brainstorming strategy	Oral and written Examination
5	2+4hours Theoretical& Practical	Understanding and assimilation	PCR machine	Teamwork strategy.	Oral and written Examination
6	2+4hours Theoretical& Practical	Understanding and assimilation	Gel Electrophoresis	Project strategy	Oral and written Examination
7-9	2+4hours Theoretical& Practical	Understanding and assimilation	Automated analyzers	Discussion strategy	Oral and written Examination
10	6+4hours Theoretical& Practical	Understanding and assimilation	Complete Blood Count(CBC)machine(Blood Count Analyzer)	Brainstorming strategy	Oral and written Examination
11-12	2+4hours Theoretical& Practical	Understanding and assimilation	Chromatography apparatus(chromatograph) - Paper chromatography Thin layer chromatography- Column chromatography	Teamwork strategy.	Oral and written Examination
13	2+4hours Theoretical& Practical	Understanding and assimilation	Types &Uses of the filters	Project strategy	Oral and written Examination
14	2+4hours Theoretical& Practical	Understanding and assimilation	Laboratory test tubes	Discussion strategy	Oral and written Examination
15	2+4hours Theoretical& Practical	Understanding and assimilation	Types– Applications	Brainstorming strategy	Oral and written Examination

Course Evaluation: The score out of 100 is distributed according to the tasks assigned

to the student such as daily preparation, daily oral, monthly, or written exams, reports.... etc Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc(40 annual endeavor grades, divided into 25 theoretical grades + 15 practical grades) (60 final exam grades, divided into 35 theoretical grades + 25 practical grades).

Learning and Teaching Resources	
Required textbooks (curricular books, if any)	
Main references (sources)	
Recommended books and references (scientific journals, reports…)	**1-Universtiy academic subject vocabulary** **2-Tikrit university website** **3-College of technology website** **4-Scientific journal and websites**
Electronic References, Websites	**https://www.uboby ION.EDU-IQ** **https://pharmacy-uobasrah end.iq** **Bio falak**

Course Description Form

21. Course Name:
Human Biology
22. Course Code:ML1103
23. Semester / Year 2023 − 2024
Quarterly study
24. Description Preparation Date:10-2-2024
27 / 3 / 2024
25.Available Attendance Forms: weekly In person lectures
Study attendance
26.Number of Credit Hours (Total) / Number of Units (Total)
30 hours practical -- 75 hours theoretical _ Units 4

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

Name: Ali Hussein Hasan
Email: ali.h.hasan@almamounc.edu.iq

28. Course Objectives

Course Objectives	**1-To explain many forms of life** **2- To show the development of cells a all aspects of life** **3- To describe the environment and function of inheritance**

Teaching and Learning Strategies: Brainstorming strategy
Modeling learning strategy
Group work or cooperative learning strategy
Discussion strategy
Project strategy
A strategy for problem solving or problem-based learning
Story Learning strategy.
Combining different strategies

2. Course Structure

1	**2 theory** **5 practical**	Understanding and assimilation	**Photosynthesis Light energy , visible light , process of photosynthesis**	**Learning method**	**Evaluation method**
2	**2 theory** **5 practical**	Understanding and assimilation	Nutrition and Digestion	Lectures Discussion	Exam and Quiz and report
3	**2 theory** **5 practical**	Understanding and assimilation	Respiration and gas exchange	Lectures Discussion	Exam and Quiz and reports
4	**2 theory** **5 practical**	Understanding and assimilation	Circulatory System	Lectures Discussion	Oral and written Examination

5	**First exam**				
6	**2 theory** **5 practical**	Understanding and assimilation	Excretory system	Lectures Discussion	Oral and written Examination
7	**2 theory** **5 practical**	Understanding and assimilation	Neurons	Lectures Discussion	Exam and Quiz and report
8	**2 theory** **5 practical**	Understanding and assimilation	Muscular	Lectures Discussion	Exam and Quiz and report
9	**2 theory** **5 practical**	Understanding and assimilation	Animal Hormone	Lectures Discussion	Exam and Quiz and report
10	**2 theory** **5 practical**	Understanding and assimilation	Meiosis	Lectures Discussion	Exam and Quiz and report
11	**2 theory** **5 practical**	Understanding and assimilation	mitosis	Lectures Discussion	Exam and Quiz and report
12	**Second exam**				
13	**2 theory** **5 practical**	Understanding and assimilation	Life molecules DNA	Lectures Discussion	Exam and Quiz and report
14	**2 theory** **5 practical**	Understanding and assimilation	**Life molecule RNA**	Lectures Discussion	Exam and Quiz and repor
15	**2 theory** **5 practical**		**Study Or Systems(Digestive, Circulatory ,Respiratory, Urinar Muscularly, Nervo and Functions**	Lectures Discussion	Exam and Quiz and repor

Course Evaluation: The score out of 100 is distributed according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports.... etc Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc (40 annual endeavor grades, divided into 25 theoretical grades + 15 practical grades) (60 final exam grades, divided into 35 theoretical grades + 25 practical grades).

1.
2. Learning and Teaching Resources

Required textbooks (curricular books, if any)	
Main references (sources)	Human Biology , biology
Recommended books and references (scientific journals, reports…)	Journal , report ,
Electronic References, Websites	Google , you tub ,

Course Description Form

29. Course Name:	
Anatomy	
30. Course Code: ML1202	
31. Semester / Year:	
Second Quarter / 2023−2024	
32. Description Preparation Date:	
24/12/2024	
33.Available Attendance Forms:	
Weekly attendance	
34.Number of Credit Hours (Total) / Number of Units (Total)	
105 Credit Hours for each semester / Units 4	
35. Course administrator's name (mention all, if more than one name)	
Name: dr sajad ghalib Ibrahim Email: sajad.g.ibrahim@almamonuc.ed	
36. Course Objectives	
Course Objective	To have an adequate information about anatomy since it is the cornerstone **In comprehending the clinical sciences, To study the essential bases in Anatomy and to know the Structure and morphology of human body as well as the structures Of the organs and systems.**
37. Teaching and Learning Strategies	
Strategy	Students learn about anatomy through this course and textbook.

	addition, to discussions, activities, and on exams, students will be asked apply knowledge learned in critical-thinking questions.

38. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1.	**2 theory 5 practical**	Comprehension Assimilation	General Anatomy: Introduction to anatomy and human body, level oforganization,anatomicalposition,bodyregionsandcavities,body planesandsections,directionalterms.	discussions	Exams reports
2.	**2 theory 5 practical**	Comprehension	Tissues and membranes	**Lecture**	Exams reports
3.	**2 theory 5 practical**	Assimilation	Body regions Upper limb ,lower limb ,thorax	**Lecture**	Exams reports
4.	**First exam**	Comprehension	Abdomen, pelvis,head and neck	**Lecture**	Exams reports
5.	**2 theory 5 practical**	Assimilation	Body systems :Muscle oskeletalsystem:Bones,jointsandmuscles	**Lecture**	Exams reports
6.	**2 theory 5 practical**	Comprehension	Digestive system: Digestive tract, Accessories and glands	**Skills Mastery**	Exams reports
7.	**2 theory 5 practical**	Assimilation	Cardiovascular system: heart ,blood vessels.	**Lecture**	Exams reports
8.	**2 theory 5 practical**	Comprehension	Lymphatic system.	**Combining diffe methods**	Exams reports
9.	**2 theory 5 practical**	Assimilation	Respiratory system	**Lecture**	Exams reports
10.	**2 theory 5 practical**	Comprehension	Nervous system :central nervous system ,peripheral nervous System	**Lecture**	Exams reports
11.	**Second exam**	Assimilation	Endocrine system .	**Lecture**	Exams reports
12.	**2 theory 5 practical**	Comprehension	Urinary system	**Lecture**	Exams reports
13.	**2 t**heory **5 practical**	Assimilation	Reproductive system	**Lecture**	Exams reports
14.	**2 theory**	Comprehension	Gynecology,pregnancy,childbirth,Embryology,Childhood, Growth and development	**Lecture**	Exams reports
15.	**5 practical**	Assimilation	Review	**Problem solving**	Exams reports

1. Course Evaluation	
Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc	
2. Learning and Teaching Resources	
Required textbo (curricular books, any)	**DrakeR.L.(eds)(2019).*Gray'sAnatomyforStudents*.London:Elsevier.** **Netter,F.(2019).AtlasofHumanAnatomy(7thed.).Philadelphia,PA : Saunders.**
Main referen (sources)	
Recommended books and references (scientific journals, reports…)	
Electronic Referenc Websites	**http://teachmeanatomy.info**

Course Description Form

1. Course Name:
Medical Terminology
2. Course Code: ML1102
3. Semester / Year:
First Quarter / 2023−2024
4. Description Preparation Date:
24/12/2024
5. Available Attendance Forms:
Weekly theoritcal-Practical attendance
6. Number of Credit Hours (Total) / Number of Units (Total)
30 hours (2 Hours practical)Weekly /2Units.
7. Course administrator's name (mention all, if more than one name)
Name: dr sajad ghalib Ibrahim Email: sajad.g.ibrahim@almamonuc.ed
8. Course Objectives: To develop the students' ability to speak with the medical staff and patients in a clear and understood language.

Course Objective	Introduction–structural analysis- Basic rules of medical word building. Major suffixes- suffixes denoting a state or condition. Major suffixes-suffixes denoting medic actions. Prefixes- prefixes of No.& measures. Prefixes- prefixes of color. Prefixes- prefixes of direction & position. Prefixes- prefixes of size, time & place. Prefixes-prefixes of negation. Prefixes- prefixes of type. Roots.

9. Teaching and Learning Strategies	
Strategy	Students learn about medical terminology through this course a textbook. In addition, to discussions, activities, and on exams, studer will be asked to apply knowledge learned in critical-thinking question

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1-15		The student should be able to distinguish the roots, suffixes, prefixes and word endings of medical terms	**Introduction–structural analysis- Basic rules of medical word building. Major suffixes- suffixes denoting a state or condition. Major suffixes-suffixes denoting mec actions. Prefixes- prefixes of No.& measures. Prefixes- prefixes of color. Prefixes- prefixes of direction & position. Prefixes- prefixes of size, time & place. Prefixes prefixes of negation. Prefixes- prefixes of type. Roots. Word terminals. Conditions. The body as a wh Skin & its appendages. Gastrointestinal Tract. Respiratory system. Cardiovascular System. Blood & lymphatic sys Musculoskeletal system Urogenital system. .system Endocrine .system Nervous .senses Special .Oncology Speciality related ter**	Lectures Theoretic Slides show	Seminars Reports Assignments Quizzes (weekly, monthly)

11. Course Evaluation

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

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	1. Nath, Judi Lindsley; Lindsley, Kelsey P. A Short Course in Mec Terminology. Wolters Kluwer Health, 2018.
Main references (sources)	
Recommended books and references (scientific journals, reports…)	**Collins, C. Edward: A Short Course in Medical TerminologyLippincott Williams & Wilkins, Nov 5, 2013 -** Medical **- 468**
Electronic References, Websites	

Course Description Form

39. Course Name: General Chemistry1+2
40. Course Code:ML1101
41. Semester / Year:2023-2024
Quarterly
42. Description Preparation Date:10-2-2024
43.Available Attendance Forms: weekly In person lectures
44.Number of Credit Hours (Total) / Number of Units (Total)
Credit Hours: (2Theortical+5Practical)105 = Units 4
45. Course administrator's name (mention all, if more than one name)
Name: alimohamadkhalaf Email:ali.alriaby2020@gmail.com ali.m.khalaf@almamonuc.edu.iq
46. Course Objectives

Course Objectives 1-understanding the subjects of chemistry 2-ability to solve different problems 3-ability to do the experiments in the lab.	

Teaching and Learning Strategies: Brainstorming strategy

Modeling learning strategy
Group work or cooperative learning strategy
Discussion strategy
Project strategy
A strategy for problem solving or problem-based learning
Story Learning strategy.
Combining different strategies

3. Course Structure

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

9.	2+5hours Theoretical Practical	Understanding and assimilation	Introduction to Analytical chemistry. Introduction to experiments	Lectures Discussion Daily and Monthly quiz	Exam and Quiz and reports
10.	2+5hours Theoretical Practical	Understanding and assimilation	Solutions +concentrations Learning and using the balances and burette	Lectures and using data show	Oral and written Examination
11.	2+5hours Theoretical Practical	Understanding and assimilation	Chemical reactions – types –problems Titration strong acid with strong base.	Teamwork strategy.	Oral and written Examination
12.	2+5hours Theoretical Practical	Understanding and assimilation	Chemical reactions+problems Titration acid with carbonat.	Lectures data show Discussion.	Oral and written Examination
13.	2+5hours Theoretical Practical	Understanding and assimilation	Equilibrium in chemical reactions Titration strong acid with weak base.	Discussion strategy Lecturesdatashow	Oral and written Examination
14.		Understanding and assimilation	Equilibrium c Constant in chemical reactions+problems Determination of acetic acid in veniger	Lectures+dicussion Of problems	Oral and written Examination
15.	Theoretical Practical	Understanding and assimilation	Factors affect Equilibrium in chemical reactions Discussion of raports experiments	.Lectures+datashow And discussion the problems	Oral+written Examination

16.	2+5hours	Understanding and assimilation	Acidity of solution Det.of hydrogen ion Det. PH OF Solution	Ledtures+data show and discussion	Oral+written Examination
17.	2+5hours Theoretical Practical	Understanding and assimilation	Buffers and PH of Solution Det. PH of solu.by PH meter	Discussion strategy Lectures	Oral+wrtten Examination
18.	2+5hours Theoretical Practical	Understanding and assimilation	Organic Chem. Introduction +alkanes Oxidation Reduction Titration	Lectures+Discussion	Oral+written Examination
19.	2+5 hours Theoretical+practical	Understanding and assimilation	Alkenes+alkynes Separation and detection of ionic Positive metals	Lectures.	Oral+written Examination
20.	2+5 hours Theoretical+practical	Understanding and assimilation	Ketons+aldehyds+alcohols Identification of alcohols And aldehydes+ketones	Lectures data show	Oral and written examination
21.	2+5 hours Theoretical+practical	Understanding and assimilation	Carboxylic acids Identification of carboxylic acids	Lectures	Oral+written examination2*2 hours
22.	2+5 hours Theoretical+practical	Understanding and assimilation	Aromatic +carboxylic acids Identification of carboxylic acids and phenols	Lectures	Oral+written examination
23.	2+5 hours Theoretical+practical	Understanding and assimilation	Revision on previous subjects	DISCUSSION.	Oral+written examination
24.	2+5 hours Theoretical+practical	Understanding and assimilation	Carbohydrates introduction definition+type carbohydrates	Lectures +datashow	Oral +wr examination

			Molish test carbohydrates		
25.	2+5 hours Theoretical+practical	Understanding and assimilation	Biological functions And classification with structure of carbohydrates Benedict test	Lectures	Oral+writteb examination
26.	2+5 hours Theoretical+practical	Understanding and assimilation	Lipids Difinition+biological function Determination of vit. Cin orange	Lectures	Oral+written examination
27.	2+5 hours Theoretical+practical	Understanding and assimilation	Fatty acids+lipids Classification + function Det. Of vit.c in orange	Teamwork strategy.	Oral+written examination
28.	2+5 hours Theoretical practical	Understanding and assimilation	Amino acids definit and biological funct Scheme for identification of unkowncarbohydrat sol.	Lectures	Oral+written examination
29.	2+5 hours Theoretical practical	Understanding And assimilation	Amino acids Classification and function Identification of carbohydrates sol.	Discussion strategy + Lectures	Oral+written examination
30.	2+5 hours		Review and examination	Discussion	
31.	2+5 hours Theoretical+practical	Understanding And assimilation	Nucleotides and Nucleic acids definition and classification of nitrogenous bases Biuret test cysteine test	Lectures	Oral+written examination
32.	2+5	Understanding And assimilation	Nucleic acids Biological function of nucleotides structures and differences between DNA andRNA	lectures	Oral+written examination
33.	2+5hours	Understanding	Enzymes General properties	Lectures	Oral and wr examination

	Theoretical+practical	And assimilation	Classification and biological functions Molish test and protein test		
34.	2+5hours Theoretical+practical	Understanding And assimilation	Vitamins definition and classification Precipitation of proteins	Lectures	Oral +wr examination
35.	2+5 hours Theoretical +practical	Understanding And assimilation	Vitamins Biological functions Paper chromatography	Lectures	Oral+written examination
36.	2+5hours Theoretical +practical	Understanding And assimilation	Solar energy technology Solar radiation Advantages of solar energy Disadvantages and photo electrochemical of Hydrogen production Paper and thinlayer chromatography	Lectures And discussion strategy	Oral+written examination
37.	2+5 hours Theoretical+practical	Understanding And assimilation	Nanotechnology Hydrogen production Energy transport Nano semiconductor materials for photocatalytic water splitting Paper chromatography	Discussion strategy + Lectures	Oral+written examination
38.			Revision		

Course Evaluation: The score out of 100 is distributed according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports.... etc Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc(40 annual endeavor

grades, divided into 25 theoretical grades + 15 practical grades) (60 final exam grades, divided into 35 theoretical grades + 25 practical grades). 3.
4. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Organic chemistry Jonathan Clayden,NickGreeves,S Stuart warren 2022 2-Short Course in Biochemistry Albert L .Lehninger 3-Understanding Chemistry George Pimentel ,Richard Sprat 1971 4-Solar Energy Renewal Eneergy and Environment , Rob Foster. 5-Analytical chemistry
Main references (sources)	
Recommended books and references (scientific journals, reports…)	يرجى الاجابة عن هذه الفقرات
Electronic References, Websites	https.//books.google.iq/books

Course Description Form

47. Course Name:
Descriptive Biostatistics
48. Course Code:ML2206
49. Semester / Year:
Second Quarter / 2023−2024
50. Description Preparation Date:
10/2/2024
51.Available Attendance Forms:
Weakly Theoretical /Practical Attendance

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

45 hrs. Theoretical /Practical/ 2 units

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

Name :Assistant Lecturer Ali Q. AbdulQadir

Email:: qusay_ali@yahoo.com

54. Course Objectives :To explain the statistical methods to the student to be able to process the data in his/her researches after graduation.

Course Objectives	.

55. Teaching and Learning Strategies

Strategy	Using modern methods in education (electronic whiteboard and display screens) Using discussion methods, daily exams, homework, and reports, as well Motivational questions.

56. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1.	1+3 Theoretical practical	Comprehension &Assimilation	**Definition of Biostatistics, types of data, types of Variables and Sources of data..**	electronic whiteboard ar display screens	Oral & written Exams
2.	1+3 Theoretical practical	Comprehensio &Assimilation	**Methods of data collection and sampling types**	electronic whiteboard display screens	Oral & written Exams
3.	1+3 Theoretica practical	Comprehension &Assimilation	**Numerical methods of presentation of data.**	electronic whiteboard ar display screens	
4.	1+3 Theoretical practical	Comprehension &Assimilation	**Graphical methods of presentation of data**	electronic whiteboard and display screens	Oral & written Exams
5.	1+3 Theoretical practical	Comprehension &Assimilation	**Mathematical methods of presentation of data: (Measures of Central Tendency (Arithmetic Mea Median, Mode). (2): Measures of Non-Central location (Percentiles, Quartiles.(**	electronic whiteboard and display screens	Oral & written Exams
6.	1+3 Theoretical practical	Comprehension &Assimilation	**Measures of Dispersion (Range, Variance, Stan Deviation) of ungroup and group data. Coefficie Variation, Standard Errs**	electronic whiteboard and display screens	Oral & written Exams
9-10	1+3 Theoretical practical	Comprehension &Assimilation	**Measures of Dispersion (Range, Variance, Stan Deviation) of ungroup and group data. Coefficie Variation, Standard Errs**	electronic whiteboard and display screens	Oral & written Exams
11	1+3 Theoretical practical	Comprehension &Assimilation	**Percentiles, Quartiles and Interquartile Rang**	electronic whiteboard and display screens	Oral & written Exams

12	1+3 Theoretical practical	Comprehension &Assimilation	**Percentiles, Quartiles and Interquartile Rang**	electronic whiteboard and display screens	Ora l& written Exams
13	1+3 Theoretical practical	Comprehension &Assimilation	**Moments, Skewness measurement and Kurtosis Measurement.**	electronic whiteboard and display screens	Ora l& written Exams
14	1+3 Theoretical practical	Comprehension &Assimilation	**Moments, Skewness measurement and Kurtosis Measurement.**	electronic whiteboard and display screens	Ora l& written Exams
15	1+3 Theoretical practical	Comprehension &Assimilation	**Elementary Probability Theory**	electronic whiteboard and display screens	Ora l& written Exams

1. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc
Distribution of the grade out of 100 according to the tasks assigned to the student, such as daily preparation, daily, oral, monthly, written exams, reports, etc.
(40 annual endeavor grades, divided into 25 theoretical grades + 15 practical grades) (60 final exam grades, divided into 35 theoretical grades + 25 practical grades).

2. Learning and Teaching Resources

Required textbooks (curricular books, if any)	**Aviva P. and Caroline S.: Statistics in medicine 3th Edition ;201**
Main references (sources)	
Recommended books and references (scientific journals, reports…)	**-Wayne W. Daniel: Biostatistics "Basic Concepts and Methodol for the Health Sciences" 9th Edition ;2010**
Electronic References, Websites	

Course Description Form

57. Course Name: Histology
58. Course Code:ML2104
59. Semester / Year:2023-2024
Quarterly
60. Description Preparation Date:2-4-2024
61.Available Attendance Forms: weekly In person lectures
62.Number of Credit Hours (Total) / Number of Units (Total)
Credit Hours(2+4)90= /Units 4
63. Course administrator's name (mention all, if more than one name)
Name:. lecturer DR. Tarik.T.Fejer Email: tarik.t.fejer@almamonuc.edu.iq
64. Course Objectives

Course Objective	**Histology is the essential tool for medical students specialization, this course aims to introduce the student t types of cells and classify them according to shape of these cells and the problems of these tissues and esse functions that forms different tissues and organs of the human body by examine thin slices of a tissue unde microscope.**

Teaching and Learning Strategies: Brainstorming strategy
Modeling learning strategy
Group work or cooperative learning strategy
Discussion strategy
Project strategy
A strategy for problem solving or problem-based learning
Story Learning strategy.
Combining different strategies

4. Course Structure

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

		Outcomes			
39.	2+4hours Theoretical Practical	Understanding and assimilation	histology, Classification of Tissue preparation	Lectures Discussion Daily and Monthly quiz	Exam and Quiz and repor
40.	2+4hours Theoretical Practical	Understanding and assimilation	Overview of Cell structure & type	Discussion strategy	Oral and written Examination
41.	2+4hours Theoretical Practical	Understanding and assimilation	classifications of primary tissues	Slides Show.	Oral and written Examination
42.	2+4hours Theoretical Practical	Understanding and assimilation	The glandular Tissues	Project strategy	Oral and written Examination
43.	2+4hours Theoretical Practical	Understanding and assimilation	Connective and Suppor Tissue	Discussion strategy	Oral and written Examination
44.	2+4hours Theoretical Practical	Understanding and assimilation	Connective Tissue proper	Slides Show	Oral and written Examination
45.	2+*4hours Theoretical Practical	Understanding and assimilation	Cartilage, Histogene Growth and repair cartilage	Slides Show	Oral and written Examination
46.	2+4hours Theoretical Practical	Understanding and assimilation	Histogenesis of Bone	Slides Show	Oral and written Examination
47.	2+4hours Theoretical Practical	Understanding and assimilation	Formation of blood cells.	Slides Show	Oral and written Examination
48.	2+4hours Theoretical Practical	Understanding and assimilation	Muscular tissue	Slides Show	Oral and written Examination
49.	2+4hours Theoretical Practical	Understanding and assimilation	Nervous tissue: Overviev nervous system (CNS & PI	Slides Show	Oral and written Examination

12-13	2+4hours Theoretical Practical		**Nervous system: the Nerve cells (neurons) and their classification**	Slides Show	Oral and written Examination
14	2+4hours Theoretical Practical	Understanding and assimilation	**Supporting cells of nervous system**	Slides Show	Oral and written Examination
15	2+4hours Theoretical Practical	Understanding and assimilation	**Review**	Combining different strategies	Oral and written Examination

Course Evaluation: The score out of 100 is distributed according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports.... etc Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc(40 annual endeavor grades, divided into 25 theoretical grades + 15 practical grades) (60 final exam grades, divided into 35 theoretical grades + 25 practical grades).

5.

6. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Text Book of Human Histology
Main references (sources)	
Recommended books and references (scientific journals, reports…)	
Electronic References, Websites	

Course Description Form

65. Course Name: Histology

66. Course Code:ML2204

67. Semester / Year:2023-2024

Quarterly

68. Description Preparation Date:2-4-2024

69. Available Attendance Forms: weekly In person lectures

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

Credit Hours(2+4)90= /Units 4

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

Name: Assit. Lect. Ahmed Alaa
Email: ahmed.ala.liverpool@gmail.com

72. Course Objectives

Course Objective	**Histology is the essential tool for medical students specialization, this course aims to introduce the student t types of cells and classify them according to shape of these cells and the problems of these tissues and esse functions that forms different tissues and organs of the human body by examine thin slices of a tissue unde microscope.**

Teaching and Learning Strategies: Brainstorming strategy
Modeling learning strategy
Group work or cooperative learning strategy
Discussion strategy
Project strategy
A strategy for problem solving or problem-based learning
Story Learning strategy.
Combining different strategies

5. Course Structure

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

50.	2+4hours Theoretical Practical	Understanding and assimilation	Cartilages	Lectures Discussion Daily and Monthly quiz	Exam and Quiz and repor
51.	2+4hours Theoretical Practical	Understanding and assimilation	Bones	Brainstorming strategy	Oral and written Examination
52.	2+4hours Theoretical Practical	Understanding and assimilation	Blood	Teamwork strategy.	Oral and written Examination
53.	2+4hours Theoretical Practical	Understanding and assimilation	Formation of of blood cel	Project strategy	Oral and written Examination
54.	2+4hours Theoretical Practical	Understanding and assimilation	Nervous Tissue	Discussion strategy	Oral and written Examination
55.	2+4hours Theoretical Practical	Understanding and assimilation	Nervous System	Brainstorming strategy	Oral and written Examination
56.	2+*4hours Theoretical Practical	Understanding and assimilation	Circulatory System	Teamwork strategy.	Oral and written Examination
57.	2+4hours Theoretical Practical	Understanding and assimilation	Lymphoid System	Project strategy	Oral and written Examination
58.	2+4hours Theoretical Practical	Understanding and assimilation	Lymphoid Organs	Discussion strategy	Oral and written Examination
59.	2+4hours Theoretical Practical	Understanding and assimilation	Respiratory System	Brainstorming strategy	Oral and written Examination
60.	2+4hours Theoretical Practical	Understanding and assimilation	Digestive System	Teamwork strategy.	Oral and written Examination
61.	2+4hours Theoretical Practical		**Urinary system**	lecture	Oral and written Examination

62.	2+4hours Theoretical Practical	Understanding and assimilation	**Endocrine system**	lecture	Oral and written Examination
63.	2+4hours Theoretical Practical	Understanding and assimilation	**Sense organ**	lecture	Oral and written Examination
64.	2+4hours Theoretical Practical	Understanding and assimilation	**The integumentary system-Skin**	lecture	Oral and written Examination

Course Evaluation: The score out of 100 is distributed according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports.... etc Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc(40 annual endeavor grades, divided into 25 theoretical grades + 15 practical grades) (60 final exam grades, divided into 35 theoretical grades + 25 practical grades).

7.

8. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Text Book of Human Histology
Main references (sources)	
Recommended books and references (scientific journals, reports…)	
Electronic References, Websites	

Course Description Form

73. Course Name: Medical parasitology1+2
74. Course Code:ML2106
75. Semester \ 2023-2024
Quarterly
76. Description Preparation Date:28-3-2024
77.Available Attendance Forms: weekly In person lectures
78.Number of Credit Hours / Number of Units
First Course Credit Hours (2 h theory*15)+(4h practical*15)=90 /Units(4) Second Course Credit Hours (2 h theory*15)+(4h practical*15)=90/ Units(4)
79. Course administrator's name (mention all, if more than one name)
Name: assistant lecture. Maab salah jameel Email:Maab.s.j@almamounic.edu.iq
80. Course Objectives

Course Objectives	

Teaching and Learning Strategies: Brainstorming strategy

Modeling learning strategy
Teaching and Learning Strategies: Brainstorming strategy
Discussion strategy
Project strategy
A strategy for problem solving or problem-based learning
Story Learning strategy.

Combining different strategies

6. Course Structure

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

65.	2*4 Theoretical Practical	Understanding and assimilation	General Introduction: Introduction; Parasites; Host Zoonosis; Host-parasite Relationships; Life Cycle of Parasites; Sources of Infectio Modes of Infection; Pathogenesis; Immunity in Parasitic Infection; Laborator Diagnosis	Lectures Discussion Daily and Monthly quiz	Exam and Quiz and repor
66.	2*4 Theoretical Practical	Understanding and assimilation	Protozoa General Features ; Structure Reproduction ; Life Cycle ; Classificatio Protozoa ; Phylum Sarcomastigophora Phylum Apicomplexa; Phylum Ciliopho Phylum Microspora	Brainstorming strategy	Oral and written Examination
67.	2*2hours Theoretical Practical	Understanding and assimilation	Sacodina, (Amoebae) Entamoeba histolytica; History and Distribution; Morphology; Life Cycle; Pathogenesis a Clinical Features; Extraintestinal Amoebiasis; Laboratory Diagnosis; Immunity; Treatment;	Teamwork strategy.	Oral and written Examination
68.	2*4hours Theoretical Practical	Understanding and assimilation	Entamoeba Coli , Entamoeba Gingivalis Endolimax nana 24;; Pathogenic FreeLiving Amoebae; naegleria Fowler History and Distribution 26; Morpholo Life Cycle; Pathogenicity and Clinical Features; Laboratory Diagnosis; Treatment	Project strategy	Oral and written Examination
69.	2*4 h	Understanding and assimilation	Entamoeba Coli , EntamoebaGingivalis Endolimax nana 24;; Pathogenic FreeLiving Amoebae; naegleria Fowler History and Distribution 26; Morpholo Life Cycle; Pathogenicity and Clinical Features; Laboratory Diagnosis; Treatment	Discussion strategy	Oral and written Examination
70.	2*4 h	Understanding and assimilation	Intestinal, Oral, and Genital Flagellates Giardia Lamblia; History and Distribut Habitat; Morphology; Life Cycle; Pathogenicity and Clinical Features; Laboratory Diagnosis; Treatment	Brainstorming strategy	Oral and written Examination
71.	2*4 h	Understanding and assimilation	Genus Trichomonas. T. vaginalis/ urogenital flagellate. T. hominis T. tena Biology , medical importance and Lab. Diagnosis of each species	Teamwork strategy.	Oral and written Examination
72.	2*4 h	Understanding and assimilation	Heamo- flagellates(blood& tissue flagellates),general characters. Developmental stages in the vertebrat invertebrate hosts. Genus leishmania ,species of leishmania, biology, vector, medical importance of eachspecies, typ of leishmaiasis , life cycle ,Lab. Diagnos incloding immunological tests	Project strategy	Oral and written Examination
73.	2*4 h	Understanding and assimilation	of trypanosome, biology , vector, medi importance of each species, forms of parasite, life cycle,Lab. Diagnosis	Discussion strategy	Oral and written Examination
74.	2*4 h	Understanding and assimilation	Ciliophora: Blantidiumcoli ,Biology , medical importance, Lab. Diagnosis. Apicomplex: General charcter.Genus Toxoplasma.,T.gondii ,Biology, medica lmportance,acquired and congenital toxoplasosis. Life cycle, role of domesticate animals in the transmissio of the disease. Lab. Diagnosis	Brainstorming strategy	Oral and written Examination
75.	2*4 h	Understanding and assimilation	Genus plasmodium. Introduction to malarial parasites, malarial paroxysm, general life cycle of the plasmodium ,	Teamwork strategy.	Oral and written

			species of plasmodium		Examination
76.	2*4 h	Understanding and assimilation	P.falciparum, P. vivax, P ovale, P. malar Disease, pathology, medical importanc distribution, main differences during li cycle.	Project strategy	Oral and written Examination
77.	2*4 h	Understanding and assimilation	General discussion on malarial paraste ,epidemiology, methods of diagnosis. T to take clinical samples. Blood films	Cooperative Learning	Oral and written Examination
78.	2*4 h	Understanding and assimilation	Isopora, pathology, medicalimportance,Lab.Dianosis. Sarcocystis species: pathology , medica importance,Lab diagnosis	Brainstorming strategy	Oral and written Examination
79.	2*4 h	Understanding and assimilation	Cryptosporidiadse Genus cryptosporidium, species belong the genus,	Teamwork strategy.	Oral and written Examination
	الفصل الثاني				Oral and written Examination
1.	2*4 h	Understanding and assimilation	Platyhelminth: General characters. Cla cestoda: General characters. Teaniasaginata: Teaniasolium: Morphology & the adult warm and the larval stages of each species, biology, li cycle of each species, pathoginicity o each species, Lab. Diagnosis	Discussion strategy	Oral and written Examination
2.	2*4 h	Understanding and assimilation	Hymenolepis nana, Hymenolepisdimin Diplidium caninum, Diphyllobathr latum, Biology, morphology, pathogin of eachspecies,Lab. Diagnosis.	Brainstorming strategy	Oral and written Examination
3.	2*4 h	Understanding and assimilation	Echinococcus granulo Echinocuccusmultilocularis. Biology cycle, pathoginicity, medical importa of hydatid cyst disease ,Lab. Diagnosis.	Teamwork strategy.	Oral and written Examination
4.	2*4 h	Understanding and assimilation	Class Trematoda: General charac Genus Schistosoma. Specis of hu schistosoma, life cycle. Schistos hematobium. Schistosoma mans Biology of adult worm, hab pathgenicity,Lab.diagnosis	Project strategy	Oral and written Examination
5	2*4 h		Fasciula hepatica Biology , life cy pathogenicity, Lab diagn Nemathelminthis. ClssNemtoda, gen characters.	Discussion strategy	Oral and written Examination
6	2*4 h		Ascaris lambricoides Entero vermicularis. Biology of a worm,lifecycle, pathgenicity and med importanceof each species, Lab. Diagn of each species	Brainstorming strategy	Oral and written Examination
7	2*4 h		Trichuris trichura. Trichenala spir Biology , life cycle , pathogenicity, med importanceof each species, Lab. Diagn of each species	Teamwork strategy.	Oral and written Examination
8.	2*4 h		Strogyloidesstercoralis. Biology, life cy pathgenicity, medical importance, Diagnosis	Project strategy	Oral and written Examination
9.	2*4 h	Teaching and Learning Strategies: Brainstorming strategy	Ancylostomaduadenale ,Nec Americans (Hooks worm) Biology, cycle, pathogenicity, medical importa of each species, Lab. Diagnosis.	Discussion strategy	Oral and written Examination

10	2*4 h		The filariae: Biology, pathgenicity medical importance of each species, Diagnosis of each species. Visceral la migrance, Cutaneaus larvae migrance.	Brainstorming strategy	Oral and written Examination
11	2*4 h	Teaching and Learning Strategies: Brainstorming strategy	Entomology\ Sand fly, Black fly	Teamwork strategy.	Oral and written Examination
12.	2*4 h		Mosquitoes Ticks & Mite	Project strategy	Oral and written Examination
13.	2*4 h		Ticks & Mites	Discussion strategy	Oral and written Examination
14.	2*4 h		Fleas	Brainstorming strategy	Oral and written Examination
15.			Revision	Problem solving	

Course Evaluation: The score out of 100 is distributed according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports.... etc Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc (40 annual endeavor grades, divided into 25 theoretical grades + 15 practical grades) (60 final exam grades, divided into 35 theoretical grades + 25 practical grades).
9.

10. Learning and Teaching Resources	
Required textbooks (curricular books, any)	Medical parasitology 10th edit
Main references (sources)	Medical parasitology 8th edight
Recommended books and references (scientific journals, reports…)	

Electronic References, Websites	Google scholar

Course Description Form

81. Course Name:
Human Physiology
82. Course Code:ML2103
83. Semester / Year:
Quarter1+2 / 2023−2024
84. Description Preparation Date:
10/2/2024
85.Available Attendance Forms:
Weakly Theoretical /Practical Attendance
86.Number of Credit Hours (Total) / Number of Units (Total)
90 hrs/ 4 units
87. Course administrator's name (mention all, if more than one name)
Name: Duha ali abass Email:duhabio2020@gmail.com
88. Course Objectives

Course Objectives	Study how human body organs function in response to changing internal and external environment, to keep the no values inside the body.

89. Teaching and Learning Strategies

Strategy	Using modern methods in education (electronic whiteboard and display screens) Using discussion methods, daily exams, homework, and reports, as well Motivational questions.

90. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
7.	2+4 Theoretical practical	Comprehension &Assimilation	General Introduction to Physiology Cell General Funct Cell Membrane Transport	Lecture & Data show	Exams reports
8.	2+4 Theoretical practical	Comprehensio &Assimilation	General Idea about Body fluids: Types, Composition, and Functions. Unit of Measurement, Conversion and Conversion factor.	Lecture &Data sho	Exams reports

9.	2+4	Comprehension &Assimilation	lood: Composition, Specific Functions of Compartment. Plasma and Serum Differences Separation	Lecture & Data show	Exams reports
10	2+4	Comprehension &Assimilation	RBCs: Definition, Structure, and Normal Value; DefinitionStructure, and Normal Value; Blood Groups.	Lecture & Data show	Exams reports
11	2+4	Comprehension &Assimilation	Erythropoiesis, Homeostasis, Death and Disposal	Lecture & Data show	Exams reports
12	2+4	Comprehension &Assimilation	White Blood Cells: Classification, .Spe Function,Normal Value	Lecture & Data show	Exams reports
13	2+4	Comprehension &Assimilation	Platelet: Definition, Function, Normal V Thrombopoiesis and Hemostasis.	Lecture & Data show	Exams reports
14	2+4	Comprehension &Assimilation	Heart Physiology: Conductive System, Cardiac O (Mechanics and Control), and Factor Affecting.	Lecture & Data show	Exams reports
9-10	2+4	Comprehension &Assimilation	Vascular (Blood Vessels) Physiology: Mechanics Control; Blood .Pressure; and Factor Affecting	Lecture & Data show	Exams reports
11	2+4	Comprehension &Assimilation	Lymphatic Physiology: Organs: Composition, Functic Each part. Lymph: Structure, Hemodynamic and F Affecting their Movement	Lecture & Data show	Exams+repor ts
12	2+4	Comprehension &Assimilation	Respiratory Physiology: Parts and Specific Funct Ventilation: .Mechanics and Control	Lecture & Data show	Exams+repor ts
13	2+4	Comprehension &Assimilation	External Respiration, Gas Blood Transport, Int Respiration: Mechanics, Control and Factor affecting	Lecture & Data show	Exams reports
14	2+4	Comprehension &Assimilation	Lung Volumes: Normal Values and Factor Affec Conscious and UnConscious Control of Respiration. Ro Pons and Medulla in Respiratory Transient.	Lecture & Data show	Exams reports
15	2+4	Comprehension &Assimilation	Acid-Base Balance: Definition, Buffer Systems, and Ro Body Systems In the Regulation.	Lecture & Data show	Exams reports

3. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, dailyoral, monthly, or written exams, reports .... etc
Distribution of the grade out of 100 according to the tasks assigned to the student, such as daily preparation, daily, oral, monthly, written exams, reports, etc.
(40 annual endeavor grades, divided into 25 theoretical grades + 15 practical grades) (60 final exam grades, divided into 35 theoretical grades + 25 practical grades).

4. Learning and Teaching Resources

Required textbooks (curricular books, if any)	
Main references (sources)	- 1William F. Ganong: review of medical physiology.(201 ..2- K Sembulingam, Prema Sembulingam Essentials of medical physiology . 3-Human physiology from cell to syst Lauralee Sher wood .(2004
Recommended books and references (scientific journals, reports…)	1-Elsevier journal 2-Nature journal

Course Description Form

91. Course Name: Biochemistry
92. Course Code:ML2102
93. Semester / Year:2023-2024
Quarterly1+2
94. Description Preparation Date:10-2-2024
95.Available Attendance Forms: weekly In person lectures
96.Number of Credit Hours (Total) / Number of Units/ (Total)
Credit Hours 90 4 Units
97. Course administrator's name (mention all, if more than one name)
Name: lecturer suad Turkey ali Email: suad.t.ali@almamonuc.edu.iq
98. Course Objectives
Course Objectives(biochemistry) Distinguish between different type of tests in clinical biochemistry and equipment's related to ap many different tests that will be able to determine the specific criteria for efficient and laborat tests , at the end of course the the students will be able to describe the variables s Accompany the different biochemical tests .
Teaching and Learning Strategies: Brainstorming strategy Modeling learning strategy Group work or cooperative learning strategy Discussion strategy Project strategy A strategy for problem solving or problem-based learning Story Learning strategy. Combining different strategies
7. Course Structure

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

		Outcomes			
80.	2+4hours Theoretical Practical	Understanding and assimilation	Introduction biochemistry Metabolism production energy	Lectures Discussion Daily and Monthly quiz	Exam and Quiz and report
81.	2+4hours Theoretical Practical	Understanding and assimilation	Metabolism c carbohydrate and diabetes mellitus… glucose test	Brainstorming strategy	Oral and written Examination
82.	2+4hours Theoretical Practical	Understanding and assimilation	Glucosamine Glucosamine Glycans Proteoglycans glycoproteins	Teamwork strategy.	Oral and written Examination
83.	2+4hours Theoretical Practical	Understanding and assimilation	Hormones Classification Functions metabolism	Project strategy	Oral and written Examination
84.	2+4hours Theoretical Practical	Understanding and assimilation	Structure and Metabolism o Proteins Urea cycle	Discussion strategy	Oral and written Examination
85.	2+44hours Theoretical Practical	Understanding and assimilation	Metabolism purine pyrimidine	Brainstorming strategy	Oral and written Examination
86.	2+4hours Theoretical Practical	Understanding and assimilation	Gout disease Uric acid test	Teamwork strategy.	Oral and written Examination
87.	2+4hours Theoretical Practical	Understanding and assimilation	Specimen collection	Project strategy	Oral and written Examination
88.	2+4hours Theoretical Practical	Understanding and assimilation	Blood collec techniques , Anticoagulant Separation of Serum Principles Of instrumentati n spectrophoto er……beers lambert law	Discussion strategy	Oral and written Examination
89.	2+4hours Theoretical Practical	Understanding and assimilation	Benedict test Barfoed test	Brainstorming strategy	Oral and writ Examination

90.	2+4hours Theoretical Practical	Understanding and assimilation	Ninhydrin tes	Teamwork strategy.	Oral and writ Examination
91.	2+4hours Theoretical Practical	Understanding and assimilation	Isoelectric po enzymology	Project strategy	Oral and written Examination
92.	2+4hours Theoretical Practical	Understanding and assimilation	Alkaline Phosphatase Beta amylase assay	Cooperative Learning	Oral and written Examination
93.	2+4hours	Understanding and assimilation	Review for Kidney functi tests	Brainstorming strategy	Oral and written Examination
94.	2+4hours	Understanding and assimilation	Review for liv Functions tes	Teamwork strategy.	Oral and written Examination

Course Evaluation: The score out of 100 is distributed according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports.... etc Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc (40 annual endeavor grades, divided into 25 theoretical grades + 15 practical grades) (60 final exam grades, divided into 35 theoretical grades + 25 practical grades).

11.

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Harpers illustrated biochemistry Lipppincotts illustrated Reviews.....biochemistry Eight edition Laboratory and Diagnostic tests Manipal manual of Clinical biochemistry
Main references (sources)	
Recommended books and references (scientific journals, reports…)	
Electronic References, Websites	Wikipedea.org.

Course Description Form

99. Course Name:
Medical bacteriology1+2
100. Course Code:ML2201
101. Semester / Year:2023-2024
Quarterly/Ministerial
102. Description Preparation Date:10-2-2024
17−2−2024
103. Available Attendance Forms: weekly In person lectures
In person lectures (Theoretical +Practical)
104. Number of Credit Hours (Total) / Number of Units (Total)
Credit Hours 90 4Units
105. Course administrator's name (mention all, if more than one name)
Name: Prof. Dr. shimaaMahmoad Ali Email: shimaa.m.ali@almamonuc.edu.iq
106. Course Objectives

Course Objectives	

Teaching and Learning Strategies: Brainstorming strategy

Modeling learning strategy
Group work or cooperative learning strategy
Discussion strategy
Project strategy
A strategy for problem solving or problem-based learning
Story Learning strategy.

Combining different strategies

8. Course Structure

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

95.	2+4hours Theoretical +2Practical	Understanding and assimilation	***Neisseria***	Lectures Discussion Daily and Monthly quiz	Exam and Quiz and repor
96.	2+4hours Theoretical +2Practical	Understanding and assimilation	***Enteric Gram-negat rods: Escherichia coli***	Brainstorming strategy	Oral and written Examination
97.	2+4hours Theoretical +2Practical	Understanding and assimilation	***Klebsiella***	Teamwork strategy.	Oral and written Examination
98.	2+4hours Theoretical +2Practical	Understanding and assimilation	***Pseudomonads and Acinetobacter***	Project strategy	Oral and written Examination
99.	2+4hours Theoretical +2Practical	Understanding and assimilation	***Shigella and Salmonel***	Discussion strategy	Oral and written Examination
100	2+4hours Theoretical +2Practical	Understanding and assimilation	***Yersinia***	Brainstorming strategy	Examinations
101	2+4hours Theoretical +2Practical	Understanding and assimilation	***Vibrio***	Teamwork strategy.	Examinations
102	2+4hours Theoretical +2Practical	Understanding and assimilation	***Campylobacter***	Project strategy	Examinations
103	2+4hours Theoretical +2Practical	Understanding and assimilation	***Helicobacter pylori***	Discussion strategy	Examinations
104	2+4hours Theoretical +2Practical	Understanding and assimilation	***Haemophilus***	Brainstorming strategy	Examinations
105	2+4hours Theoretical +2Practical	Understanding and assimilation	***Bordetella and Brucell***	Teamwork strategy.	Examinations
106	2+4hours Theoretical +2Practical	Understanding and assimilation	***Chlamydia***	Project strategy	Examinations

107	2+4hours Theoretical +2Practical	Understanding and assimilation	***Spirochetes***	Cooperative Learning	Examinations
108	2+4hours Theoretical +2Practical	Understanding and assimilation	***Mycobacterium***	Brainstorming strategy	Examinations
109	2+4hours Theoretical +2Practical	Understanding and assimilation	***Mycoplasma a Rickettsia***	Teamwork strategy.	Examinations

Course Evaluation:

The score out of 100 is distributed according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports.... etc Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc(40 annual endeavor grades, divided into 25 theoretical grades + 15 practical grades) (60 ministerial final).

13. Learning and Teaching Resources

Required textbooks (curricular books, if any)	1-Bergeys manual of systematic bacteriology/Geo M. Garrity, editor- in- chief. Boone, Da R.;Castenholz, Richard W.; Garrity, Garrity, George 2- Medical Microbiology by Patrick R; Ke Rosenthal; Michael A. pfaller.
Main references (sources)	Review of Medical Microbiology and Immunolo Warren Levinson, thirteenth edition,McGraw Education.
Recommended books and references (scientific journals, reports…)	Google, yahoo, chrome
Electronic References, Websites	

Course Description Form Baath Party crimes

1. Course Name:
Baath Party crimes
2. Course Code:
DLB21011
3. Semester / Year:
Year
4. Description Preparation Date:
16/3/2024
5. Available Attendance Forms:
Weekly attendance
6. Number of Credit Hours (Total) / Number of Units (Total)
30 hours / (2 units).
7. Course administrator's name (mention all, if more than one name)
Name: Dr. azhar abd alhusaen Email: azhar.a.abdullah@almamonuc.edu.iq
8. Course Objectives

Course Objectives	
general goal // Providing the student with all the scientific elements enhance his knowledge of the basics of the crimes the defunct Baath Party by explaining the m important crimes and violations committed by defunct Baathist regime against the Iraqi people.	**Behavioral goals //** 1- It is necessary for the student to know the most important violations committed by the defunct Baathis regime against rights and freedoms. 2- It is necessary for the student to know the psychological and social field. 3- It is necessary for the student to know culture, media, and the nature of the militarization of Iraqi society during the time of the defunct Baathist regime 4- The student must know the impact of oppression wars on the environment and population. 5- It is necessary for the student to know the effects the use of internationally prohibited weapons and environmental pollution. 6- It is necessary for the student to know what m graves are and how places of worship were bombe Iraq during the time of the defunct Baath regime.

9. Teaching and Learning Strategies

Strategy	• Brainstorming strategy • Model learning strategy • Group work or cooperative learning strategy • Discussion strategy • Project strategy • A strategy for solving problems or discovering those problems • Strategic story • The link between different engines

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	3	Understanding Comprehension	A comprehensive review system violations	Discussion strategy	Oral and written test
2	3	Understanding Comprehension	Crimes of preventing the dissemination of religious teachings a confiscating science knowledge	Discussion strategy	Oral and written test
3	3	Understanding Comprehension	of scholars and religious you	Discussion strategy	Oral and written test
4	3	Understanding Comprehension	Banning parties in general	Discussion strategy	Oral and written test
5	3	Understanding Comprehension	Culture, media, and militarization society	Discussion strategy	Oral and written test
6	3	Understanding Comprehension	Militarization of m discourse	Discussion strategy	Oral and written test
7	3	Understanding Comprehension	The impact of oppression wars on environment population	Discussion strategy	Oral and written test
8	3	Understanding Comprehension	scorched earth policy	Discussion strategy	Oral and written test
9	3	Understanding Comprehension	Minefields and war waste	Discussion strategy	Oral and written test
10	3	Understanding Comprehension	Drying of marshes and fo migration	Discussion strategy	Oral and written test
11	3	Understanding Comprehension	The role of the former reg in drying up marshes	Discussion strategy	Oral and written test
12	3	Understanding Comprehension	Destruction of agricultural and ani environment radioactive contamination	Discussion strategy	Oral and written test
13	3	Understanding Comprehension	Razing palm groves	Discussion strategy	Oral and written test
14	3	Understanding Comprehension	Mass graves and bombing places of worship	Discussion strategy	Oral and written test

15	3	Understanding Comprehension	The effects resulting from wars on the territor Iraq	Discussion strategy	Oral and written test

11. Course Evaluation

Daily exam: 10 degrees
First semester exam: 40
final exam: Sixty degrees

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	The defunct Baath Party's crimes curriculum 2023 prepared by the Ministry of Hig Education and Scientific Research/Departm of Studies, Planning and Follow-up
Main references (sources)	The defunct Baath Party's crimes curriculum for 2 prepared by the Ministry of Higher Education and Scier Research/Department of Studies, Planning and Follow-u
Recommended books and references (scientific journals, reports...)	Legal Journal / Cairo University
Electronic References, Websites	Browse the Google network using the desired subject key.

Course Description Form

1. Course Name:

Advance
Clinical Biochemistry

2. Course Code:ML403

3. Semester / Year:

Annual

4. Description Preparation Date:

2/4/2024

5. Available Attendance Forms:

Weekly Theoretical & Practical Attendance

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

180 hrs/ 8 unit

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

Name: safa ammer yahya
Email:safa.a.y@almamonuc.edu.iq

8. Course Objectives

Course Objectives	**The ability to use laboratory equipment and use laboratory methods to Perform analyses.** **Introducing the student to the basic principles related to patholog analyzes in clinical chemistry**

9. Teaching and Learning Strategies

Strategy	Using modern methods in education (electronic whiteboard and display screens) Using discussion methods, daily exams, homework, and reports, as well Motivational questions.

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
2&1	6	Comprehension &assimilation	Chemical safety. Biosafety. Fire safety and contro	theoretical lecture using power point	**discussion questions**
4&3 5,6,7	6 6	Comprehension &assimilation	Ol Collect samples (ur blood, fe cerebrospinal fluid, from the body Liquids) other risks.	theoretical lecture using power point	**discussion questions**
8,9,10,11,12 13,14 15,16,17,18 19,20,21	6 6 6	Comprehension &assimilation	Basics of total qua management. Comprehensive test process. Control variables bef analysis.	**theoretical lecture using power point**	**Discussion + questions + short, semester and final exams**
23و22	6	Comprehension &assimilation	Problems in biochemical calculations and case studies	**Problem solving**	**Discussion + questions + short, semester and final exams**

23-30	6	Comprehension &assimilation	Case studies in clinical chemistry	**Problem solving**	**discussion + questions**

11. Course Evaluation
Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, dailyoral, monthly, or written exams, reports.... etc Distribution of the grade out of 100 according to the tasks assigned to the student, such as daily preparation, daily, oral, monthly, written exams, reports, etc. (40 annual endeavor grades, divided into 25 theoretical grades + 15 practical grades) (60 final exam grades, divided into 35 theoretical grades + 25 practical grades).

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

Course description form

.Co1-course name: Blood transfusi
/ML405 Co 2−course co
3. Semester/Year: Annually
4-Date this description was prepared: 2-2-2024
5. Available forms of attendance. Attendance is mandatory
6 .Number of study hours (total)/number of units (total) 180 hours 4 units
7. Name of the course administrator (if more than one name is mentioned)
Name:sadeq ahmed : الآيميل sadik_a_abdallah@almamonuc.edu.iq

8. Course objectives	
1-For the student to become familiar with the most important blo diseases **2-The student should know the blood types** **3-To learn some laboratory tests related to blood transfusion** **4-To understand how to compare the results he obtains with natu ratios.**	**Objectives of the study materia**
9. Teaching and learning strategies	
Smart board, blackboard, the World Wide Web	**Strategy experiments**

10. Course structure:

Evaluation method	Teaching method	Name of the unit/topic	Required learning outcomes	houer	weak
امتحانات	نظري+عملي	Historical review	Collection &handling of blood	2theoretical + 2 practical	1
امتحانات	نظري+عملي	Donor screening	Antiglobulin test	2theoretical + 2 practical	2
امتحانات	نظري+عملي	Storage of whole blood	Indirect antiglobulin test	2theoretical + 2 practical	3
امتحانات	نظري+عملي	Preparation &storage of blood components	Antibodies titration	2theoretical + 2 practical	4
امتحانات	نظري+عملي	Examination	Examination	2theoretical + 2 practical	5
امتحانات	نظري+عملي	Blood group antigens	Reading results of red cells agglutination	2theoretical + 2 practical	6
امتحانات	نظري+عملي	Laboratory tests on blood donations	Blood group antigen-antibody reaction tests	2theoretical + 2 practical	7
امتحانات	نظري+عملي	Hazards of allogeneic blood transfusion	Compatibility testing	2theoretical + 2 practical	8
امتحانات	نظري+عملي	Red blood cell antigens	Antibody screening	2theoretical + 2 practical	9
امتحانات	نظري+عملي	Antibodies of the ABO system	Antibody identification	2theoretical + 2 practical	10
امتحانات	نظري+عملي	First semester examination	First semester examination	2theoretical + 2 practical	11
امتحانات	نظري+عملي			2 نظري+2عملي	12
امتحانات	نظري+عملي	Rh system	Laboratory tests for the recipent	2 نظري+2عملي	13
امتحانات	نظري+عملي	Acquired hemolytic anemia	ABO & D grouping	2 نظري+2عملي	14
امتحانات	نظري+عملي	Kell system	Cold antibody	2 نظري+2عملي	15
					16
امتحانات	نظري+عملي	Examination	Examination	2 نظري+2عملي	17

18	**2 نظري+2عملي**	Red cell reagent	Lewis system	**نظري+عملي**	امتحانات
19	**2 نظري+2عملي**	Selection cells for transfusion	Emergency blood issue	**نظري+عملي**	امتحانات
20	**2 نظري+2عملي**	hemostasis	Autologus donation	**نظري+عملي**	امتحانات
21	**2 نظري+2عملي**	PT&PTT	Aphresis	**نظري+عملي**	امتحانات
22	**2 نظري+2عملي**	Selection cells for transfusion	Emergency blood issue	**نظري+عملي**	امتحانات
23	**2 نظري+2عملي**	Factor assay	Types of transfusion reactions	**نظري+عملي**	امتحانات
24	**2 نظري+2عملي**	Second semester examination	Second semester examination	**نظري+عملي**	امتحانات
-25 29	**2 نظري+2عملي**	Drawbacks of blood transfusion services in Iraq	Order of clinical importance of antibodies	**نظري+عملي**	امتحانات

11.تقييم المقرر
40 سعي -60 نهائي
12.مصادر التعلم والتدريس

الكتب المقررة المطلوبة (Modern blood banki &transfusion practices, Hoffbra Postgraduate Haematology, **Dacie a Lewis: practical haematology.**(	
المراجع الرئيسة (Hematology International Journal)	
الكتب والمراجع الساندة التي يوصى بها (مواقع الجامعات الرصينة المحلية والعالمية	
المراجع الإلكترونية ، مواقع الانترنيت	

Course Description Form

107. Course Name:
Pathology
108. Course Code:
109. Semester / Year:
Annual
110. Description Preparation Date:
2/4/2024
111. Available Attendance Forms:
Weekly Theoretical & Practical Attendance
112. Number of Credit Hours (Total) / Number of Units (Total)
180 hrs./ 7 units
113. Course administrator's name (mention all, if more than one name)
Name: Bassma Aday Ali Email: basma.A.ali@almamonuc.edu.iq
114. Course Objectives

Course Objectives	**To provide the student an overall and modern idea about the Pathology,** **To give the student good information basis on pathology to enable him in His future work in hospitals and health centers.**

115. Teaching and Learning Strategies	
Strategy	Using modern methods in education (electronic whiteboard and display screens) Using discussion methods, daily exams, homework, and reports, as well Motivational questions.

116. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1.	6 hours Theoretical &Practical	Comprehension &assimilat	Lung (atelectasias, acute lung injury)	Theoretical lecture using power point	**Examinations oral +written**

2.	6 hours Theoretical &Practical	Comprehension &assimilation	Lung (chronic bronchitis pulmonary embolism)	Theoretical lecture using power point	**Examinations oral +written**
3.	6 hours Theoretical &Practical	Comprehension &assimilation	Lung tumors	**Lecture& dicussion**	**Examinations oral+written**
4.	6 hours Theoretical &Practical	Comprehension &assimilation	Kidney (glomercular disease)	**Lecture& dicussion**	**Examinations oral+written**
5.	6 hours Theoretical &Practical	Comprehension &assimilation	Kidney (nephrotic syndrome, IgA nephropathy (Berger disease)	**Lecture& dicussion**	**Examinations oral+written**
6.	6 hours Theoretical &Practical	Comprehension &assimilat	Kidney tumors	**Lecture& dicussion**	**Examinations oral+written**
7.	6 hours Theoretical &Practical	Comprehension &assimilat	Cancer of the oral cavity and tongue	**Lecture& dicussion**	**Examinations oral+written**
8.	6 hours Theoretical &Practical	Comprehension &assimilat	Esophagus (lacivation, varices, esophageal carcinoma)	**Lecture& dicussion**	**Examinations oral+written**
9.	6 hours Theoretical &Practical	Comprehension &assimilat	Stomach (gastritis, ulcer, carcinoma)	**Lecture& Discussion**	**Examinations oral+written**
10.	6 hours Theoretical &Practical	Comprehension &assimilation	Large intestines (hemorrhoids, malabsorption syndrome)	**Lecture& dicussion**	**Examinations oral+written**
11.	6 hours Theoretical &Practical	Comprehension &assimilat	Crohn disease	**Lecture& dicussion**	

12.	6 hours Theoretical &Practical	Comprehension &assimilation	Large intestines tumors	**Lecture& Discussion**	**Examinations oral+written**
13.	6 hours Theoretical &Practical	Comprehension &assimilat	Liver (hepatic infection, failure, cirrhosis)	**Lecture& dicussion**	**Examinations oral+written**
14.	6 hours Theoretical &Practical	Comprehension &assimilat	Hepatic tumors	**Lecture& dicussion**	**Examinations oral+written**
15.	6 hours Theoretical &Practical	Comprehension &assimilat	Gall bladder (cholecystitis, tumors)	**Lecture& dicussion**	**Examinations oral+written**
16.	6 hours Theoretical &Practical	Comprehension &assimilat	Pancreas (pancreatitis)	**Lecture& dicussion**	**Examinations oral+written**
17.	6 hours Theoretical &Practical	Comprehension &assimilat	Pancreatic neoplasma	**Lecture& Discussion**	**Examinations oral+written**
18.	6 hours Theoretical &Practical	Comprehension &assimilat	Male genital system (testicular atrophy, lesions, neoplasma)	**Lecture& Discussion**	**Examinations oral+written**
19.	6 hours Theoretical &Practical	Comprehension &assimilation	Male genital system (prostatis, tumors)	**Lecture& Discussion**	**Examinations oral+written**
20.	6 hours Theoretical &Practical	Comprehension &assimilat	Female genital system (cervicitis, tumor of the cervix)	**Lecture& Discussion**	**Examinations oral+written**
21.	6 hours Theoretical &Practical	Comprehension &assimilat	Uterus (endometritis, endometriosis , tumor of the uterus)	**Lecture& Discussion**	**Examinations oral+written**
22.	6 hours Theoretical &Practical	Comprehension &assimilation	Breast (fibrocystic changes, tumors of the breast)	**Lecture& dicussion**	**Examinations oral+written**
23.	6 hours Theoretical &Practical	Comprehension &assimilation	Endocrine system (hyperpituitarism and pituitary adenoma)	**Lecture& Discussion**	**Examinations oral+written**

24.	6 hours Theoretical &Practical	Comprehension &assimilation	Thyroid (thyroiditis, thyroid neoplasma)	**Lecture& dicussion**	**Examinations oral+written**
25.	6 hours Theoretical &Practical	Comprehension &assimilation	Bone tumors	**Lecture& Discussion**	**Examinations oral+written**
26.	6 hours Theoretical &Practical	Comprehension &assimilation	Skin (acute eczematous dermatitis, psoriasis)	**Lecture& Discussion**	**Examinations oral+written**
27.	6 hours Theoretical &Practical	Comprehension &assimilation	Skin tumors	**Lecture& Discussion**	**Examinations oral+written**
28.	6 hours Theoretical &Practical	Comprehension &assimilation	Nervous system (brain tumor)	**Lecture& Discussion**	**Examinations oral+written**
29.	6 hours Theoretical &Practical	Comprehension &assimilation	Nervous system (diseases of the peripheral nervous system)	**Lecture& Discussion**	**Examinations oral+written**
30.	6 hours Theoretical &Practical	Problem Solving	Review	**Problem Solving**	**Examinations oral+written**

1. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, dailyoral, monthly, or written exams, reports.... etc
Distribution of the grade out of 100 according to the tasks assigned to the student, such as daily preparation, daily, oral, monthly, written exams, reports, etc.
(40 annual endeavor grades, divided into 25 theoretical grades + 15 practical grades) (60 final exam grades, divided into 35 theoretical grades + 25 practical grades).

2. Learning and Teaching Resources

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

Course Description Form

117. Course Name : Parasitology
118. Course Code:ML404
119. Semester / Year:2023-2024
Annual
120. Description Preparation Date:31-3-2024
121. Available Attendance Forms: weekly In person lectures
122. Number of Credit Hours (Total) / Number of Units (Total)
Credit Hours:180 hours Theoretical &Practical 8/ units
123. Course administrator's name (mention all, if more than one name)
Name: DrHazem Ali Abed Email: sdq273@yahoo.com
124. Course Objectives

Course Objectives	**- To know the morphology, life cycle, pathogenicity and Lab. Diagnosis of all parasites of medical importance.** **-To know the epidemiology of parasites** **-To Introduce the student to the classification of parasites, the diseases they cause, and the molecular laboratory tests through which parasites can be diagnosed.**

Teaching and Learning Strategies: Problem Solving strategy

Group work or cooperative learning strategy
Discussion strategy
Project strategy
A strategy for problem solving or problem-based learning
Story Learning strategy.
Combining different strategies

9. Course Structure

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

		Outcomes			
110.	2+4hours Theoretical Practical	Understanding and assimilation	Principle of Paraitology	Lectures Discussion	Exam and Quiz and report
111.	2+4hours Theoretical Practical	Understanding and assimilation	Amoeba	Lectures Discussion	Oral and written Examination
112.		Understanding and assimilation	Amoeba	Lectures Discussion	Oral and written Examination
113.	2+4hours Theoretical Practical	Understanding and assimilation	Giardia lamblia	Lectures Discussion	Oral and written Examination
114.	2+4hours Theoretical Practical	Understanding and assimilation	Examination	Problem solving	Oral and written Examination
115.	2+4hours Theoretical Practical	Understanding and assimilation	Trichomonas vaginalis	Lectures Discussion	Oral and Written Examination
116.	2+4hours Theoretical Practical	Understanding and assimilation	Trichomonas Vaginalis	Lectures Discussion .	Oral and Written Examination
117.	2+4hours Theoretical Practical	Understanding and assimilation	Naegleriafowleri	Lectures Discussion	Oral and Written Examination
118.	2+4hours Theoretical Practical	Understanding and assimilation	Naegleriafowleri	Lectures Discussion	Oral and Written Examination
119.	2+4hours Theoretical Practical	Understanding and assimilation	Examination	Problem solving	Oral and Written Examination
120.	2+4hours Theoretical Practical	Understanding and assimilation	Acanthamoeba	Lectures Discussion .	Oral and written Examination
121.	2+4 Theoretical Practical	Understanding and assimilation	Acanthamoeba	Lectures Discussion	Oral and written Examination
122.	2+4hours Theoretical Practical	Understanding and assimilation	Leishmania	Lectures Discussion	Oral and Written Examination

123.	2+4hours Theoretical Practical	Understanding and assimilation	Leishmania	Lectures Discussion	Oral and written Examination
124.	2+4hours Theoretical Practical	Understanding and assimilation	Trypanosoma	Lectures Discussion .	Oral and written Examination
125.	2+4hours Theoretical Practical	Understanding and assimilation	Trypanosoma	Lectures Discussion	Oral and Written Examination
126.	2+4hours Theoretical Practical	Understanding and assimilation	Examination	Problem solving	Oral and Written Examination
127.	2+4hours Theoretical Practical	Understanding and assimilation	Malaria	Brainstorming strategy	Oral and written Examination
128.	2+4hours Theoretical Practical	Understanding and assimilation	Malaria	Lectures Discussion .	Oral and written Examination
129.	2+4hours Theoretical Practical	Understanding and assimilation	Malaria	Lectures Discussion	Oral and Written Examination
130.	2+4hours Theoretical Practical	Understanding and assimilation	Shistosoma	Lectures Discussion	Oral and Written Examination
131.	2+4hours Theoretical Practical	Understanding and assimilation	Shistosoma	Lectures Discussion	Oral and Written Examination
132.	2+4hours Theoretical Practical	Understanding and assimilation	Examination	Problem solving	Oral and Written Examination
133.	2+4hours Theoretical Practical	Understanding and assimilation	Ascariasis	Lectures Discussion	Oral and Written Examination
134.	2+4hours Theoretical Practical	Understanding and assimilation	Ascariasis	Lectures Discussion	Oral and Written Examination
135.	2+4hours Theoretical Practical	Understanding and assimilation	Echinococcosis	Lectures Discussion	Oral and Written Examination
136.	2+4hours Theoretical Practical	Understanding and assimilation	Echinococcosis	Lectures Discussion strategy.	Oral and Written Examination

137.	2+4hours Theoretical Practical	Understanding and assimilation	Tapeworm	Lectures Discussion	Oral and Written Examination
138.	2+4hours Theoretical Practical	Understanding and assimilation	Tapeworm	Lectures Discussion	Oral and written Examina
139.	2+4hours Theoretical Practical	Understanding and assimilation	Examination	Problem Solving	Oral and Written Examination

Course Evaluation: The score out of 100 is distributed according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports.... etc Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc (40 annual endeavor grades, divided into 25 theoretical grades + 15 practical grades) (60 final exam grades, divided into 35 theoretical grades + 25 practical grades).

14.

15. Learning and Teaching Resources

Required textbooks (curricular books, if any)	
Main references (sources)	
Recommended books and references (scientific journals, reports…)	
Electronic References, Websites	for Center of disease control and prevention parasite diseases

Course Description Form

1. Course Name:
English Language
2. Course Code: **ML4010**
3. Semester / Year:
Fourth / Annual
4. Description Preparation Date:
2024/2/8

5. Available Attendance Forms:

Campus-based attendance

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

- Credit Hours 1
- Units 2

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

Name: Husham Riyadh Shaker
Email: husham.r.shaker@almamonuc.edu.iq

8. Course Objectives

Course Objectives	• **To enable students to understand and produce correct form of English utterance.**

9. Teaching and Learning Strategies

Strategy	Cognitive Strategies, Cooperative Learning, and Discussion.

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	1	Strengthening the student's ability to analyze	Seen passage	Lecture & Discussion	Oral Test
2	1	Understanding the subject	Simple present	Lecture & Discussion	Oral Test
3	1	Understanding the subject	Negative + Question	Lecture & Discussion	Oral Test
4	1	Understanding the subject	Present continuous	Lecture & Discussion	Oral Test
5	1	Understanding the subject	Negative + Question	Lecture & Discussion	Oral Test
6	1	Understanding the subject	Past simple	Lecture & Discussion	Oral Test
7	1	Understanding	Negative + Question	Lecture &	Oral Test

		the subject		**Discussion**	
8	**1**	**Strengthening the student's ability to analyze**	Past continuous	**Lecture & Discussion**	**Oral Test**
9	**1**	**Understanding the subject**	Negative + Question	**Lecture & Discussion**	**Oral Test**
10	**1**	**Strengthening the student's ability to analyze**	Seen passage	**Lecture & Discussion**	**Oral Test**
11	**1**	**Assessing the student's level**	**Term Exam**	–	**Written Exam**
12	**1**	**Understanding the subject**	Past perfect	**Lecture & Discussion**	**Oral Test**
13	**1**	**Understanding the subject**	Negative + Question	**Lecture & Discussion**	**Oral Test**
14	**1**	**Understanding the subject**	Past perfect continuous	**Lecture & Discussion**	**Oral Test**
15	**1**	**Understanding the subject**	Negative + Question	**Lecture & Discussion**	**Oral Test**
16	**1**	**Strengthening the student's ability to analyze**	Seen passage	**Lecture & Discussion**	**Oral Test**
17	**1**	**Understanding the subject**	Simple future	**Lecture & Discussion**	**Oral Test & Homework**
18	**1**	**Understanding the subject**	Negative + Question	**Lecture & Discussion**	**Oral Test & Homework**
19	**1**	**Understanding the subject**	Future continuous	**Lecture & Discussion**	**Oral Test**
20	**1**	**Understanding the subject**	Negative + Question	**Lecture & Discussion**	**Oral Test**
21	**1**	**Strengthening the student's ability to analyze**	Seen passage	**Lecture & Discussion**	**Oral Test**

22	**1**	**Understanding the subject**	Future perfect	**Lecture & Discussion**	**Oral Test & Homework**
23	**1**	**Understanding the subject**	Negative + Question	**Lecture & Discussion**	**Oral Test**
24	**1**	**Strengthening the student's ability to analyze**	Seen passage	**Lecture & Discussion**	**Oral Test**
25	**1**	**Understanding the subject**	Future perfect continuous	**Lecture & Discussion**	**Oral Test**
26	**1**	**Understanding the subject**	Negative + Question	**Lecture & Discussion**	**Oral Test**
27	**1**	**Strengthening the student's ability to analyze**	Seen passage	**Lecture & Discussion**	**Oral Test**
28	**1**	**Strengthening the student's ability analyze**	Seen passage	**Lecture & Discussion**	**Oral Test**
29	**1**	**Refining the student's knowledge of the subject**	**Overall Revision**	**Lecture & Discussion**	**Oral Test**
30	**1**	**Assessing the student's level**	**Term Exam**	–	**Written Exam**

11. Course Evaluation

1st Term: 20 (6 attendance & class participation/ 4 midterm exam/ 10 term exam)
2nd Term: 20 (6 attendance & class participation/ 4 midterm exam/ 10 term exam)
Final Exam: 60

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	*Headway*
Main references (sources)	
Recommended books and references (scientific journals, reports…)	
Electronic References, Websites	*Wikipedia.com*