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

Academic Program and Course Description

2024-2025

Introduction:

The educational program is a well-planned set of courses that include procedures and experiences arranged in the form of an academic syllabus. Its main goal is to improve and build graduates' skills, so they are ready for the job market. The program is reviewed and evaluated every year through internal or external audit procedures and programs like the External Examiner Program.

The academic program description is a short summary of the main features of the program and its courses. It shows what skills students are working to develop based on the program's goals. This description is very important because it is the main part of getting the program accredited, and it is written by the teaching staff together under the supervision of scientific committees in the scientific departments.

This guide, in its second version, includes a description of the academic program after updating the subjects and paragraphs of the previous guide in light of the updates and developments of the educational system in Iraq, which included the description of the academic program in its traditional form (annual, quarterly), as well as the adoption of the academic program description circulated according to the letter of the Department of Studies T 3/2906 on 3/5/2023 regarding the programs that adopt the Bologna Process as the basis for their work.

In this regard, we can only emphasize the importance of writing an academic programs and course description to ensure the proper functioning of the educational process.

Concepts and Terminology:

Academic Program Description: The academic program description provides a brief summary of its vision, mission and objectives, including an accurate description of the targeted learning outcomes according to specific learning strategies.

Course Description: Provides a brief summary of the most important characteristics of the course and the learning outcomes expected of the students to achieve, proving whether they have made the most of the available learning opportunities. It is derived from the program description.

Program Vision: An ambitious picture for the future of the academic program to be sophisticated, inspiring, stimulating, realistic and applicable.

Program Mission: Briefly outlines the objectives and activities necessary to achieve them and defines the program's development paths and directions.

Program Objectives: They are statements that describe what the academic program intends to achieve within a specific period of time and are measurable and observable.

Curriculum Structure: All courses / subjects included in the academic program according to the approved learning system (quarterly, annual, Bologna Process) whether it is a requirement (ministry, university, college and scientific department) with the number of credit hours.

Learning Outcomes: A compatible set of knowledge, skills and values acquired by students after the successful completion of the academic program and must determine the learning outcomes of each course in a way that achieves the objectives of the program.

Teaching and learning strategies: They are the strategies used by the faculty members to develop students' teaching and learning, and they are plans that are followed to reach the learning goals. They describe all classroom and extra-curricular activities to achieve the learning outcomes of the program.

University Name: Al-Furat Al-Awsat Technical University
Faculty/ Institute: Al-Mussyyab Technical Institute
Scientific Department: Medical Lap Techniques
Academic or professional program Name
Final certificate Name : Diploma in medical Laboratory Technology
Academic System :course
Description Preparation Date :2024 _2025
File completion Date

Signature:
Head of Department Name:
Dr. Ali Dhaher Marhash
Date: 27/4/2025

Signature:
Scientific Associate Name:
Dr. Muhammad Hadi Sabry
Date: 27/4/ 2025

The file was verified by: Ass. Lecturer Walaa Hussein Allawi
Department of Quality Assurance and University Performance
Director of the Quality Assurance and University Performance Department :
Date: 27/4/2025
Signature:

جامعة الفرات الأوسط التقنية
المعهد التقني المسيب
شعبة ضمان الجودة والأداء الجامعي

Approval of the Dean
ASS.Prof.Dr. Malik N. Hawas
8.5.2025

1. Program Vision

The Medical Laboratory Technology Department works through its specialized scientific studies to establish a technical system based on the requirements and needs of the community and the service facility related to the specialty, including developing technology and technology in the Medical Laboratory Technology Diploma.

2. Program Mission

Working to achieve the goals and requirements of the department through a suitable environment and providing all the material and human requirements necessary to achieve this and working to graduate classes capable of serving the community in providing scientific competence in the field of medical laboratory techniques through technical learning in accordance with internationally approved quality standards.

3. Program Objectives

The Department of Medical Laboratory Technology aims to prepare staff
A technician capable of working in the medical field and hospitals and knowing how to manage them.

4. Program Accreditation

Nothing

5. Other external influences

The departments graduates serve the community in health institutions and hospitals and through practical application in health centers and hospitals during summer training .

6. Program Structure

Program Structure	Number of Courses	Credit hours	Percentage	Reviews*
Institution Requirements	5	10	%7	
College Requirements	3	7	%5	
Department Requirements	25	123	%88	
Summer Training				
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	M.L.T	Laboratory technique	**2**	**4**
	His	Histology	**2**	**3**
	M.L.I	Laboratory instruments	**2**	**2**
	Mic.pre	Microbial preparation	**2**	**3**
	A.Ch	Analytical chemistry	**2**	**4**
	F. of N.	Fundamentals of nursing	**1**	**2**
	CA	Computer	**1**	**1**
	HRD	Human Rights and Democracy	**2**	**-**
First year/ 2nd semester	B.T	Blood transfusion	**1**	**2**
	Bioche	Biochemistry	**2**	**4**
	MB	Molecular Biology	**2**	2
	QC	Quality control	**2**	**4**
	HIT	Histological techniques	**2**	**3**
	La.S	Lap Safety	**1**	**2**
	AR	Arabic language	**2**	**-**
	Eng.	English Language	**2**	**-**
Second year/ first semester	Pro	Protozoa	**2**	**4**
	Hem	Hematology1	**2**	**4**
	Mic.	microbiology	**2**	**4**
	Im	Immunology	**2**	**4**
	CL.CH	Clinical chemistry1	**2**	**4**
	Vir	Virology	**1**	**2**
	Me.Eth.	Medical ethics	2	-
		Baath Party Crimes	2	-
Second year/ 2nd semester	Hem	Hematology2	2	**4**
	Bac.Pat	Pathogenic Bacteria	2	**4**
	CL.im	Clinical Immunology	2	**4**
	CL.ch	Clinical biochemistry2	2	**4**
	Hel	Helminthes	2	4
	M.M	Medical Mycology	1	2
	CA	Computer application	**1**	**1**
	Ar.	Arabic language	2	-
	G.PRO	Graduation project	2	-

8.Expected learning outcomes of the program
Knowledge
A1- introducing student to the technical skills in the field of condition pathological analysis techniques A2- introducing student to how collect and process pathological samples A3- introducing student to the base principles of basic tests A4- striving to adopt modern academic programs in learning and assessment
Skills
B1-Empoweing the student with skills in field of pathological analysis B2- enabling the student to used and maintain material and devices B3- enabling the student to read result distinguish between normal and abnormal values and interpret them clinically
Ethics
C1- scientific integrity in providing result and maintaining their confidentiality C2- respecting occupation safety rules to protect oneself , friend and patients C3- encouraging cooperation and teamwork

9. Teaching and Learning Strategies
The modern education system adopts means of illustration such as illustrative pictures, and the use of scientific means, devices, methods, programs, and products for each laboratory procedure, and videos explaining how the laboratory procedure works, while providing theoretical lectures that include the scientific basis for each procedure in order to improve the teaching process.

10. Evaluation methods
Daily exam Monthly exam Intellectual questions Final exam

11. Faculty						
Faculty Members						
Academic Rank			**Special Requirements /Skills (if applicable)**		**Number of the teaching staff**	
					Staff	**Lecturer**
	General	**Special**			✓	
Assistant Professor	Veterinary Medicine	Mystical & Protective Medicine			✓	
Assistant	Philosophy in	Biologist			✓	
Professor	Biology Science				✓	
Assistant Professor	Biology	Immunity			✓	
Assistant Professor	Biology	Immunity			✓	
Assistant Lecturer	Biology	Animal science			✓	
Assistant Lecturer	Biology	Animal science			✓	
Assistant Lecturer	Biology	Animal science			✓	
Assistant Lecturer	Biology	Animal science			✓	
Assistant Lecturer	Biology	Parasitology			✓	
Assistant Lecturer	English Language	English Teaching Methods			✓	
Assistant Lecturer	Chemistry	Chemistry			✓	
Assistant Lecturer	Veterinary Medicine	Oral & Medical Microbiology			✓	

Assistant Lecturer	Veterinary Medicine	Zoonotic Diseases			✓	
Assistant Lecturer	Bio-resistance technologies	Bio-resistance technologies			✓	
Assistant Lecturer	Biotechnology	biology			✓	
Assistant Lecturer	Veterinary medicine	parasitology			✓	
Assistant	Biology	Biology			✓	

Assistant Lecturer	Physiology	Veterinary Physiology				
Assistant Lecturer	Public Health Branch	Veterinary Health				
Assistant Lecturer	Biology	plant				

Professional Development
Mentoring new faculty members
Electronic and in-person workshops and courses are approved inside and outside the educational institution.
Professional development of faculty members
Meetings, seminars and training courses are approved to prepare and prepare faculty members.

1. **Acceptance Criterion**
- Central Admission - for morning studies. - Direct application - for evening studies - according to grade and competition.

2. **The most important sources of information about the program**
A group of methodological books related to the academic subjects are relied upon.

3. Program Development Plan

Modern, world-class scientific equipment that keeps pace with advances in the field of medical laboratories through faculty partnerships in an advanced, specialized training course.

Program Skills Outline														
											Required program Learning outcomes			
Ethics				Skills			Knowledge				Basic or optional	Course Name	Course Code	Year/Level
	C3	C2	C1		B3	B2	B1	A4	A3	A2	A1				
	✓	✓			✓	✓	✓	✓	✓	✓	✓	Basic	Medical laboratory techniques	L.T.M	First year /level 1
	✓	✓					✓	✓	✓	✓	✓	Basic	Microbial preparation	MIC.PRE	
	✓	✓				✓	✓	✓	✓			Basic	Medical laboratory instrument	M.L.I	
	✓				✓			✓			✓	Basic	Histology	His	
	✓	✓					✓	✓	✓		✓	Basic	Analytical chemistry	A.CH	
	✓	✓	✓			✓	✓	✓	✓			Basic	Fundamentals of nursing	F. of N.	
	✓	✓				✓	✓	✓	✓		✓	Basic	Quality control	Q.C	First year /level 2
	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	Basic	Histological techniques	HIT	
	✓	✓	✓				✓	✓			✓	Basic	Molecular biology	MB	
	✓	✓					✓	✓			✓	Basic	Lab. Safety	La.S	
	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	Basic	Blood transfusion	B.T	
	✓	✓				✓	✓	✓	✓		✓	Basic	Biochemistry	Bioche	
	✓							✓				Optinal	Human right and democratic	HRD	

	✓							✓				Optinal	English language	Eng	
	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	Basic	Microbiology	Mic	Second year / level 1
	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	Basic	Hematology	Hem	
	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	Basic	CLINICAL CHEMISTRY	CL.CH	
	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	Basic	Immunology	IM	
	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	Basic	Protozoa	Pro	
	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	Basic	Virology	Vir	
	✓							✓				Basic	Medical Ethics	Me.Eth	
	✓	✓						✓				Optinal	جرائم نظام البعث في العراق		
	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	Basic	Bacterial pathogenicity	Bac.Pat	Second year / level 2
	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	Basic	Hematology/2	Hem	
	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	Basic	Clinical chemistry	Cl.ch	
	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	Basic	Clinical immunology	Cl.im	
	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	Basic	Helminthes	Hel	
	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	Basic	Medical mycology	M.M	
	✓						✓	✓					Graduation project	G.PRO	
	✓	✓			✓	✓	✓	✓	✓			Optinal	Computer application	CA	

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

Course Description Form

1. Course Name: Histology
2. Course Code:
His
3. Semester / Year: 1st semester/ First year
4. Description Preparation Date: 18/2/2024
5. Available Attendance Forms: Attend a lecture
6. Number of Credit Hours (Total) / Number of Units (Total): Number of Units (5)
75/5
7. Course administrator's name (mention all, if more than one name)
Name: Dr. Ruqayah Ali Salman Email: roqa@atu.edu.iq
8. Course Objectives

Course Objectives	To understand the histological structure and morphology of human tissue.
9. Teaching and Learning Strategies	
Strategy	• curriculums and specialized books practical experiments • Latest research and periodicals • Educational videos

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	5		Shape of cell	Attend lecture	exam
2	5		Epithelial tissue –simple epi T.	Attend lecture	exam
3	5		Epithelial tissue- Stratified epith. T.	Attend lecture	exam
4	5		Connective tissue – Loose c t.T.	Attend lecture	exam
5	5		Connective tissue –dense co	Attend lecture	exam
6	5		Connective issue –the blood	Attend lecture	Exam
7	5		Connective tissue –compact bone	Attend lecture	exam
8	5		External feature	Attend a	exam

			of digestive system	lecture	
9	5		Urogenital system of male &female	Attend a lecture	exam
10	5		Liver	Attend a lecture	Exam
11	5		Spleen	Attend a lecture	exam
12	5		Lymph node	Attend a lecture	exam
13	5		Circulatory system (Artery)	Attend a lecture	exam
14	5		Circulatory system (vein)	Attend a lecture	exam
15	5		Final exam	Attend a lecture	Exam

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 written exams, reports etc The theoretical monthly written exam is 20 marks The monthly written practical exam is 10 marks The theoretical final written exam is 35 marks The final practical written exam is 25 marks

12. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	Not available
Main references (sources)	ATLAS OF HISTOLOGY (thirteen edition)
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	

Course Description Form

1. Course Name: Laboratory Techniques / First stage/ theoretical
2. Course Code:
L.T.M
3. Semester / Year: 1st SEMSTER
4. Description Preparation Date: 2/2/2024
5. Available Attendance Forms: Attend a lecture
6. Number of Credit Hours () / Number of Units ()
90/6

7. Course administrator's name (mention all, if more than one name)					
Name: Hadeer Amer Mohan Email: hadeer.mohan@atu.edu.iq					
8. Course Objectives					
Course Objectives	The student will be able to: - **- General objectives: -** Understand the principle of all medical techniques that used in the medical laboratories.				
9. Teaching and Learning Strategies					
Strategy	• Lectures • Practical experiences • The exams				
10. Course Structure					
Week	**Hours**	**Required Learning Outcomes**	**Unit or subject name**	**Learning method**	**Evaluation method**
1	6	Introduction to medical lab techniqu		Attend a lecture	exar
2	6	Sample collection and transport		Attend lecture	exar
3	6	Culturing of microorganism		Attend lecture	exar
4	6	GUE		Attend lecture	exar
5	6	GSE		Attend lecture	exar
6	6	Seminal examination		Attend lecture	exar
7	6	Monthly exam		Attend lecture	exar
8	6	Agglutination technique		Attend lecture	exar
9	6	ELISA technique		Attend lecture	exar
10	6	RIA technique		Attend lecture	exar
11	6	PCR technique		Attend lecture	exar
12	6	Immunofluorescence technique		Attend lecture	exar
13	6	Review		Attend lecture	exar
14	6	Review		Attend lecture	exar
15	6	**Monthly exam**		Attend lecture	exar
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 written exams, reports .... etc The theoretical monthly written exam is 20 marks The monthly written practical exam is 10 marks The theoretical final written exam is 35 marks The final practical written exam is 25 marks

12. Learning and Teaching Resources	
Required textbooks (curricular books, any)	Nothing
Main references (sources)	MEDICAL labrotory technique Book
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	

Course Description Form

1. Course Name: Microbial Preparation / First stage/ theoretical
2. Course Code:
MIC.PRE
3. Semester / Year: 1st SEMSTER
4. Description Preparation Date: 2/2/2024
5. Available Attendance Forms: Attend a lecture
6. Number of Credit Hours (75) / Number of Units (5)
7. Course administrator's name (mention all, if more than one name)
Name: Name: Ayat Hazem Ageel Email: aiyat.ageel@atu.edu.iq
8. Course Objectives

Course Objectives	prepare slides for histopathology and cytology A) In general:- Students can prepare permanent slides for different body organs B) Specifically student can do :- Permanent stained tissue slides and body fluid smears. 1- Fix and preserve tissue specimen.

9. Teaching and Learning Strategies	
Strategy	• Lectures • Practical experiences • The exams

10. Course Structure

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

1	5	Definition of some terminology that de With histology , cytology, etc		Attend a lecture	exam
2	5	Sample collection, biopsy, and autop		Attend a lecture	exam
3	5	Steps of preparing tissue for s a fixation, fixatives.		Attend a lecture	exam
4	5	Steps of preparing tissue for stu fixation, fixatives.		Attend a lecture	exam
5	5	Routine fixatives and special fixative		Attend a lecture	exam
6	5	Routine fixatives and special		Attend a lecture	exam
7	5	fixative Washing, solution , time		Attend a lecture	exam
8	5	Dehydration , dehydrants		Attend a lecture	exam
9	5	Clearing ,clearing agents		Attend a lecture	exam
10	5	Infiltration ,types of waxes .		Attend a lecture	exam
11	5	blocking and trimming		Attend a lecture	exam
12	5	Microtomes, Sectioning.		Attend a lecture	exam
13	5	Review		Attend a lecture	exam
14	5	Review		Attend a lecture	exam
15	5	Final exam		Attend a lecture	exam

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 written exams, reports .... etc
The theoretical monthly written exam is 20 marks
The monthly written practical exam is 10 marks
The theoretical final written exam is 35 marks
The final practical written exam is 25 marks

12. Learning and Teaching Resources

Required textbooks (curricular books, any)	Nothing
Main references (sources)	A manual of Histological Techniques and The diagnos Application By : John D. Banehroft , H.C. Cook
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	

Course Description Form

1. Course Name: Laboratory instruments / First stage/ theoretical
2. Course Code:
M.L.I
3. Semester / Year: 1st SEMSTER
4. Description Preparation Date: 2/2/2024
5. Available Attendance Forms: Attend a lecture
6. Number of Credit Hours (60) / Number of Units (4)
7. Course administrator's name (mention all, if more than one name)
Name: Safa Nihad Abed Email safa.abd@atu.edu.iq
8. Course Objectives

Course Objectives	The student will be able to: - **- General objectives: -** Understand the principle of all medical techniques that use medic laboratories.
9. Teaching and Learning Strategies	
Strategy	• Lectures • Practical experiences • The exams

10. Course Structure

Week	Hours	Required Learning Outcome S	Unit or subject name	Learning method	Evaluati
1	4		Introduction to medical lab technique	Attend a lectur e	exam
2	4		Sample collection and transport	Attend a lecture	exam
3	4		Culturing of microorganism	Attend lecture	exam
4	4		GUE	Attend	exam
5	4		GSE	Attend a lecture	exam
6	4		Seminal examination	Attend a lecture	exam

7	4		Monthly exam	Attend a lecture	exam
8	4		Agglutination technique	Attend a lecture	exam
9	4		ELISA technique	Attend a lecture	exam
10	4		RIA technique	Attend a lecture	exam
11	4		Immunofluorescence	Attend a lecture	exam
13	4		PCR	Attend a lecture	exam
14	4		Review	Attend a lecture	exam
15	4		Monthly exam	Attend a lecture	exam

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 written exams, reports .... etc The theoretical monthly written exam is 20 marks The monthly written practical exam is 10 marks The theoretical final written exam is 35 marks The final practical written exam is 25 marks	
12. Learning and Teaching Resources	
Required textbooks (curricular books, any)	Nothing
Main references (sources)	MEDICAL labrotory technique Book
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	

Course Description

1. Course Name: Analytical chemistry / First stage/ theoretical
2. Course Code:
A.CH
3. Semester / Year: 1st SEMSTER
4. Description Preparation Date: 2/2/2024
5. Available Attendance Forms: Attend a lecture
6. Number of Credit Hours (90) / Number of Units (6)
7. Course administrator's name (mention all, if more than one name)
Name: maream mammon mahmmed Email: maream.mahmmed.ims@atu.edu.iq
8. Course Objectives

Course Objectives	Study and understand the substance and solutions, how to deal wit prepare them, and how to dilute them practically and using laws n

9. Teaching and Learning Strategies	
Strategy	• Study and understand the substance and solutions, how to deal with materials, how to prepare th them practically and using laws mathematically.

10. Course Structure

Week	**Hours**	**Required Learning Outcomes**	**Unit or subject name**	**Learning method**	**Evaluation method**
1	6	Introduction to analytical chemistry a w methods are used chemically		Attend a lecture	exam
2	6	About organicchemistry, what are applications, what are isotopes and their types?		Attend a lecture	exam
3	6	An overview of the types of standard methods an explanation of what is the error rate		Attend a lecture	exam
4	6	Explain the chemical and physical states matter and how to deal with matter in its vari states		Attend a lecture	exam
5	6	Explain the law of molarity and how to apply practically and mathematically		Attend a lecture	exam
6	6	Explain the law of normality and how to apply it practically and mathematically		Attend a lecture	exam
7	6	Explain the general dilution lav		Attend a	exam

		and how prepare liquid and solid substances		lecture	
8	6	Describe the process of titration practically mathematically, what is t purpose of titration and what types a used in the process titration		Attend a lecture	exam
9	6	Definition of ph. of solutions, what is importance, and how to extract it practically using laws mathematically,		Attend a lecture	exam
10	6	Definition of acids, bases and how to prep Them		Attend a lecture	exam
11	6	Definition of strong acid and weak acid		Attend a lecture	exam
12	6	Definition of a strong base and a weak base		Attend a lecture	exam
13	6	What is weak acid and its salt and how to prep it		Attend a lecture	exam
14	6	What is a weak base, its salt and how to prepar		Attend a lecture	exam
15	6	Review		Attend a lecture	exam

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 written exams, reports .... etc The theoretical monthly written exam is 20 marks The monthly written practical exam is 10 marks The theoretical final written exam is 35 marks The final practical written exam is 25 marks

12. Learning and Teaching Resources	
Required textbooks (curricular book if any)	Not available
Main references (sources)	Foundations of Analytical Chemistry / Douglas A. Scoog201
Recommended books and references (scientific journals, reports...)	Foundations of Analytical Chemistry / Douglas A. Scoog201
Electronic References, Websites	Principles of analytical chemistry (researchgate.net).pdf

7	2		Word Processing (Cont.): Creating and Managing Tables, Utilizing Styles and Themes, Spell Check and Grammar Tools, Using Headers and Footers. Spread Sheet: Introduction to Spreadsheet Software, Creating and Formatting Worksheets. Sorting and Filtering Data, Using Formulas and Functions.	Attend a lecture	exam
8	2		Spread Sheet (Cont.): Using Formulas and Functions, Using Pivot Tables for Data Analysis, Data Validation and Error Checking, Data Visualization: Creating Charts and Graphs.	Attend a lecture	exam
9	2		Presentation Software: Introduction to Presentation Software, Overview of Popular Presentation Tools, creating a New Presentation, Using Templates and Themes, Inserting and Formatting Text and Images, Transition and Animation Effects.	Attend a lecture	exam
10	2		Presentation Software (Cont.): Using Speaker Notes and Timers,, Advanced Features: Hyperlinks and Action Buttons, Troubleshooting Common Presentation Issues, Future Trends in Presentation Technology.	Attend a lecture	Exam
11	2		Introduction to Internet and Web Browsers: Computer networks Basic; LAN, WAN; Concept of Internet and its Applications; connecting to internet.	Attend a lecture	exam
12	2		Introduction to Internet and Web Browsers (Cont.): World Wide Web; Web Browsing software's, Search Engines; Understanding URL; Domain name; IP Address.	Attend a lecture	exam
13	2		Communications and Emails: Basics of electronic mail; Getting an email account; Sending and receiving	Attend a lecture	exam

			emails; Accessing sent emails; emails; Using Emails; Document collaboration.		
14	2		Introduction to Cloud Computing and Services: Definition of Cloud Computing and its concept,	Attend a lecture	exam
15	2		Cloud-Based Office Suites (Office 365 and Google Workspace), Google Docs, Google Sheets, Google Drive, Google Meet.	Attend a lecture	Exam

11. Course Evaluation
Distributing the score out of 100 according to the tasks assigned to the student such as daily etc. preparation, daily oral, monthly, or written exams, reports The theoretical monthly written exam is 20 marks The monthly written practical exam is 10 marks The theoretical final written exam is 35 marks The final practical written exam is 25 marks

12. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	1. Graham Brown, David Watson, "Cambridge IGCSE Information and Communication Technology", 3rd Edition (2020) 2. Alan Evans, Kendall Martin, Mary Anne Poatsy, "Technology In Action Complete", 16th Edition (2020). 3. Ahmed Banafa, "Introduction to Artificial Intelligence (AL)", 1st Edition (2024). 4.Microsoft Office 2019 Step by Step Ist Edition by Curtis Frye & Joan Lambert
Main references (sources)	
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	

Course Description Form

1. Course Name: Fundamentals of nursing / First stage/ theoretical
2. Course Code:
F. of N.
3. Semester / Year: 1st SEMSTER
4. Description Preparation Date: 19/3/2024
5. Available Attendance Forms: Attend a lecture
6. Number of Credit Hours (Total)45 / Number of Units (Total): Number of Units (3)
7. Course administrator's name (mention all, if more than one name)
Name: shaima alawi obaid Email: shaima.obaid @atu.edu.iq
8. Course Objectives

Course Objectives	Learn about the foundations of nursing. • Special: - Getting to know the basics of nursing, firs professional safety in the field of nursing, and method patient while he is in medical laboratories
9. Teaching and Learning Strategies	
Strategy	• Lectures • Practical experiences • The exams

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	3		Introduction to nursing	Attend a lecture	exam
2	3		Medical examination	Attend a lecture	exam
3	3		Vital signs, temperature measurement	Attend a lecture	exam
4	3		Pulse, definition, factors that effecting pu measurement of pulse	Attend a lecture	exam
5	3		Respiration, definition, factors that effect respiration, measurement of respiration	Attend a lecture	exam
6	3		Blood pressure, definition, factor the effect blood pressure, hyper and hypotensi	Attend a lecture	Exam

			measurement of blood		
7	3			e	exam
8	3		Health care, definition, factors effecting he care	Attend a lecture	Exam
9	3		Factors that effects the health of worker laboratories, natural factors, infectious diseases Chemical factors- disease	Attend a lecture	exam
10	3		Chemical factors- disease	Attend a lecture	Exam
11	3		Psychological factors-diseases	Attend a lecture	exam
12	3		Biological factors- types-their effects on work in Lab.- diseases.	Attend a lecture	
13	3		First aid- definition, paramedic, fundamental first aid, wound, bleeding .	Attend a lecture	
14	3		Burns- types of fracture aid- artificial respiration Final examination .	Attend a lecture	
15	3		Biological factors- types-their effects on work in Lab.- diseases.	Attend a lecture	

11. Course Evaluation
Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, written exams, reports etc The theoretical monthly written exam is 20 marks The monthly written practical exam is 10 marks The theoretical final written exam is 35 marks The final practical written exam is 25 marks

12. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	
Main references (sources)	
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	

Course Description Form

1. Course Name: Name of the course: Human Rights and Democracy / Theoretical / First stag
2. Course Code:
HRD
3. Semester / Year:
first stage
4. Description Preparation Date: 20/3/2024
Medical laboratories
5. Available Attendance Forms:
6. Number of Credit Hours (Total) / Number of Units (Total)
30hours, 2 credit
7. Course administrator's name (mention all, if more than one name)
Name : a.t Muneer Hadi Hussein Email: muneer.hussein.ims@atu.edu.iq
8. Course Objectives

Course Objectives	At the end of the academic year, the student should be able to recogn the principles and values of human rights, introduce them, r generations to respect and adhere to them, and become familiar w public freedoms and what these freedoms are in their details.
9. Teaching and Learning Strategies	
Strategy	Written lectures

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2		Human rights/definition/goals Human rights in ancient civilizations, especially Mesopotamian civilization	Attend a lecture	Quiz discussion
2	2		Human rights in divine laws, with a focus on human rights in Islam	Attend a lecture	quiz discussion
3	2		Human rights in contemporary and modern history / international recognition of human rights since World War I and the League of Nations	Attend a lecture	Quiz discussion

4	2		Regional recognition of human rights (International Committee of the Red Cross / Amnesty International / Human Rights Watch / National Human Rights Organizations)	Attend a lecture	Quiz Discussion
5	2		Human rights in Iraqi constitutions between theory and reality	Attend a lecture	Quiz Discussion
6	2		The relationship between human rights and public freedoms: A - In the Universal Declaration of Human Rights B- In regional charters and national constitutions	Attend a lecture	Quiz discussion
7	2		Modern human rights: facts in development - the right to a clean environment - the right to solidarity - the right to religion	Attend a lecture	Quiz Discussion
8	2		Exam		Exam.
9	2		Economic and cultural human rights and civil and political human rights	Attend a lecture	Quiz discussion
10	2		Guarantees of respect and protection of human rights at the national level / Guarantees in the constitution and laws / Guarantees in the principle of the rule of law / Guarantees in constitutional oversight / Guarantees in freedom of speech and public opinion / The role of non- governmental organizations in respecting and protecting human rights	Attend a lecture	Quiz Discussion
11	2		Democracy / its definition / types	Attend a lecture	Quiz Discussion
12	2		Concepts of democracy	Attend a lecture	Quiz discussion
13	2		Democracy in the Third World	Attend a lecture	Quiz Discussion
14	2		Concepts of freedoms / classification of basic public freedoms / intellectual freedoms / economic and social freedoms	Attend a lecture	Quiz Discussion

15	2		Final exam of second course		Exam.

11. Course Evaluation
Short oral and written tests Report preparation Homework assignments Practical and applied tests Other contributions and participation

12. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	
Main references (sources)	
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	

Course Description Form 2

61. Course Name: Quality control	
62. Course Code:	
Q.C	
63. Semester /First Year: second semester	
64. Description Preparation Date:22/3/2024	
65. Available Attendance Forms:	
66. Number of Credit Hours (90) / Number of Units (6)	
67. Course administrator's name (mention all, if more than one name)	
Name: Hadeer Amer Mohan Email: hadeer.mohan@atu.edu.iq	
68. Course Objectives	
Course Objectives	• The student will be able to: • Understand the principles of all instruments used in medical laboratories and how to draw samples.
69. Teaching and Learning Strategies	
Strategy	• Teaching and learning strategies and methods adopted in implementing the program in general.

70. Course Structure					
Week	**Hours**	**Required Learning Outcomes**	**Unit or subject name**	**Learning method**	**Evaluation method**
1	6		Introduction to Quality Control	Attend lecture	Exam
2	6		The Medical Importance of Quality Control	Attend a lecture	exam
3	6		Scales for Diagnosing Errors and Rejecting Results	Attend a lecture	Exam
4	6		Materials for Quality Control	Attend a lecture	exam
5	6		Quality Control for Qualitative Tests	Attend a lecture	exam
6	6		Quality Control for Quantitative Tests	Attend a lecture	exam
7	6		Quality Control for Semi-Quantitative Tests	Attend a lecture	exam
8	6		Quality Control and Its Problems	Attend a lecture	Exam
9	6		Review		
10	6		Exam		

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 written exams, reports etc The theoretical monthly written exam is 20 marks The monthly written practical exam is 10 marks The theoretical final written exam is 35 marks The final practical written exam is 25 marks

12. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	Nothing.
Main references (sources)	MEDICAL laboratory technique

Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	

Course Description Form

1. Course Name: Molecular Biology					
2. Course Code: MB					
3. Semester /First Year: second semester					
4. Description Preparation Date:22/2/2024					
5. Available Attendance Forms:					
6. Number of Credit Hours (60) / Number of Units (4)					
7. Course administrator's name (mention all, if more than one name) Name: Dr. Ruqayah Ali Salman Email: roqa@atu.edu.iq					
8. Course Objectives **Course Objectives** • Students will be able to understand the molecular process of intact cells signaling and the molecular structures of the cell.					
9. Teaching and Learning Strategies **Strategy** • curriculums and specialized books practical experiments • Latest research and periodicals • Educational videos					
10. Course Structure					
Week	**Hours**	**Required Learning Outcomes**	**Unit or subject name**	**Learning method**	**Evaluation method**
1	4		Introduction to molecular biology	Attend lecture	Exam
2	4		Cell cycle	Attend lecture	Exam
3	4		DNA and RNA structure	Attend lecture	Exam
4	4		DNA replication	Attend lecture	Exam
5	4		DNA transcription	Attend lecture	Exam
6-7	4		**Translation and protein synthesis**	Attend lecture	Exam
8	4		Gene expression an regulation	Attend lecture	Exam
9-10	4		Inhibitors of translation and transcription	Attend lecture	Exam
11	4		DNA repair system	Attend lecture	Exam
12	4		Mutation and chromosomal aberrations	Attend lecture	Exam
13	4		Chemical and physical agents that cause mutation	Attend lecture	Exam
14	4		Recombinant DNA technology (cDNA technique)	Attend lecture	Exam
15	4		Cloning and application (briefly)	Attend lecture	Exam
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 written exams, reports .....etc The theoretical monthly written exam is 20 marks The monthly written practical exam is 10 marks The theoretical final written exam is 35 marks The final practical written exam is 25 marks
12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Not available
Main references (sources)	• Molecular Biology (Third edition) David P. Clark, 2018
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	

Course Description Form

1. Course Name: Histological techniques/1st /
2. Course Code:
HIT
3. Semester / Year: 2ND SEMSTER
4. Description Preparation Date: 18/3/2024
5. Available Attendance Forms: Attend a lecture
6. Number of Credit Hours (Total) / Number of Units (Total): Number of Units (5)
75/5
7. Course administrator's name (mention all, if more than one name)
Name: Ayat Hazem Ageel Email: aiyat.ageel@atu.edu.iq
8. Course Objectives

Course Objectives	How to handle and preserve samples and make histo them

9. Teaching and Learning Strategies	
Strategy	• Lectures • Practical experiences • The exams

10. Course Structure

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

1	5		Mounting , Adhesives	Attend a lecture	exam
2	5		Staining , classification of stain		
3	5		Staining , classification of stain		
4	5		Staining section	Attend a lecture	exam
5	5		Staining section	Attend a lecture	exam
6	5		Methods of staining .	Attend a lecture	Exam
7	5		Types of stains	Attend a lecture	exam
8	5		preparation of stain and oxidati of some stains	Attend a lecture	Exam
9	5		Stains solvents ,factors affection staining , storage of stains , ho to choose stain .	Attend a lecture	exam
10	5		Decalcification , bone tissue	Attend a lecture	Exam
11	5		Examination for second term	Attend a lecture	exam
12	5		Tissue slide	Attend a lecture	exam
13	5		Freezing	Attend a lecture	exam
14	5		Microtome	Attend a lecture	exam
15	5		Final examination .	Attend a lecture	Exam

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 written exams, reports etc The theoretical monthly written exam is 20 marks The monthly written practical exam is 10 marks The theoretical final written exam is 35 marks The final practical written exam is 25 marks

12. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	Nothing
Main references (sources)	A manual of Histological Techniques and The diagnostic By : John D. Banehroft , H.C. Cook

Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	

Course Description Form

1. Course Name: laboratory safety
2. Course Code:
La.S.
3. Semester / Year: second semester / year 1
4. Description Preparation Date:

5. Available Attendance Forms:
6. Number of Credit Hours (Total) / Number of Units (Total)
45/3
7. Course administrator's name (mention all, if more than one name)
Name: shaima alawi obaid Email: shaimaobaid@atu.edu.iq
8. Course Objectives

Course Objectives	**1. Know what is meant by laboratory safety.....** **2. identify laboratory risks...** **3. identify laboratory chemiy...**

9. Teaching and Learning Strategies

Strategy	Lectures The exam

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1and 3	3		Introduction To laboratory Safety General lab. Safety roles	Attend Lecture Attend Lecture	Exam Exam

4and	3		Person protection equipment's	Attend a lecture	exam
6and and8	3		Biological hazards	Attend lecture	exam
9-10	3		Types of biolog Hazards	Attend lecture	
11	3		Chemical Hazards	Attend lecture	exam
12	3		Types of Chemical hazards	Attend lecture	exam
13	3		Review	Attend lecture	exam
14-1	3		Final exam		exam

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 written exams, reports etc.

12. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	
Main references (sources)	
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	

Course Description Form

1. Course Name: Blood transfusion
2. Course Code:
B.T
3. Semester / Year: 2ND SEMSTER
4. Description Preparation Date: 18/4/2024
5. Available Attendance Forms: Attend a lecture
6. Number of Credit Hours (Total 45) / Number of Units (Total): Number of Units (3)
7. Course administrator's name (mention all, if more than one name)

Name: moayad saleh nameh Email: moayad.nameh@atu.edu.iq					
8. Course Objectives					
Course Objectives			How to handle and preserve samples and make histo them		
9. Teaching and Learning Strategies					
Strategy			• Lectures • Practical experiences • The exams		
10. Course Structure					
Week	**Hours**	**Required Learning Outcomes**	**Unit or subject name**	**Learning method**	**Evaluation method**
1	3		Information of blood transfusion	Attend a lecture	exam
2	3		Blood components , blood collection		
3	3		choosing the donor , examination ,time of collection		
4	3		Blood group ,ABO system, Rh factor , Lewis system	Attend a lecture	exam
5	3		Classification of blood typing	Attend a lecture	exam
6	3		Direct and indirect coombs test Blood	Attend a lecture	Exam
7	3		Process of cross matching ,reporting and record the result	Attend a lecture	exam
8	3		Roles of blood transfusion ,bl Disease	Attend a lecture	exam
9	3		Pregnant care ,leukemia of infant .	Attend a lecture	exam
10	3		Component of blood after store ,anticoagulants	Attend a lecture	Exam
11	3		Examination for second term	Attend a lecture	exam
12	3		Blood transfusion disadvantage	Attend a lecture	exam

13	3		Separation of blood content ,meth of separation	Attend a lecture	exam
14	3		Quality control, tools ,persons ,meth	Attend a lecture	exam
15	3		Final examination .	Attend a lecture	Exam

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 written exams, reports .....etc The theoretical monthly written exam is 20 marks The monthly written practical exam is 10 marks The theoretical final written exam is 35 marks The final practical written exam is 25 marks

12. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	Nothing
Main references (sources)	A manual of Histological Techniques and The diag By : John D. Banehroft , H.C. Cook
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	

Course Description Form

1. Course Name: BIOCHEMSTERY /1ST year /
2. Course Code:
Bioche.
3. Semester / Year: 2ND SEMSTER
4. Description Preparation Date: 18/4/2024
5. Available Attendance Forms: Attend a lecture
6. Number of Credit Hours (Total 90) / Number of Units (Total): Number of Units (6)
7. Course administrator's name (mention all, if more than one name)
Name: Baraa.B.Aldin Email: baraa.ahmed.ims@atu.edu.iq
8. Course Objectives

Course Objectives	Know the functioning of cells, the functions and important enzymes Knowledge of metabolism

9. Teaching and Learning Strategies	
Strategy	• Lectures • Practical experiences • The exams

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	6		Definition of biochemistry and what are the components of	Attend a lecture	exam
2	6		The cell and its importance Carbohydrates, their classification a types and their chemical composition		
3	6		Fats, their characteristics and types and chemical composition		
4	6		Essential fats and derived fats	Attend a lecture	exam
5	6		Proteins and their properties	Attend a lecture	exam
6	6		Peptide Bond in Amino Acids	Attend a lecture	Exam
7	6		Amino acids, their types and characteristics of each type	Attend a lecture	exam
8	6		Enzymes and their classification	Attend a lecture	Exam
9	6		Know some of the disorders that af Glands and affect the work of enzyme	Attend a lecture	exam
10	6		Types of glands, their location and function of the enzyme action	Attend a lecture	Exam
11	6		Endocrine diseases	Attend a lecture	exam
12	6		Vitamins, their properties importance	Attend a lecture	exam
13	6		Sources of vitamins	Attend a lecture	exam
14	6		Laboratory tests for some vitamins	Attend a lecture	exam
15	6		Review	Attend a lecture	Exam

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 written exams, reports .....etc

The theoretical monthly written exam is 20 marks

The monthly written practical exam is 10 marks

The theoretical final written exam is 35 marks

The final practical written exam is 25 marks

12. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	Nothing
Main references (sources)	BIOCHEMSTRY
Recommended books and references (scientific journals, reports...)	HARPERS ILLUSTRATED BIOCHEMSTERY
Electronic References, Websites	Online Medical Learning - HMX | Harvard Medical School

Course Description Form

1. Course Name: English Language/ Second semester					
2. Course Code:					
Eng.					
3. Semester / Year: 1st / Second semester					
4. Description Preparation Date: 23- 2-2024					
5. Available Attendance Forms: Attend a lecture					
6. Number of Credit Hours (Total30) / Number of Units (Total)/ (2)					
7. Course administrator's name (mention all, if more than one name)					
Name: Afrah Mohammed Muslim Email: afrah.al-sowaidi.ims@atu.edu.iq					
8. Course Objectives					
Course Objectives	1. Improving the English language for students and teachers to the point where they can use it as a popular language of communication, research, and study. 2. Improving the educational level to deal with the translation of scientific texts properly.				
9. Teaching and Learning Strategies					
Strategy	1. Listening + Speaking, 2. Writing + reading. Each level is divided into four educational stages, with specific proced objectives to support what has been previously learned while adding everything new.				
10. Course Structure					
Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2		**Introduction** am/are/is my/your What's your name? p6 How are you? p8	attend a lecture	exam

2	2		Questions, am/are/is he/she/they – his/her Negatives, questions, short answers	attend a lecture	exam
3	2		Spelling of –ing and spelling of -ed	attend a lecture	exam
4	2		Possessive adjectives, Possessive	attend a lecture	exam
5	2		Present Simple I/you/they	attend a lecture	exam
6	2		The time. p40 present Simple he/she/it questions and negatives	attend a lecture	exam
7	2		Object pronouns this/that questions and answers	attend a lecture	exam
8	2		There is/are, any Prepositions	attend a lecture	exam
9	2		Past Simple - irregular Verbs	attend a lecture	exam
10	2		Past Simple - regular and irregular questions and negatives Short answers	attend a lecture	exam
11	2		can/can't Requests and offers	attend a lecture	exam
12	2		want, like, and would like	attend a lecture	exam
13	2		Present Simple and Present Continuous	attend a lecture	exam
14	2		question words revision resent Continuous for future	attend a lecture	exam
15	2		Final exam	attend a lecture	exam
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 written exams, reports etc.	
12. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	New Headway Beginner student's Book
Main references (sources)	
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	

Course Description Form

1. Course Name: Arabic Language /1ST year /
2. Course Code:
Ar.
3. Semester / Year: 2ND SEMSTER
4. Description Preparation Date: 18/3/2024
5. Available Attendance Forms: Attend a lecture
6. Number of Credit Hours (Total)30 / Number of Units (Total): Number of Units (2)
7. Course administrator's name (mention all, if more than one name)
Name: Dr. Noha Abdel Rasoul Zaki Email:

8. Course Objectives	
Course Objectives	- Preparing well-qualified students in the Arabic language and literature, familiar with contemporary trends and approaches in their specialization. 2- Expanding linguistic and literary awareness to include all students and the local community through lectures, seminars, and various training courses, and supporting creative talents.

9. Teaching and Learning Strategies	
Strategy	• Written lectures

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2		Introduction to linguistic errors - the closed and long taa and the open taa	Attend a lecture	exam
2	2		Rules for writing the extended and shortened alif - solar and lunar letters	Attend a lecture	exam

3			Ḍād and Ḍā'		
4	2		Writing the hamza	Attend a lecture	exam
5	2		Punctuation marks	Attend a lecture	exam
6	2		Objects	Attend a lecture	Exam
7	2		Number	Attend a lecture	exam
8	2		Applications of Common Grammatical Mistakes	Attend a lecture	Exam
9	2		Nūn and Tanwīn – Meanings	Attend a lecture	exam
10	2		Prepositions	Attend a lecture	Exam
11	2		Formal Aspects of Administrative Discourse	Attend a lecture	exam
12	2		Language of Administrative Discourse	Attend a lecture	exam
13	2		Samples of Administrative Correspondence	Attend a lecture	exam
14	2		Comprehensive Review	Attend a lecture	exam
15	2		Final Exam	Attend a lecture	Exam

11. Course Evaluation
Short oral and written tests Report preparation Homework assignments Practical and applied tests Other contributions and participation

12. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	Nothing
Main references (sources)	Arabic Language Notebook
Recommended books and references (scientific journals, reports...)	Ibn Aqil's Commentary on Ibn Malik's Alfiyyah
Electronic References, Websites	

Course Description Form 2nd Year

1. Course Name: Hematology 1
2. Course Code:
Hem
3. Semester / Year: first semester
4. Description Preparation Date: 22/2/2024
5. Available Attendance Forms: Attend a lecture
6. Number of Credit Hours (90) / Number of Units (6)
7. Course administrator's name (mention all, if more than one name)
Name: Dr. Hisham Atwan Swadi Email: animalproduction547@atu.edu.iq
8. Course Objectives

Course Objectives	• Knowing medical system • and tests that occur in laboratory • and diagnosis the disease case

9. Teaching and Learning Strategies	
Strategy	• Lectures • Practical experiences • the exams

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	6		Introduction importance hematology. Study the blood contains.	Attend a lecture	exam
2	6		The haemoto poiesis in fetus, children and adult.	Attend a lectu	exam
3	6		The normal red blood	Attend	exam

	6		cells, importance, Structure, erythropoiesis and Function.	lecture	
4	6		Polycythemia, causes, Clinical Signs and Laboratory diagnosis.	Attend lecture	exam
5	6		Study the red cell morphology in health and disease. Abnormality R.B.C in size.	Attend lecture	exam
6	6		Abnormality of R.B.C in shape.	Attend lecture	exam
7	6		Abnormality of R.B.C in colour.	Attend lecture	exam
8	6		The normal Hb. Of the blood, contain and importanc	Attend lecture	exam
9	6		Study the types of normal Hb. Types.	Attend lecture	exam
10	6		Common Hb. Variant.	Attend lecture	exam
11	6		Anemia. Definition, classification and types.	Attend lecture	exam
12	6		Anemia. Causes .clinical signs and laboratory Finding	Attend lecture	exam
13	6		Megaloblastic anemia and Pernicious anemia	Attend lecture	exam
14	6		Aplastic anemia and hemolytic anemia.	Attend lecture	exam
15	6		Sickle Cell an. And acquired and autoimmune hemolytic anemia.	Attend lecture	exam

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 written exams, reports etc The theoretical monthly written exam is 20 marks The monthly written practical exam is 10 marks The theoretical final written exam is 35 marks The final practical written exam is 25 marks

12. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	Nothing
Main references (sources)	Hematology
Recommended books and references (scientific journals, reports...)	Color atlas of hematology - Practical Microscopic and Clinical Diagnosis
Electronic References, Websites	

Course Description Form

1. Course Name: Microbiology /1st SEMSTER
2. Course Code:
Mic.
3. Semester / Year: 1st SEMSTER
4. Description Preparation Date: 18/3/2024
5. Available Attendance Forms: Attend a lecture
6. Number of Credit Hours (Total)90 / Number of Units (Total): Number of Units (6)
7. Course administrator's name (mention all, if more than one name)
Name: heba khalaf Email: heba.khalaf.ism@atu.edu.iq
8. Course Objectives

Course Objectives	• Introduction to microbiology , **Important Figure Microbiology Science** • Classification of microbiology • Scientific nomenclature of bacteria • Bacterial structure, growth, toxin, pathogenesis , Antibacterial agent
9. Teaching and Learning Strategies	
Strategy	• Lectures • Practical experiences • The exams

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	6		Introduction to medical microbiology, Microorganism, instruction with the host, microbial virulence, historical significance	Attend a lecture	exam
2	6		classes of pathogenic microorganisms Viruses, bacteria, fungi, parasites	Attend a lecture	exam
3	6		Classification and Scientific nomenclatur of the bacteria. Normal Flora		
4	6		Bacterial Structure	Attend a lecture	exam

5	6		Bacterial division and growth	Attend a lecture	exam
6	6		Bacterial Genetics, DNA transfer between bacteria	Attend a lecture	Exam
7	6		Pathogenicity of bacteria	Attend a lecture	exam
8	6		TOXIGENESIS (bacterial toxin).	Attend a lecture	Exam
9	6		Classes of antibacterial agents	Attend a lecture	exam
10	6		General characteristic and classification of virus	Attend a lecture	Exam
11	6		Viral genetics, a mutation, instruction between viruses, the role of genetic variation in evolution of viruses.	Attend a lecture	exam
12	6		Pathogenicity of viruses	Attend a lecture	exam
13	6		Classes of antiviral agents	Attend a lecture	exam
14	6		Characteristic and classification of medic Fungi	Attend a lecture	exam
15	6		Morphology and structure of fungi, Classes of antifungal agents	Attend a lecture	Exam

11. Course Evaluation
Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily written exams, reports etc The theoretical monthly written exam is 20 marks The monthly written practical exam is 10 marks The theoretical final written exam is 35 marks The final practical written exam is 25 marks

12. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	Nothing
Main references (sources)	Microbiology Immunology and microbiology
Recommended books and references (scientific journals, reports...)	Microbiology Immunology and microbiology
Electronic References, Websites	

Course Description Form

1. Course Name: Clinical Immunology /1st SEMSTER

2. Course Code:

CL.im

3. Semester / Year: 1st SEMSTER/ 2nd year

4. Description Preparation Date: 19/3/2024

5. Available Attendance Forms: Attend a lecture

6. Number of Credit Hours (Total)90 / Number of Units (Total): Number of Units (6)

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

Name: Dr. Azhaar Mousa Jaffar
Email: azhaar.jaffar@atu.edu.iq

8. Course Objectives

Course Objectives	Studying the basics of immunology, how the pathogen resistant to it enter the body, and the types of immune response

9. Teaching and Learning Strategies

Strategy	• curriculums and specialized books practical experiments • Latest research and periodicals • Educational videos

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	6		Immunology: definition and classification of the sections of immunity, natural and acquired immunity, natural immune factors and defenses	Attend a lecture	exam
2	6		The immune system, lymphoid tissues and cells, their origin, recipients and stages of maturation, primary and secondary lymphoid organs.	Attend a lecture	exam
3	6		Phagocytosis: Antigen presenting cells		

4	6		Antigen and antigenic determination	Attend a lecture	exam
5	6		Antibodies: Definition of the opposite, composition, types, properties, manufacturing and editing	Attend a lecture	exam
6	6		Immune response: primary and secondary, their characteristics and differences, regulation of the immune response	Attend a lecture	Exam
7	6		Major histocompatibility complex (MHC) Its definition, types, role in antigen presentation:	Attend a lecture	exam
8	6		Complements: Definition of complement, activation, methods of activation, inhibitors, diseases associated with complement deficiency	Attend a lecture	Exam
9	6		Cytokines	Attend a lecture	exam
10	6		Immunity against germs and toxins How the immune system works in defense against germs	Attend a lecture	Exam
11	6		Immunity against viruses, immunity against parasites Immunity against fungi	Attend a lecture	exam
12	6		Definition of tumor, antigens related to the tumor, their types, their relationship to various tumors, means of evading the body's immunity.	Attend a lecture	exam
13	6		Hypersensitivity: Its definition, different patterns, and diseases resulting from it	Attend a lecture	exam
14	6		Natural and acquired immune deficiency: Types and theories	Attend a lecture	exam
15	6		Vaccination, types of vaccines	Attend a lecture	Exam
11. Course Evaluation					

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, written exams, reports etc The theoretical monthly written exam is 20 marks The monthly written practical exam is 10 marks The theoretical final written exam is 35 marks The final practical written exam is 25 marks	
12. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	Not available
Main references (sources)	How The Immune System Works (5th ed)
Recommended books and references (scientific journals, reports...)	Cellular and Molecular Immunology, 8ed
Electronic References, Websites	(YouTube channel) https://youtu.be/WzMH5-51yfM?si=t91Qc0EoIO4DvK

Course Description Form

1. Course Name: Clinical Chemistry 1 /1st semester	
2. Course Code:	
CL.CH	
3. Semester / Year: 2nd year	
4. Description Preparation Date: 19/3/2024	
5. Available Attendance Forms: Attend a lecture	
6. Number of Credit Hours (Total)90 / Number of Units (Total): Number of Units (6)	
7. Course administrator's name (mention all, if more than one name)	
Name: Baraa.B.Aldin Email: baraa.ahmed.ims@atu.edu.iq	
8. Course Objectives	
Course Objectives	Students will be learned the essential information of clinical chemistry and their will be able to develop their skills in clinical chemistry.
9. Teaching and Learning Strategies	
Strategy	• Lectures • Practical experiences • The exams
10. Course Structure	

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	6		Introduction to clinical chemistry Disciplinary of clinical chemistry Introduction of metabolism, types of metabolism (anabolism and catabolism) Collection and handing of blood samples , anticoagulant , urine compassion ,urine collection methods urine preservative	Attend a lecture	exam
2	6		Acid-base balance	Attend a lecture	exam
3-4	6		Electrolytes (Na^{+}, K^{+}, Cl^{-}, Ca^{2+}, Mg, ect….) Diseases related to increase and decrease of electrolytes	Attend a lecture	exam
5	6		Trace element [Cu^{+2}, Ceruloplasmin, Zn, Mn], disease appeared in abnormal metabolism of these metals.	Attend a lecture	exam
6-7	6		Glucose digestion and absorption (glucose metabolism) Glucose uptake by cells Glycolysis and hormones that regulate glycolysis	Attend a lecture	exam
8	6		Exam	Attend a lecture	Exam
9	6		Tricyclic acid (TCA, Krebs' cycle):- 1- Reactions of TCA 2- Energy production of TCA 3- Function and regulation of TCA 4- dysfunction of TCA	Attend a lecture	exam
10	6		Glycogen metabolism;- 1- Regulation of synthesis 2- disorders of glycogen metabolism	Attend a lecture	Exam
11	6		Gluconeogenesis Precursors (such as Pyruvate, lactate, alanine, ect…)	Attend a lecture	exam
12-14	6		Diabetes Mellitus **1-** blood glucose and regulation of blood glucose (role of insulin and glucagon hormones in glucose regulation) **2-** Hyperglycemia (types of DM)	Attend a lecture	Exam

			3- Hypoglycemia		
15	6		Review for final exam	Attend a lecture	exam

11. Course Evaluation
Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, written exams, reports etc The theoretical monthly written exam is 20 marks The monthly written practical exam is 10 marks The theoretical final written exam is 35 marks The final practical written exam is 25 marks

12. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	
Main references (sources)	
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	

Course Description Form

1. Course Name: Protozoa /1st semester
2. Course Code:
Pro
3. Semester / Year: 2nd year
4. Description Preparation Date: 19/3/2024
5. Available Attendance Forms: Attend a lecture
6. Number of Credit Hours (Total)90 / Number of Units (Total): Number of Units (6)
7. Course administrator's name (mention all, if more than one name)
Name : dr. Zahra fadil mungi Email : Zahra mungi@atu.edu.i.
8. Course Objectives

Course Objectives	The students will be learned to utilize biochemical measurements and principles to understand, diagnose, monitor, prevent, and treat human diseases.
9. Teaching and Learning Strategies	
Strategy	• Lectures • Practical experiences

	• The exams

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	6		Defines the parasites ,parasitology types of parasites Types of host, Classification of parasites, Protozoa + metazoan Metazoa [helminthes and arthropoda]	Attend a lecture	exam
2	6		Introduction generally in characteristic feature of protozoa and classification:- Rhizopoda ,Mastigophora ,Cilophora (ciliate) ,Telospora	Attend a lecture	exam
3	6		Class Rhizopoda Pathogenic amoeba, *Entamoeba histolytica*, Morphology ,life cycle ,Pathogenicity ,Lab.diagnosis	Attend a lecture	exam
4	6		Few of morphology ,pathogenicity ,diagnosis of :- *Entamoeba gingivalis, Acanthomoeba ,Naegleria*	Attend a lecture	exam
5	6		Nonpathogenic amoeba Different between Entamoeba coli and E. histolytica. morphology , Lab, diagnosis of Iodamoeba butschlii , Endolimax nana ,E. dispar ,Dientamoeba fragilis	Attend a lecture	exam
6	6		Class Mastigophora or Flagellates generally introduction in characteristic feature and classification in (intestinal flagellate, blood and tissue flagellates, genital flagellates). Intestinal Flagellate: - Giardia lamblia ,Chilomastix mesnili ,Trichomonas hominis ,Morphology ,life cycle ,pathogenicity ,and lab. Diagnosis.	Attend a lecture	Exam
7	6		Genital flagellate Trichomonas vaginales, Oral flagellates, Trichomonas tenax. Morphology, pathogenicity and lab. Diagnosis	Attend a lecture	exam

8	6		Tissue and blood flagellate Haemoflagellates forms. Lishmania donovani, Lishmania tropica , Lishmania brazeliencis Morphology ,life cycle ,pathogenicity, Lab. Diagnosis	Attend a lecture	Exam

9	6		Trypanosoma cruzi , Trypanosoma brucei Morphology ,life cycle ,pathogenicity, Lab. Diagnosis Sample of Tse-tse fly and Reduviid bug.	Attend a lecture	exam
10	6		Class Ciliophra (cilata) Blantidium coli Morphology ,life cycle ,pathogenicity, Lab. Diagnosis	Attend a lecture	Exam
11	6		Review	Attend a lecture	exam
12	6		Class Sporozoa Generally introduction of characteristic features of sporozoa. Life cycle in generally of Plasmodium spp. In man and insects.	Attend a lecture	exam
13	6		Plasmodium vivax Plasmodium ovale pathogenicity, Lab. Diagnosis Plasmodium malariae Plasmodium falciparum Pathogenicity, Lab. diagnosis and short notes of parasites Babesia spp. The differences in lab. diagnosis with Plasmodium spp.	Attend a lecture	exam
14	6		Isosporia belli , Toxoplasma gondii Morphology ,life cycle ,pathogenicity, Lab. diagnosis Cryptosporidium spp. Morphology ,life cycle ,pathogenicity, Lab. Diagnosis	Attend a lecture	exam
15	6		Review and examination	Attend a lecture	Exam

11. Course Evaluation
Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, written exams, reports etc The theoretical monthly written exam is 20 marks The monthly written practical exam is 10 marks The theoretical final written exam is 35

marks The final practical written exam is 25 marks

12. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	Human Parasitology
Main references (sources)	
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	

Course Description Form

1. Course Name: Name of the course:
Virology / 2nd year / 1st course
2. Course Code:
Vir.
3. Semester / Year: 2nd year /**1st course**
4. Description Preparation Date: 20/3/2024

5. Available Attendance Forms:
Attend a lecture
6. Number of Credit Hours (Total) / Number of Units (Total)
(45)/ (3)
7. Course administrator's name (mention all, if more than one name)
Name: Ahmed Sadiq Ahmed.gasim@atu.edu.iq
8. Course Objectives

Course Objectives	
9. Teaching and Learning Strategies	
Strategy	

10. Course Structure					
Week	**Hours**	**Required Learning Outcomes**	**Unit or subject name**	**Learning method**	**Evaluation method**
1	3		Introduction, General properties of virus, structure, classification of DNA & RNA viruses.	Attend a lecture	Quiz discussion
2	3		Replication of DNA and RNA virus	Attend a lecture	quiz discussion
3	3		Virus isolation & cultivation.	Attend a lecture	Quiz discussion
4	3		Chemotherapy, antiviral agent & vaccines.	Attend a lecture	Quiz Discussion
5	3		Influenza viruses	Attend a lecture	Quiz Discussion
6	3		Paramyxo & Robella viruses.	Attend a lecture	Quiz discussion
7	3		Enteric viruses, Rhinovirus group.	Attend a lecture	Quiz Discussion
8	3		Pathogenesis of viruses and Genetic of viruses	Attend a lecture	Exam.
9	3		Herpes viruses	Attend a lecture	Quiz discussion
10	3		Oncogenic viruses	Attend a lecture	Quiz Discussion
11	3		Hepatitis viruses	Attend a lecture	Quiz Discussion
12	3		Rubies & other neurotropic viruses	Attend a lecture	Quiz discussion

13	3		Arbo viruses & viral haemorrhagic viruses	Attend a lecture	Quiz Discussion
14	3		Adeno, pox & parvo viruses	Attend a lecture	Quiz Discussion
15	3		Retro & Adis	Attend a lecture	Exam.

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 written exams, reports etc . quiz of practice and theory 10marks . first theory exam 10 marks Second theory exam 10 marks First and second practice exam 10 marks Final practice exam 25 marls Final theory exam 35

12. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	
Main references (sources)	
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	

Course Description Form

1. Course Name: Crimes of the Ba'ath Party /1st SEMSTER
2. Course Code:
3. Semester / Year: 1st SEMSTER/ 2nd year
4. Description Preparation Date: 19/3/2024
5. Available Attendance Forms: Attend a lecture
6. Number of Credit Hours (Total)30 / Number of Units (Total): Number of Units (2)
7. Course administrator's name (mention all, if more than one name)
Name : a.t Muneer Hadi Hussein Email: muneer.hussein.ims@atu.edu.iq
8. Course Objectives

Course Objectives	At the end of the academic year, the student should be able to recogn the principles and values of human rights, introduce them, r generations to respect and adhere to them, and become familiar w public freedoms and what thes freedoms are in their details.	an d e.

9. Teaching and Learning Strategies

Strategy	• Lectures • The exams

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2		Introduction to the Crimes of the Ba'ath Party	Attend a lecture	exam
2	2		Definition of crime	Attend a lecture	exam
3	2		Sections of crime	Attend a lecture	exam
4	2		Crimes of the Ba'ath regime according to documentation The court is the law of the court. The Supreme Criminal Court	Attend a lecture	exam
5	2		The decisions issued by The Supreme Criminal Court	Attend a lecture	exam
6	2		General discussions	Attend a lecture	Exam
7	2		Psychological crimes	Attend a lecture	exam
8	2		Social crimes	Attend a lecture	Exam
9	2		Violations of Iraqi laws	Attend a lecture	exam
10	2		War and radioactive pollution and landmine explosions	Attend a lecture	Exam
11	2		Destruction of cities and villages (scorched earth policy)	Attend a lecture	exam
12	2		Desiccation of the marshes	Attend a lecture	exam
13	2		The uprooting of palm groves, trees, and crops	Attend a lecture	exam

14	2		The events of the mass graves committed by the Ba'athist regime in Iraq	Attend a lecture	exam
15	2		The chronological classification of mass graves in Iraq for the period 1963-2003 AD.	Attend a lecture	Exam

11. Course Evaluation
Short oral and written tests Report preparation Homework assignments Practical and applied tests Other contributions and participation

12. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	
Main references (sources)	
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	

Course Description Form

1. Course Name: Principles of professional ethics/1st SEMSTER
2. Course Code:
Me.Eth.
3. Semester / Year: 1st SEMSTER/ 2nd year
4. Description Preparation Date: 19/3/2024
5. Available Attendance Forms: Attend a lecture
6. Number of Credit Hours (Total)30 / Number of Units (Total): Number of Units (2)
7. Course administrator's name (mention all, if more than one name)
Name : Bashir Ali Hassan Email :
8. Course Objectives

Course Objectives		and e.
9. Teaching and Learning Strategies		

Strategy	• Lectures • The exams

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2		Principles of professional ethics	Attend a lecture	exam
2	2		Structure, reproduction and classification	Attend a lecture	exam
3	2		Cultural characteristics, type mycosis	Attend a lecture	exam
4	2		General principle in treatme	Attend a lecture	exam
5	2		Actinomyces, Nocardia, Mycetoma	Attend a lecture	exam
6	2		Dermatophytes	Attend a lecture	Exam
7	2		Candidiasis	Attend a lecture	exam
8	2		Cytococesis	Attend a lecture	Exam
9	2		Cryptococcusis	Attend a lecture	exam
10	2		Histoplasmosis, sporotrichosis	Attend a lecture	Exam
11	2		Micellanaus fungi ,Aspergillosi mucor	Attend a lecture	exam
12	2		Rhizopus & penicillium	Attend a lecture	exam
13	2		Anti-fungal agents, antibiotic produced by fungi	Attend a lecture	exam
14	2		Review	Attend a lecture	exam
15	2		Final exam	Attend a lecture	Exam

11. Course Evaluation

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

The theoretical monthly written exam is 20 marks The monthly written practical exam is 10 marks

The theoretical final written exam is 35 marks The final practical written exam is 25 marks

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	

Main references (sources)	
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	

Course Description Form 2nd semester

1. Course Name: Pathogenic Bacteria /2nd semester
2. Course Code:
Bac.Pat
3. Semester / Year: 2nd year
4. Description Preparation Date: 19/3/2024
5. Available Attendance Forms: Attend a lecture
6. Number of Credit Hours (Total)90 / Number of Units (Total): Number of Units (6)
7. Course administrator's name (mention all, if more than one name)
Name: heba khalaf Email: heba.khalaf.ism@atu.edu.iq
8. Course Objectives

Course Objectives	Students will learn basic information of clinical to • Develop their skills in clinical chemistry.
9. Teaching and Learning Strategies	
Strategy	• Lectures • Practical experiences • The exams

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	6		Introduction to clinical chemistry Disciplinary of clinical chemistry Introduction of metabolism, types of	Attend a lecture	exam

			metabolism (anabolism and catabolism) collection and handing of blood samples , anticoagulant , urine compassion ,urine collection methods , urine preservative		
2	6		Acid-base balance	Attend a lecture	exam
3	6		Electrolytes (Na+, K+, Cl-, Ca2+, Mg, ect….)	Attend a lecture	exam
4	6		Diseases related to increase and decre of electrolytes	Attend a lecture	exam
5	6		Trace element [Cu+2, Ceruloplasmin, Mn], Disease appeared in abnorma metabolism of these metals.	Attend a lecture	exam
6	6		Glucose digestion and absorption (glucose metabolism) Glucose uptake cells	Attend a lecture	Exam
7	6		Glycolysis and hormones regulate glycolysis	Atten d a lectur e	exam
8	6		Monthly exam	Attend a lecture	Exam

9	6		Tricyclic acid (TCA, Krebs' cycle 1- Reactions of TCA 2- Energy production of TCA 3- Function and regulationof T 4- dysfunction of TCA	Attend a lecture	exam
10	6		- Glycogen metabolism - Regulation of synthesis - disorders of glycogen metabolisı	Attend a lecture	Exam
11	6		Gluconeogenesis Precursors (such as Pyruvate, lacta alanine, ect…)	Attend a lecture	exam
12	6		Diabetes Mellitus	Attend a lecture	exam
13	6		(blood glucose and regulation of blood glucose (role insulin and glucagon hormones ir glucose regulation)	Attend a lecture	exam
14	6		Hyperglycemia (types of DM) Hypoglycemia	Attend a lecture	exam
15	6		Review for final exam	Attend a lecture	Exam
11. Course Evaluation					

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, written exams, reports etc The theoretical monthly written exam is 20 marks The monthly written practical exam is 10 marks The theoretical final written exam is 35 marks The final practical written exam is 25 marks

12. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	Nothing
Main references (sources)	Lippincott's Biochemistry book
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	

Course Description Form

13. Course Name: Hematology 2
14. Course Code:
Hem
15. Semester / Year: second semester
16. Description Preparation Date: 22/2/2024
17. Available Attendance Forms: Attend a lecture

18. Number of Credit Hours (90) / Number of Units (6)	
19. Course administrator's name (mention all, if more than one name)	
Name: Dr. Hisham Atwan Swadi Email: animalproduction547@atu.edu.iq	
20. Course Objectives	
Course Objectives	• Knowing medical system • and tests that occur in laboratory • and diagnosis the disease case
21. Teaching and Learning Strategies	
Strategy	• Lectures • Practical experiences • the exams
22. Course Structure	

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	6		Haemostasis , definition and typ .The role of blood Vessels and Platelet in Haemostasis.	Attend a lecture	exam
2	6		Coagulation factors, name and figures.	Attend a lecture	exam
3	6		Coagulative Processes	Attend a lecture	exam
4	6		Haemostasis disorder types. Haemostasis due to blood vessel disorder.	Attend a lecture	exam
5	6		Haemostasis due to Coagulative disorder.	Attend lecture	exam
6	6		Haemostasis due to blood platel disorder.	Attend lecture	exam
7	6		Haemostasis due to Coagulativ disorder.	Attend lecture	exam
8	6		The White blood Cells, types.	Attend lecture	exam
9	6		The maturation of W.B.C.	Attend lecture	exam
10	6		The function of W.B.C.	Attend lecture	exam
11	6		Leukocytosis	Attend lecture	exam
12	6		Leukopenia	Attend lecture	exam
13	6		Leukemia, definition and classification.	Attend lecture	exam
14	6		Chronic and acute myeloid. L.	Attend lecture	exam
15	6		Chronic and acute Monocytic .L	Attend lecture	exam

23. 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 The theoretical monthly written exam is 20 marks The monthly written practical exam is 10 marks The theoretical final written exam is 35 marks The final practical written exam is 25 marks

24. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	Nothing
Main references (sources)	Hematology
Recommended books and references (scientific journals, reports...)	Color atlas of hematology - Practical Microscopic and Clinical Diagnosis

Electronic References, Websites	

Course Description Form

1. Course Name: ***Clinical Chemistry 2*** /2nd semester					
2. Course Code:					
CL.ch					
3. Semester / Year: 2nd year					
4. Description Preparation Date: 19/3/2024					
5. Available Attendance Forms: Attend a lecture					
6. Number of Credit Hours (Total)90 / Number of Units (Total): Number of Units (6)					
7. Course administrator's name (mention all, if more than one name)					
1. Name: Baraa.B.Aldin Email: baraa.ahmed.ims@atu.edu.iq					
8. Course Objectives					
Course Objectives	Students will learn basic information of clinical to Develop their skills in clinical chemistry.				
9. Teaching and Learning Strategies					
Strategy	• Lectures • Practical experiences • The exams				
10. Course Structure					
Week	**Hours**	**Required Learning Outcomes**	**Unit or subject name**	**Learning method**	**Evaluation method**
1-3	6		Protein metabolism and renal function 1- Serum Protein (components), 2- Amino acid metabolism, 3- fate of ammonia, 4- Urea cycle, urea metabolism and renal function tests	Attend a lecture	exam
4-6	6		Lipid metabolism **1-** fatty acids oxidation **2-** ketone bodies Lipid profile and disorder in lipid profil (cholesterol, triglycerides, lipoproteins	Attend a lecture	exam

7	6		Disorders of purine and pyrimidine Uric acid metabolism (synthesis and hyperuricemia)	Attend a lecture	exam
8	6		Exam	Attend a lecture	exam
9	6		Introduction to enzyme (definition of enzymology) Creatin kinase CK (isoenzymes) Lactate dehydrogenase LDH (isoenzymes)	Attend a lecture	exam
10-11	6		Liver function tests Bilirubin metabolism Jaundice (adult and neonatal jaundice) Hepatitis and liver function tests	Attend a lecture	Exam
12	6		Tumor markers	Attend a lecture	exam
13-15	6		Hormones 1- Thyroid hormones (Thyroid function tests, parathyroid hormones) Fertility hormones (testosterone, luteinizing hormone, prolactin, follicular stimulating hormone)	Attend a lecture	Exam

11. Course Evaluation	
Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, written exams, reports etc The theoretical monthly written exam is 20 marks The monthly written practical exam is 10 marks The theoretical final written exam is 35 marks The final practical written exam is 25 marks	
12. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	Nothing
Main references (sources)	Lippincott's Biochemistry book
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	

Course Description Form

1. Course Name: Clinical Immunology
2. Course Code:
CL.im
3. Semester / Year: 2ND SEMSTER/ 2nd year
4. Description Preparation Date: 22/2/2024
5. Available Attendance Forms: Attend a lecture
6. Number of Credit Hours 90) / Number of Units (6)
7. Course administrator's name (mention all, if more than one name)
Name: Dr. Mohammed Hadi Alabdali Email: mohammed.alabdali@atu.edu.iq
8. Course Objectives

Course Objectives	Studying of the most important autoimmune diseases, the etiology of their occurrence and the mechanism of immunological occurrence, clinical signs of the disease and treatment.

9. Teaching and Learning Strategies

Strategy	• curriculums and specialized books practical experiments • Latest research and periodicals • Educational videos

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	6		Rheumatic diseases and Rheumatoi arthritis	Attend a lecture	exa
2	6		Systemic lupus erythromatous and Psoriatic arthritis	Attend lecture	exa
3	6		Ankylosing Spondylitis and Sjogren syndrome	Attend lecture	exa
4	6		Behcet’s disease	Attend lecture	exa
5	6		Digestive and hepatic diseases	Attend lecture	exa
6	6		Pernicious anemia	Attend lecture	exa
7	6		Diabetes Mellitus Type I	Attend lecture	exa
8	6		Review	Attend lecture	exa
9	6		Autoimmune hepatic diseases	Attend	exa

				lecture	
10	6		Primary biliary cirrhosis and primar sclerosing cholangitis	Attend lecture	exa
11	6		Renal diseases	Attend lecture	exa
12	6		Respiratory disease	Attend lecture	exa
13	6		Immunological thyroid disease and Immunological infertility	Attend lecture	exa
14	6		Tumor and Tumor markers	Attend lecture	exa
15	6		Graft versus host rejection and transplantation	Attend lecture	exa

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 written exams, reports .... etc The theoretical monthly written exam is 20 marks The monthly written practical exam is 10 marks The theoretical final written exam is 35 marks The final practical written exam is 25 marks

12. Learning and Teaching Resources	
Required textbooks (curricular books, i any)	Not available
Main references (sources)	How The Immune System Works (5th ed)
Recommended books and references (scientific journals, reports...)	Cellular and Molecular Immunology, 8ed
Electronic References, Websites	Nucleus Medical Media (YouTube channel) https://www.youtube.com/@nucleusmedicalmedia

Course Description Form

1. Course Name:
Metazoan
2. Course Code:
Hel
3. Semester / Year:2nd year / 2nd semester
Second stage
4. Description Preparation Date:
Medical laboratories
5. Available Attendance Forms:
6. Number of Credit Hours (Total) / Number of Units (Total)
90 hours, 6 credit
7. Course administrator's name (mention all, if more than one name)
Name : dr. Zahra fadil mungi Email : Zahra mungi@atu.edu.i.

8. Course Objectives	
Course Objectives	**1-** classified metazoa **2-** know spp of metazoa **3-** study pathogenicity and life cycle metazoa **4-** diagnosis of metazoa

9. Teaching and Learning Strategies	
Strategy	Lectures The exam

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	6		Introduction and characteristic feature of metazoa	Atter lectu	exa
2	6		Cestoda. Taena saginata and solium	Atter lectu	exa
3	6		Hymenolips spp	Atter lectu	exa
4	6		Ecchinococccus granulosus	Atter lectu	exa
5	6		Trematoda. Schistosoma spp	Atter lectu	exa
6	6		Liver fluckes . lung fluckes and intestinal fluckes	Atter lectu	exa
7	6		First monthly exam	Atter lectu	exa
8	6		Nematode, ascaris lumbricoidis. Trichuris trichura	Atter lectu	exa
9	6		Enterobius vermicularis, ancylostoma duodenale. Nicator americanus	Atter lectu	exa
10	6		Cutaneous larva migrans. Subcutaneous larva migrans . visceral larva migrans	Atter lectu	exa
11	6		Filaria . wuchereria bancrofti. loaloa	Atter lectu	exa
12	6		Annelida. Arthrpoda(insect and arachnids)	Atter lectu	exa
13	6		review	Atter lectu	exa
14	6		Second monthly exam	Atter lectu	exa
15	6		Final exam of second course	Atter lectu	exa

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 written exams, reports .....etc . quiz of practice and theory 10marks . first theory exam 10 marks Second theory exam 10 marks First and second practice exam 10 marks Final practice exam 25 marls Final theory exam 35

12. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	Protozoa , metazoa and arthropoda
Main references (sources)	
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	

Course Description Form

1. Course Name: Name of the course:
Medical Mycology / 2nd year / 2nd course
2. Course Code:
M.M
3. Semester / Year:
4. Description Preparation Date: 20/3/2024
5. Available Attendance Forms:
Attend a lecture
6. Number of Credit Hours (Total) / Number of Units (Total)
(45)/ (3)
7. Course administrator's name (mention all, if more than one name)
Name: Ahmed Sadiq
8. Course Objectives

Course Objectives	
9. Teaching and Learning Strategies	
Strategy	
10. Course Structure	

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation
1	3		Introduction of medical Fungi	Attend a lecture	Quiz discussion
2	3		Structure, reproduction and classification.	Attend a lecture	quiz discussion
3	3		Cultural characteristics, type of mycosis	Attend a lecture	Quiz discussion
4	3		General principle in treatment.	Attend a lecture	Quiz Discussion
5	3		Actinomyces, Nocardia, Mycetoma	Attend a lecture	Quiz Discussion
6	3		Dermatophytes	Attend a lecture	Quiz discussion
7	3		Candidiasis	Attend a lecture	Quiz Discussion
8	3		Cytococcsis	Attend a lecture	Exam.
9	3		Cryptococcusis	Attend a	Quiz discussion
	3			lecture	
10	3		Histoplasmosis, sporotrichosis	Attend a lecture	Quiz Discussion
11	3		Micellanaus fungi ,Aspergillosis, mucor	Attend a lecture	Quiz Discussion
12	3		Rhizopus & penicillium	Attend a lecture	Quiz discussion
13	3		Anti-fungal agents , antibiotic produced by fungi	Attend a lecture	Quiz Discussion
14	3		Introduction of medical Fungi	Attend a lecture	Quiz Discussion
15	3		Structure, reproduction and classification.	Attend a lecture	Exam.

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 written exams, reports etc . quiz of practice and theory 10marks . first theory exam 10 marks Second theory exam 10 marks First and second practice exam 10 marks Final practice exam 25 marls Final theory exam 35
12. Learning and Teaching Resources

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

Course Description Form

1. Course Name: Arabic Language /2nd year /
2. Course Code:
Ar.
3. Semester / Year: 2ND SEMSTER
4. Description Preparation Date: 18/3/2024
5. Available Attendance Forms: Attend a lecture
6. Number of Credit Hours (Total)30 / Number of Units (Total): Number of Units (2)
7. Course administrator's name (mention all, if more than one name)
Name: Dr. Tabark Hameed Husain Email: tabark.husain.ims@atu.edu.iq
8. Course Objectives

Course Objectives	• Developing students' language skills • Developing a spirit of pride in the Arabic language • Developing grammatical and literary abilities in university students • Elevating the level of professional and research competence
9. Teaching and Learning Strategies	
Strategy	- The lecture and the use of the board, screen, and presentation - Interactive discussion - Self-education - Using PowerPoint

10. Course Structure					
Week	**Hours**	**Required Learning Outcomes**	**Unit or subject name**	**Learning method**	**Evaluation method**
1	2		Introduction to the Arabic Language Grammar Rules	Attend a lecture	exam
2	2		Speech and its Components	Attend a lecture	exam
3			Grammar Rules(Verb Types)	Attend a lecture	exam
4	2		Grammar Rules(Indefinite and Definite Nouns)	Attend a lecture	exam
5	2		Grammar Rules (Structure and Syntax)	Attend a lecture	exam
6	2		Grammar Rules (Subject and Predicate)	Attend a lecture	Exam
7	2		Spelling and How to Write the Initial Hamza	Attend a lecture	exam
8	2		Middle Hamza	Attend a lecture	Exam
9	2		Extreme Hamza	Attend a lecture	exam
10	2		Spelling (Rules for Writing the Marbuta and Fatha Taa)	Attend a lecture	Exam
11	2		Spelling (The shortened and extended alif)	Attend a lecture	exam
12	2		Rules of expression (Punctuation)	Attend a lecture	exam
13	2		Literary Text (Surah Ar-Rahman)	Attend a lecture	exam
14	2		Memorization Text/Ten Verses	Attend a lecture	exam
15	2		Literary Text Poet: Al-Mutanabbi Poet: Badr Shakir Al-Sayyab	Attend a lecture	Exam
11. Course Evaluation					

Short oral and written tests Report preparation Homework assignments Practical and applied tests Other contributions and participation	
12. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	Nothing
Main references (sources)	The Holy Quran A Brief Introduction to the Arabic Language Grammar Meanings Arabic Grammar Rules: Simplified Grammar and Morphology Spelling Rules A Brief Introduction to the Arabic Language for Non-Specialists.
Recommended books and references (scientific journals, reports...)	Facilitating Grammar A Compendium of Arabic Lessons
Electronic References, Websites	Numerous websites devoted to Arabic language subjects, including YouTube and academic research.

Course Description Form

1. Course Name: Computer science /2nd SEMSTER	
2. Course Code:	
AC	
3. Semester / Year: 2nd SEMSTER/ 2nd year	
4. Description Preparation Date: 19/3/2024	
5. Available Attendance Forms: Attend a lecture	
6. Number of Credit Hours (Total)30 / Number of Units (Total): Number of Units (2)	
7. Course administrator's name (mention all, if more than one name)	
Name : Abeer Kazem Email :	
8. Course Objectives	
Course Objectives	
9. Teaching and Learning Strategies	
Strategy	• Lectures • The exams
10. Course Structure	

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2		Security and Networking: What is network? Types of networks. Basi network components.	Attend a lecture	exam
2	2		Security and Networking (Cont.): Network Security Basics. Understand network threats.	Attend a lecture	exam
3	2		E-Commerce: Concepts of Electron banking services this include onlin banking: ATM and debit card servic Phone banking, SMS banking, electro alert, Mobile banking	Attend a lecture	exam
4	2		Computer Troubleshooting: Identify and solving common hardware and software problems that computer use encounter	Attend a lecture	exam
5	2		Computer Troubleshooting (Cont.): B troubleshooting techniques and tools diagnosing and resolving issues. Introduction to Al: Definition of A History of Al, Al Techniques and Approaches.	Attend a lecture	exam
6	2		Introduction to Al: Definition of A History of Al, Al Techniques and Approaches.	Attend a lecture	Exam
7	2		Introduction to Al(Cont.): Key Characteristics of Al, Benefits of Al, Challenges and Ethical considerations	Attend a lecture	exam
8	2		The Role of Al in Modern Smartphon Al-Driven Mobile Technologies, Virt Assistants (Siri, Google Assistant, Ale	Attend a lecture	Exam
9	2		The Role of Al in Modern Smartpho (Cont.): Adaptive Learning, Real-Time Translation Services.	Attend a lecture	exam
10	2		Applications and Tools of Al: Overv of Al Applications in Various Indust Education and Healthcare	Attend a lecture	Exam
11	2		Applications and Tools of Al (Cont Transportation, Marketing and Advertising.	Attend a lecture	exam
12	2		Applications and Tools of Al(Cont Finance, Robotics and Automatio Technologies.	Attend a lecture	exam

13	2		Al and Society: How Al affects soc Al and international relations, Al and future of humanity.	Attend a lecture	exam
14	2		Ethical Challenges in Al : Al ethic privacy and surveillance, the impact Al on the job market.	Attend a lecture	exam
15	2		The Future of Al: Future trends in Al, recent research and emerging technologies.	Attend a lecture	Exam

11. Course Evaluation
Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, written exams, reports etc The theoretical monthly written exam is 20 marks The monthly written practical exam is 10 marks The theoretical final written exam is 35 marks The final practical written exam is 25 marks

12. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	
Main references (sources)	- Graham Brown, David Watson, "Cambridge IGCSE Information and Communication Technology", ', 3rd Edition (2020) - Alan Evans, Kendall Martin, Mary Anne Poatsy, "Technology In Action Complete" 16th Edition (2020). - Ahmed Banafa, "Introduction to Artificial Intelligence (AI)", 1st Edition (2024). - Microsoft Office 2019 Step by Step Ist Edition by Curtis Frye & Joan Lambert
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	