

Course Description Form

1. Course Name: Professional ethics					
2. Course Code:					
3. Semester / Year: first semester / fourth year					
4. Description Preparation Date: 10 / 2 /2025					
5. Available Attendance Forms: Theoretical in the classroom					
6. Number of Credit Hours (Total) / Number of Units (Total) :30 theoretical / 2 hours					
7. Course administrator's name (mention all, if more than one name)					
Name: MSc. Anwar Khairy Abed Email: anwarkhairyo@gmail.com					
8. Course Objectives					
Course Objectives			Develop a comprehensive understanding of the concepts of professional ethics. Enhance teamwork. Increase productivity and improve the quality of work, which enhances success.		
9. Teaching and Learning Strategies					
Strategy		Explaining theoretical lectures using PowerPoint			
10. Course Structure					
Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
First and second	2		-The concept of ethics	theoretical	Short exams and discuss

			-The importance of morals		
Third and Forth	2		-Health professions ethics -Principles of professional ethics Health	theoretical	Short exams and discuss
Fifth and Sixth	2		- Values and professional ethics	theoretical	Short exams and discuss
Seventh and Eighth	2		-Patterns of unethical behavior In the profession -Manifestations of administrative corruption	theoretical	Short exams and discuss
Ninth and tenth	2		-Manifestations of financial corruption -Means and methods of consolidating the values of professional ethics	theoretical	Short exams and discuss
Eleventh and Twelfth	2		-Challenges and their impact on professional ethics	theoretical	Short exams and discuss
thirteenth and fourteenth	2		Social responsibility	theoretical	Short exams and discuss
Fifteenth	2		Basic foundations For professional ethics	theoretical	Short exams and discuss

Sixteenth	2	-Medical report -Types of medical reports		theoretical	Short exams and discuss
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				Google scholar	

1. Course Name:					
Diagnostic Microbiology					
2. Course Code:					
3. Semester / Year:					
4 th – First term–Yearly					
4. Description Preparation Date:					
08/01/2025					
5. Available Attendance Forms:					
Face to face					
6. Number of Credit Hours (Total) / Number of Units (Total):					
8 / 6					
7. Course administrator's name (mention all, if more than one name)					
Dr. Husain Awad Bneed					
8. Course Objectives					
Course Objectives			- Introducing the student to the basic principles related to bacteria and traditional and modern diagnostic methods. - The curriculum includes topics on the theoretical and practical foundations of laboratory tests related to bacteria, how to collect clinical samples and grow bacteria in the laboratory, as well as diagnostic methods according to scientific foundations and the appointment of effective antibiotics.		
9. Teaching and Learning Strategies					
Strategy		Lectures Discussions Presentations Lab. Work Practical Activities			
10. Course Structure					
Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
Syllabus of The Theoretical Course					
1	2	Diagnostic Microbiology: purpose and philosophy	Diagnostic Microbiology: purpose and philosophy	interactive-face - face	Exams and quizzes
2	2	Laboratory safety	General safety considerations	interactive-face face	Exams and quizzes
3	2	Managing the clinical microbiology laboratory: effective patient care	Rapid detection of infectious agents	interactive-face face	Exams and quizzes

4	2	Selection, collection, and transport of specimens for microbiological examination	Selection, collection, and transport of specimens for microbiological examination	interactive-face face	Exams and quizzes
5	2	-Optical methods for laboratory diagnosis of infectious diseases	Examination of fresh material	interactive-face face	Exams and quizzes
6	2	Cultivation and isolation of viable pathogens	Preparation and characteristics of certain frequently used media	interactive-face face	Exams and quizzes
7-8	4	Microbiological methods for identification of microorganisms	Basic approaches for identification of pathogens	interactive-face face	Exams and quizzes
9-10	4	Nontraditional methods for identification of pathogens or their products	Particle agglutination, ELISA, PCR,etc.	interactive-face face	Exams and quizzes
11	2	Antibiotic susceptibility tests	Disc diffusion method	interactive-face face	Exams and quizzes
12-13	4	Methods for identification of etiological agents of infectious disease	-Staphylococci -Streptococci -Neisseria -Enterobacteriaceae -Pseudomonas -Other bacteria	interactive-face face	Exams and quizzes
14-15	4	Diagnosis by organ system Blood stream infections	General considerations	interactive-face face	Exams and quizzes
16-17	4	Meningitis and other infections of the central nervous system	General considerations	interactive-face face	Exams and quizzes
18-19	4	Infection of the respiratory tract	General considerations	interactive-face face	Exams and quizzes
20-21	4	Infection of the urinary tract	General considerations	interactive-face face	Exams and quizzes
22	2	Genital tract infections	Genital tract infections	interactive-face face	Exams and quizzes
23-24	4	Gastrointestinal tract infections	Genital tract infections	interactive-face face	Oral-written quiz-practical application
25	2	Infections of the eyes, ears and sinuses	Anatomy	interactive-face face	Oral-written quiz-practical application
26	2	Skin, Soft tissue and wound infections	Genital tract infections	interactive-face face	Oral-written quiz-practical application
27	2	Normal sterile body fluids, bone and bone marrow and solid tissue	-Specimens from sterile body sites	interactive-face face	Oral-written quiz-practical application
28	2	-Laboratory methods for diagnosis of parasitic infections	Specimen collection and transport	interactive-face face	Oral-written quiz-practical application
29	2	-Laboratory methods in basic mycology	Collection, and transport of clinical specimens	interactive-face face	Oral-written quiz-practical application
30	2	Laboratory methods in basic virology	Specimen selection and collection	interactive-face face	Oral-written quiz-practical application

Syllabus of The Practical Course

1-2	8	Antibiotic Susceptibility Tests	Disc diffusion method, MIC	interactive-face face	Oral-written quizzes,practical application
3-4	8	Diagnosis by organ system, Blood stream infections	Specimen volume collection	interactive-face face	Oral-written quizzes,practical application
5-6	8	Meningitis and other infections of the central nervous system	-Specimen collection and transport	interactive-face face	Oral-written quizzes,practical application
7-8	8	Infections of the respiratory tract	-Collection and transport of specimens	interactive-face face	Oral-written quizzes,practical application
9-10	8	Infections of the urinary tract	Specimen collection	interactive-face face	Oral-written quizzes,practical application
11	4	Genital tract infections	Sexually transmitted disease and other genital tract infecti agents	interactive-face face	Oral-written quizzes,practical application
12-13	8	Gastrointestinal tract infections	Specimen collection and transport	interactive-face face	Oral-written quizzes,practical application
14	4	Infections of the eyes, ears and sinuses	Specimen collection and transport -	interactive-face face	Oral-written quizzes,practical application
15	4	Skin, Soft tissue and wound infections	Specimen collection and transport	interactive-face face	Oral-written quizzes,practical application

11.Course Evaluation

Exams
Quiz
Report
Attendance
Class activity
Technical Practice

12.Learning and Teaching Resources

Required textbooks (curricular books, if any)	1. Bailey & Scott's (2019): Diagnostic microbiology, 15th Edition. 2. Mims, Medical Microbiology (2013). 5 th Edition
Main references (sources)	- Advanced techniques in diagnostic microbiology. - Medical Microbiology. A Guide to the Laboratory Diagnosis and Control of infection
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	

1. Course Name:					
Medical parasitology					
2. Course Code:					
3. Semester / Year:					
annual /fourth					
4. Description Preparation Date:					
2/1/2025					
5. Available Attendance Forms:					
Personal+hypothetical (on line)					
6. Number of Credit Hours (Total) / Number of Units (Total):					
6/8					
7. Course administrator's name (mention all, if more than one name)					
Name: Ass. Prof. Murhaf Lahlah Email: murhaflahlah@gmail.com					
8. Course Objectives					
Course Objectives		• Identify the morphological description and life cycles of the most important medical parasites • Pathogenesis • Laboratory diagnosis			
9. Teaching and Learning Strategies					
Strategy		1-Providing laboratories, computer and technical equipment and materials necessary for learning 2- Providing electronic systems that allow students easy access to information 3- Using the learning platform 4- Providing all requirements for occupational health and safety in educational equipment and activities			
10. Course Structure					
Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
Syllabus of The Theoretical Course					
1	2	Introducing the student to the skills of the latest global classification methods used in classifying parasites electronically	Recent classification of parasite	- The instructor prepares his lectures electronically and on paper and distributes	Weekly and monthly quizzes as well as various classroom activities.

		and on paper.		them to the students. - The instructor requests homework and reports from the students on the lecture topic.	
2	2	demonstrate the most important strategies in diagnosing infectious parasites	Strategies for diagnosis of parasitic infection	- The instructor prepares his lectures electronically and on paper and distributes them to the students. - The instructor requests homework and reports from the students on the lecture topic.	Weekly and monthly quizzes as well as various classroom activities.
3	2	Explaining the most important principles followed in the parasitic examination of stool samples	Examination of stool sample	- The instructor prepares his lectures electronically and on paper and distributes them to the students. - The instructor requests homework and reports from the students on the lecture topic.	Weekly and monthly quizzes as well as various classroom activities.
4	2	Discuss the types of wet solutions used in parasite examination.	Preparation of solutions for wet mount	- The instructor prepares his lectures electronically and on paper and distributes them to the students.	Weekly and monthly quizzes as well as various classroom activities.

				- The instructor requests homework and reports from the students on the lecture topic.	
5	2	investigate about the most important types of parasite preservation and fixation solutions	Preparation of preservatives and fixatives for mounted slides	- The instructor prepares his lectures electronically and on paper and distributes them to the students. - The instructor requests homework and reports from the students on the lecture topic.	Weekly and monthly quizzes as well as various classroom activities.
6	2	Explaining the principles followed in the laboratory diagnosis of parasitic protozoa	Laboratory diagnosis of enteric protozoa	- The instructor prepares his lectures electronically and on paper and distributes them to the students. - The instructor requests homework and reports from the students on the lecture topic.	Weekly and monthly quizzes as well as various classroom activities.
7	2	Introducing the student to the sedimentation method for examining exit samples	Concentration methods	- The instructor prepares his lectures electronically and on paper and distributes them to the	Weekly and monthly quizzes as well as various classroom activities.

				students. - The instructor requests homework and reports from the students on the lecture topic.	
8	2	Select of the most important immunological tests used in the diagnosis and study of parasites	Application of immunological methods in the diagnosis of parasite in General	- The instructor prepares his lectures electronically and on paper and distributes them to the students. - The instructor requests homework and reports from the students on the lecture topic.	Weekly and monthly quizzes as well as various classroom activities.
9	2	Study of the differential morphological and pathological aspects between two types of amoebic parasites	Differentiation of pathogenic <i>Entamoebahistolytica</i> and the morphologically identical non pathogenic <i>Entamoebadispar</i>	- The instructor prepares his lectures electronically and on paper and distributes them to the students. - The instructor requests homework and reports from the students on the lecture topic.	Weekly and monthly quizzes as well as various classroom activities.
10	2	Identify the most important molecular cell level tests used in classifying parasites.	The application of molecular assays	- The instructor prepares his lectures electronically and on paper and distributes	Weekly and monthly quizzes as well as various classroom activities.

				them to the students. - The instructor requests homework and reports from the students on the lecture topic.	
11	2	Describe of the morphological description and life cycle of the free amoeba.	Free living pathogenic amoeba	- The instructor prepares his lectures electronically and on paper and distributes them to the students. - The instructor requests homework and reports from the students on the lecture topic.	Weekly and monthly quizzes as well as various classroom activities.
12	2	Identify the parasite Blastocystishominis	<i>Blastocystishominis</i> as the causative agent of irritable bowel syndrome	- The instructor prepares his lectures electronically and on paper and distributes them to the students. - The instructor requests homework and reports from the students on the lecture topic.	Weekly and monthly quizzes as well as various classroom activities.
13	2	Identify two types of parasites.	Tissue flagellates e.g Genus Trypanosoma & Genus Leishmania	- The instructor prepares his lectures electronically and on paper	Weekly and monthly quizzes as well as various classroom activities.

				and distributes them to the students. - The instructor requests homework and reports from the students on the lecture topic.	
14	2	Describe of vaccines, especially Leishmaniasis vaccines.	Properties of ideal vaccines Leishmania Vaccine	- The instructor prepares his lectures electronically and on paper and distributes them to the students. - The instructor requests homework and reports from the students on the lecture topic.	Weekly and monthly quizzes as well as various classroom activities.
15	2	Report about the most important characteristics of the Apicomplexa division.	Phylum Apicomplexa	- The instructor prepares his lectures electronically and on paper and distributes them to the students. - The instructor requests homework and reports from the students on the lecture topic.	Weekly and monthly quizzes as well as various classroom activities.
16			First term examination		The first quest
17	2	A define study of the intestinal coccidia parasite	Intestinal coccidian	- The instructor prepares his lectures	Weekly and monthly quizzes as well as various

		(<i>Cyptosporidium parvum</i>)		electronically and on paper and distributes them to the students. - The instructor requests homework and reports from the students on the lecture topic.	classroom activities.
18	2	A describe study of the extra-intestinal coccidia parasite (<i>Toxoplasma</i>).	Extra-intestinal coccidian	- The instructor prepares his lectures electronically and on paper and distributes them to the students. - The instructor requests homework and reports from the students on the lecture topic.	Weekly and monthly quizzes as well as various classroom activities.
19	2	Define the types of laboratory diagnosis of medical parasites	Methods of laboratory diagnosis	- The instructor prepares his lectures electronically and on paper and distributes them to the students. - The instructor requests homework and reports from the students on the lecture topic.	Weekly and monthly quizzes as well as various classroom activities.
20	2	Describe of the most important special	Genus <i>Plasmodium</i>	- The instructor prepares his	Weekly and monthly quizzes as

		characteristics of the parasite Plasmodium		lectures electronically and on paper and distributes them to the students. - The instructor requests homework and reports from the students on the lecture topic.	well as various classroom activities.
21	2	Demonstrate of the principles followed in laboratory diagnosis of parasites	Methods of laboratory diagnosis	- The instructor prepares his lectures electronically and on paper and distributes them to the students. - The instructor requests homework and reports from the students on the lecture topic.	Weekly and monthly quizzes as well as various classroom activities.
22	2	Comparison of two classes of flatworms S	Introduction to Helminthes Classification of helminthes: Class Cestoda & Class Trematoda	- The instructor prepares his lectures electronically and on paper and distributes them to the students. - The instructor requests homework and reports from the students on the lecture topic.	Weekly and monthly quizzes as well as various classroom activities.

23	2	Addressing the most important general characteristics of the class of tapeworms	General characters of: Platyhelminths & Class Cestoda	- The instructor prepares his lectures electronically and on paper and distributes them to the students. - The instructor requests homework and reports from the students on the lecture topic.	Weekly and monthly quizzes as well as various classroom activities.
24	2	Comparison between two species of worms <i>T.solium</i> & <i>T.sagitta</i>	Genus Taenia including <i>Taeniasaginata</i> & <i>T. solium</i>	- The instructor prepares his lectures electronically and on paper and distributes them to the students. - The instructor requests homework and reports from the students on the lecture topic.	Weekly and monthly quizzes as well as various classroom activities.
25	2	report of the most important characteristics of the parasite <i>Echinococcus granulosus</i>	<i>Echinococcus granulosus</i>	- The instructor prepares his lectures electronically and on paper and distributes them to the students. - The instructor requests homework and reports from the students on the lecture	Weekly and monthly quizzes as well as various classroom activities.

				topic.	
26	2	Detailed explanation of the parasite <i>Schistosoma haematobium</i>	<i>Schistosoma haematobium</i>	- The instructor prepares his lectures electronically and on paper and distributes them to the students. - The instructor requests homework and reports from the students on the lecture topic.	Weekly and monthly quizzes as well as various classroom activities.
27			Second term examination		The second quest
28	2	Define about the most important characteristics of nematodes.	Phylum Nematelminths in general	- The instructor prepares his lectures electronically and on paper and distributes them to the students. - The instructor requests homework and reports from the students on the lecture topic.	Weekly and monthly quizzes as well as various classroom activities.
29	2	The most important methods used in anal smear examination	Modified Kato-Katis technique for examination of thick smear	- The instructor prepares his lectures electronically and on paper and distributes them to the students. - The instructor requests homework and reports	Weekly and monthly quizzes as well as various classroom activities.

				from the students on the lecture topic.	
30	2	Define about the Haradi-Mori technique for culturing nematodes.	Haradi-Mori technique cultivation of hook worm	- The instructor prepares his lectures electronically and on paper and distributes them to the students. - The instructor requests homework and reports from the students on the lecture topic.	Weekly and monthly quizzes as well as various classroom activities.

Syllabus of The Practical Course

1	4	Introducing the student to the skills of the latest global classification methods used in classifying parasites electronically and on paper.	*Systematic grouping of parasites * General terms used in parasitology	The instructor prepares his lectures electronically and on paper and distributes them to the students. - The instructor prepares parasite samples and displays them under the microscope. - The instructor requests homework and reports from the students on the lecture topic.	Weekly and monthly quizzes as well as various classroom activities.
2	4	Demonstrate of the most important	Collection and preparation of parasitic	The instructor prepares his	Weekly and monthly quizzes as

		strategies used in collecting and preparing parasitic samples	samples	lectures electronically and on paper and distributes them to the students. - The instructor prepares parasite samples and displays them under the microscope. - The instructor requests homework and reports from the students on the lecture topic.	well as various classroom activities.
3	4	select the most important principles followed in the parasitic examination of stool samples using the direct and indirect methods	a) Macroscopic examination of stool b) Microscopic examination of wet mounts	The instructor prepares his lectures electronically and on paper and distributes them to the students. - The instructor prepares parasite samples and displays them under the microscope. - The instructor requests homework and reports from the students on the lecture topic.	Weekly and monthly quizzes as well as various classroom activities.
4	4	Addressing the most important types of wet solutions used in parasite examination	the advantages and disadvantages of each solution: * Saline solution	The instructor prepares his lectures electronically	Weekly and monthly quizzes as well as various classroom

			* Iodine solutions * Eosin solution	and on paper and distributes them to the students. - The instructor prepares parasite samples and displays them under the microscope. - The instructor requests homework and reports from the students on the lecture topic.	activities.
5	4	describe about the most important types of solutions for preserving and fixing parasites	* Formalin solution (5-7%) * PVA (Polyvinyle alcohol) as fixative * Schaudinns fixative	The instructor prepares his lectures electronically and on paper and distributes them to the students. - The instructor prepares parasite samples and displays them under the microscope. - The instructor requests homework and reports from the students on the lecture topic.	Weekly and monthly quizzes as well as various classroom activities.
6	4	Demonstrate of the principles followed in laboratory diagnosis, especially for parasitic protozoa.	*The routine methods used in laboratory diagnosis	The instructor prepares his lectures electronically and on paper and distributes	Weekly and monthly quizzes as well as various classroom activities.

				them to the students. - The instructor prepares parasite samples and displays them under the microscope. - The instructor requests homework and reports from the students on the lecture topic.	
7	4	Introducing the student to the procedures followed in the sedimentation method for examining exit samples	types, purpose to use concentration methodes	The instructor prepares his lectures electronically and on paper and distributes them to the students. - The instructor prepares parasite samples and displays them under the microscope. - The instructor requests homework and reports from the students on the lecture topic.	Weekly and monthly quizzes as well as various classroom activities.
8	4	Addressing the most important immunological tests used in the diagnosis and study of parasites	Detection of antibodies in serum of patients with enteric protozoa (ELISA) * Detection of antigens in stool specimen of patients with enteric protozoa (ELISA)	The instructor prepares his lectures electronically and on paper and distributes them to the students.	Weekly and monthly quizzes as well as various classroom activities.

				- The instructor prepares parasite samples and displays them under the microscope. - The instructor requests homework and reports from the students on the lecture topic.	
9	4	Report of the most important mechanisms used in immunological tests for parasitic diagnosis	using immunological assays	The instructor prepares his lectures electronically and on paper and distributes them to the students. - The instructor prepares parasite samples and displays them under the microscope. - The instructor requests homework and reports from the students on the lecture topic.	Weekly and monthly quizzes as well as various classroom activities.
10	4	Identify the most important molecular cell level tests used in classifying parasites.	molecular assays in the diagnosis of parasites	The instructor prepares his lectures electronically and on paper and distributes them to the students. - The instructor	Weekly and monthly quizzes as well as various classroom activities.

				prepares parasite samples and displays them under the microscope. - The instructor requests homework and reports from the students on the lecture topic.	
11	4	Describe of the morphological description and life cycle of the free amoeba.	Life cycle and laboratory diagnosis	The instructor prepares his lectures electronically and on paper and distributes them to the students. - The instructor prepares parasite samples and displays them under the microscope. - The instructor requests homework and reports from the students on the lecture topic.	Weekly and monthly quizzes as well as various classroom activities.
12	4	Identify the parasite Blastocystishominis	Life cycle and laboratory diagnosis	The instructor prepares his lectures electronically and on paper and distributes them to the students. - The instructor prepares parasite	Weekly and monthly quizzes as well as various classroom activities.

				samples and displays them under the microscope. - The instructor requests homework and reports from the students on the lecture topic.	
13	4	Identify two types of flagellate parasites.	Laboratory diagnosis of flagellate parasites.	The instructor prepares his lectures electronically and on paper and distributes them to the students. - The instructor prepares parasite samples and displays them under the microscope. - The instructor requests homework and reports from the students on the lecture topic.	Weekly and monthly quizzes as well as various classroom activities.
14	4	Discussing vaccines, especially Leishmaniasis vaccines.	<i>Leishmania</i> vaccine	The instructor prepares his lectures electronically and on paper and distributes them to the students. - The instructor prepares parasite samples and displays them	Weekly and monthly quizzes as well as various classroom activities.

				under the microscope. - The instructor requests homework and reports from the students on the lecture topic.	
15	4	Learn about the most important characteristics of the Apicomplexa division.	Main properties of the group	The instructor prepares his lectures electronically and on paper and distributes them to the students. - The instructor prepares parasite samples and displays them under the microscope. - The instructor requests homework and reports from the students on the lecture topic.	Weekly and monthly quizzes as well as various classroom activities.
16			First term examination		The first quest
17	4	A report study of intestinal coccidia parasites (<i>Cryptosporidium parvum</i>)	<i>Cryptosporidium parvum</i> life cycle and laboratory diagnosis	The instructor prepares his lectures electronically and on paper and distributes them to the students. - The instructor prepares parasite samples and displays them under the	Weekly and monthly quizzes as well as various classroom activities.

				microscope. - The instructor requests homework and reports from the students on the lecture topic.	
18	4	A report study of the extra-intestinal coccidia parasite (Toxoplasma)	<i>Toxoplasma gondii</i> life cycle and laboratory diagnosis	The instructor prepares his lectures electronically and on paper and distributes them to the students. - The instructor prepares parasite samples and displays them under the microscope. - The instructor requests homework and reports from the students on the lecture topic.	Weekly and monthly quizzes as well as various classroom activities.
19	4	Describe of the most important types of laboratory diagnosis of medical parasites	Direct detection of the parasite; Serological methods & Molecular assays	The instructor prepares his lectures electronically and on paper and distributes them to the students. - The instructor prepares parasite samples and displays them under the microscope. - The	Weekly and monthly quizzes as well as various classroom activities.

				instructor requests homework and reports from the students on the lecture topic.	
20	4	Addressing the most important special characteristics of the parasite Plasmodium	Terms used in malaria & Life cycle	The instructor prepares his lectures electronically and on paper and distributes them to the students. - The instructor prepares parasite samples and displays them under the microscope. - The instructor requests homework and reports from the students on the lecture topic.	Weekly and monthly quizzes as well as various classroom activities.
21	4	Define of the principles followed in laboratory diagnosis of parasites	Preparation of Geimsa and Leishman stains - Quantitative Buffy Coat (QBC) test - Non microscopic test - Rapid Diagnostic Tests (RDTs)	The instructor prepares his lectures electronically and on paper and distributes them to the students. - The instructor prepares parasite samples and displays them under the microscope. - The instructor requests	Weekly and monthly quizzes as well as various classroom activities.

				homework and reports from the students on the lecture topic.	
22	4	Comparison of two classes of flatworms	Properties Class Cestoda & Class Trematoda	The instructor prepares his lectures electronically and on paper and distributes them to the students. - The instructor prepares parasite samples and displays them under the microscope. - The instructor requests homework and reports from the students on the lecture topic.	Weekly and monthly quizzes as well as various classroom activities.
23	4	Report of the most important general characteristics of the class of tapeworms	Sample of Platyhelminths & Class Cestoda	The instructor prepares his lectures electronically and on paper and distributes them to the students. - The instructor prepares parasite samples and displays them under the microscope. - The instructor requests homework and reports from	Weekly and monthly quizzes as well as various classroom activities.

				the students on the lecture topic.	
24	4	Comparison between two species of worms <i>T.solium</i> & <i>T.sagitta</i>	life cycle and laboratory diagnosis; differentiate between both species in laboratory	The instructor prepares his lectures electronically and on paper and distributes them to the students. - The instructor prepares parasite samples and displays them under the microscope. - The instructor requests homework and reports from the students on the lecture topic.	Weekly and monthly quizzes as well as various classroom activities.
25	4	Study of the most important characteristics of the parasite <i>Echinococcus granulosus</i>	methods of diagnosis (detection of certain Ag)	The instructor prepares his lectures electronically and on paper and distributes them to the students. - The instructor prepares parasite samples and displays them under the microscope. - The instructor requests homework and reports from the students on the lecture	Weekly and monthly quizzes as well as various classroom activities.

				topic.	
26	4	define explanation of the parasite <i>Schistosoma haematobium</i>	Direct and indirect examination for the parasite <i>Schistosoma haematopium</i>	The instructor prepares his lectures electronically and on paper and distributes them to the students. - The instructor prepares parasite samples and displays them under the microscope. - The instructor requests homework and reports from the students on the lecture topic.	Weekly and monthly quizzes as well as various classroom activities.
27			Second term examination		The second quest
28	4	Define about the most important characteristics of nematodes.	Short notes on; <i>Ascaris lumbricoides</i> , <i>Enterobius vermicularis</i> , <i>Ancylostoma duodenale</i> , <i>Strongyloides stercoralis</i>	The instructor prepares his lectures electronically and on paper and distributes them to the students. - The instructor prepares parasite samples and displays them under the microscope. - The instructor requests homework and reports from the students on the lecture topic.	Weekly and monthly quizzes as well as various classroom activities.

29	4	The most important methods used in anal smear examination	application of anal swab pin worm	The instructor prepares his lectures electronically and on paper and distributes them to the students. - The instructor prepares parasite samples and displays them under the microscope. - The instructor requests homework and reports from the students on the lecture topic.	Weekly and monthly quizzes as well as various classroom activities.
30	4	Learn about the Hardi-Mori technique for culturing worms.	hook worm and detection of rhabditiform and filariform larvae	The instructor prepares his lectures electronically and on paper and distributes them to the students. - The instructor prepares parasite samples and displays them under the microscope. - The instructor requests homework and reports from the students on the lecture topic.	Weekly and monthly quizzes as well as various classroom activities.

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, reportsetc (20 first quest + 20 second quest + 60 final)

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Twinning decisions with Iraqi universities
Main references (sources)	1- Fadhel, Hussein and Birqadar, Marwan (2020): Medical and Veterinary Parasitology - Part One, University of Kirkuk, 529 pp. 2- Fadhel, Hussein and Birqadar, Marwan (2020): Medical and Veterinary Parasitology - Part Two, University of Kirkuk.
Recommended books and references (scientific journals, reports...)	Qatranji, Mohsen (2019): Microbiology (1) - Faculty of Pharmacy - Hama University - Syria.
Electronic References, Websites	Assif, et al., (2004): medical parasitology. Uni. Of Gondar www.google.com www.science-direct.com

1. Course Name:	
Advanced Clinical Chemistry	
2. Course Code:	
3. Semester / Year:	
Yearly/ 4 th	
4. Description Preparation Date:	
03/01/2025	
5. Available Attendance Forms:	
Face to face	
6. Number of Credit Hours (Total) / Number of Units (Total):	
6 / 8	
7. Course administrator's name (mention all, if more than one name)	
Name: Dr. Mohammad Anas Suliman Alfeen Email: chem_anas@yahoo.com	
8. Course Objectives	
Course Objectives	• Introducing the student to the basic principles related to pathological analyses. • Defining advanced clinical chemistry with regard to modern techniques related to examinations and early detection of tumors or serious diseases.
9. Teaching and Learning Strategies	
Strategy	The student should be able to deal with the latest technologies related to pathological analyses in terms of scientific understanding and the special principle of these devices to benefit from them in completing all pathological analyses in record time, accuracy and reliability according to WHO recommendations.

10. Course Structure					
Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
Syllabus of The Theoretical Course					
1	2	Understands safe laboratory work, wearing personal protective equipment, and handling patient specimens.	Laboratory safety	interactive-visual	Oral quiz
2	2	Apply and remembers and applies safe work instructions in medical laboratories.	Laboratory safety	interactive-visual	Oral quiz
3	2	An analysis ability, for application of analysis request forms, evaluation of results and pathological examinations	Classification of laboratory request and interpretation of results	interactive-visual	Oral quiz
4	2	Apply the collecting samples in an ideal way.	Sample collection rules and how to handle them	interactive-visual	Oral quiz
5	2	Remembers the concept of quality in medical laboratories according to the requirements of ISO 15189	Quality Management	interactive-visual	Oral quiz
6	2	Practical application of the quality management model in the laboratory	Quality Management	interactive-visual	Oral quiz
7	2	Analyzes, evaluates and innovates in proposing solutions and problems within what he has learned	Quality Management	interactive-visual	Oral quiz

		from quality management in laboratories.			
8	2	Remembers and understands the principles of its operation, how to deal with it and work on it	Modern techniques in clinical chemistry	interactive-visual	Oral quiz
9	2	Apply the instructions for operating these techniques and analyzing the results.	Modern techniques in clinical chemistry	interactive-visual	Oral quiz
10	2	Analysis and applies of these techniques in pathological analysis.	Modern techniques in clinical chemistry	interactive-visual	Oral quiz
11	2	Remembers analytical and evaluation skills on these techniques.	Modern techniques in clinical chemistry	interactive-visual	Oral quiz
12	2	Applies analytical and evaluation skills on these techniques.	Modern techniques in clinical chemistry	interactive-visual	Oral quiz
13	2	Understands the principles of clinical chemistry from specimen collection to different stages of childhood.	pediatric Clinical chemistry	interactive-visual	Oral quiz
14	2	apply sampling and work on techniques specific to each disease in children	pediatric Clinical chemistry	interactive-visual	Oral quiz
15	2	Evaluate and analyze these results.	pediatric Clinical chemistry	interactive-visual	Oral quiz
16	2	Understands the use of computers primarily in technology and their	Computer in clinical chemistry	interactive-visual	Oral quiz

		purpose in displaying and processing analysis and results.			
17	2	Remember modern computer applications in the field of nanotechnology for clinical research	Computer in clinical chemistry	interactive-visual	Oral quiz
18	2	understand the principles of testing for each of the body's functions and the appropriate technique for these disease states.	Functional tests in clinical chemistry and evaluation of these pathological analyses	interactive-visual	Oral quiz
19	2	understand the principles of testing for each of the body's functions and the appropriate technique for these disease states.	Functional tests in clinical chemistry and evaluation of these pathological analyses	interactive-visual	Oral quiz
20	2	understand and remembers the principles of testing for each of the body's functions and the appropriate technique for these disease states.	Functional tests in clinical chemistry and evaluation of these pathological analyses	interactive-visual	Oral quiz
21	2	Apply the principles of testing for each of the body's functions and the appropriate technique for these disease states.	Functional tests in clinical chemistry and evaluation of these pathological analyses	interactive-visual	Oral quiz
22	2	understand the principles of biostatistics calculations in	Errors in calculations related to biochemistry	interactive-visual	Oral quiz

		biochemistry, including SPSS			
23	2	how to apply the SPSS system in processing the results of medical cases according to the technology used	Errors in calculations related to biochemistry	interactive-visual	Oral quiz
24	2	Analysis a liver profile disease conditions in terms of function performance.	Case studies according to the principles of clinical chemistry	interactive-visual	Oral quiz
25	2	Analysis kidney profile disease conditions in terms of function performance.	Case studies according to the principles of clinical chemistry	interactive-visual	Oral quiz
26	2	Analysis heart diseases conditions in terms of function performance	Case studies according to the principles of clinical chemistry	interactive-visual	Oral quiz
27	2	Analysis pathological cases in terms of functional performance in children.	Case studies according to the principles of clinical chemistry	interactive-visual	Oral quiz
28	2	Analysis pathological conditions in terms of functional performance in prostate cancer patients.	Case studies according to the principles of clinical chemistry	interactive-visual	Oral quiz
29	2	Analysis pathological diseases conditions in terms of functional performance in asthma patients.	Case studies according to the principles of clinical chemistry	interactive-visual	Oral quiz
30	2	Analysis pathological cases in terms of functional performance in	Case studies according to the principles of clinical	interactive-visual	Oral quiz

		patients with cerebral palsy.	chemistry		
Syllabus of The Practical Course					
1	4	Understands safe laboratory work, wearing personal protective equipment, and handling patient specimens.	Laboratory safety	interactive-visual	Oral-written quiz-practical application
2	4	Apply safe work instructions in medical laboratories.	Laboratory safety	interactive-visual	Oral-written quiz-practical application
3	4	An analysis ability, for application of analysis request forms, evaluation of results and pathological examinations	Laboratory Request and Documentation of Pathological Results How to Interpret Results	interactive-visual	Oral-written quiz-practical application
4	4	Apply the collecting samples in an ideal way.	Collecting samples of all kinds	interactive-visual	Oral-written quiz-practical application
5	4	Remembers the concept of quality in medical laboratories according to the requirements of ISO 15189	Quality Management	interactive-visual	Oral-written quiz
6	4	Practical application of the quality management model in the laboratory	Quality Management	interactive-visual	Oral-written quiz
7	4	Analyzes, evaluates and innovates in proposing solutions and problems within what he has learned from quality	Modern techniques in clinical chemistry	interactive-visual	Oral-written quiz-practical application

		management in laboratories.			
8	4	Remembers and understands the principles of its operation, how to deal with it and work on it	Modern techniques in clinical chemistry	interactive-visual	Oral-written quiz-practical application
9	4	Apply the instructions for operating these techniques and analyzing the results.	Modern techniques in clinical chemistry	interactive-visual	Oral-written quiz
10	4	Analysis and applies of these techniques in pathological analysis.	Modern techniques in clinical chemistry	interactive-visual	Oral-written quiz
11	4	Remembers analytical and evaluation skills on these techniques.	pediatric Clinical chemistry	interactive-visual	Oral-written quiz-practical application
12	4	Applies analytical and evaluation skills on these techniques.	pediatric Clinical chemistry	interactive-visual	Oral-written quiz-practical application
13	4	Understands the principles of clinical chemistry from specimen collection to different stages of childhood.	pediatric Clinical chemistry	interactive-visual	Oral-written quiz-practical application
14	4	apply sampling and work on techniques specific to each disease in children	Computer clinical chemistry in	interactive-visual	Oral-written quiz-practical application
15	4	Evaluate and analyze these results.	Computer clinical chemistry in	interactive-visual	Oral-written quiz-practical application

16	4	Understands the use of computers primarily in technology and their purpose in displaying and processing analysis and results.	Functional tests in clinical chemistry and evaluation of these pathological analyses	interactive-visual	Oral-written quiz-practical application
17	4	Remember modern computer applications in the field of nanotechnology for clinical research	Functional tests in clinical chemistry and evaluation of these pathological analyses	interactive-visual	Oral-written quiz-practical application
18	4	understand the principles of testing for each of the body's functions and the appropriate technique for these disease states.	Functional tests in clinical chemistry and evaluation of these pathological analyses	interactive-visual	Oral-written quiz-practical application
19	4	understand the principles of testing for each of the body's functions and the appropriate technique for these disease states.	Functional tests in clinical chemistry and evaluation of these pathological analyses	interactive-visual	Oral-written quiz-practical application
20	4	understand and remembers the principles of testing for each of the body's functions and the appropriate technique for these disease states.	Errors in calculations related to biochemistry	interactive-visual	Oral-written quiz-practical application
21	4	Apply the principles of testing for each of the body's functions and the appropriate technique for these disease states.	Errors in calculations related to biochemistry	interactive-visual	Oral-written quiz-practical application

22	4	understand the principles of biostatistics calculations in biochemistry, including SPSS	Case studies according to the principles of clinical chemistry	interactive-visual	Oral-written quiz-practical application
23	4	how to apply the SPSS system in processing the results of medical cases according to the technology used	Case studies according to the principles of clinical chemistry	interactive-visual	Oral-written quiz-practical application
24	4	Analysis a liver profile disease conditions in terms of function performance.	Case studies according to the principles of clinical chemistry	interactive-visual	Oral-written quiz-practical application
25	4	Analysis kidney profile disease conditions in terms of function performance.	Case studies according to the principles of clinical chemistry	interactive-visual	Oral-written quiz-practical application
26	4	Analysis heart diseases conditions in terms of function performance	Case studies according to the principles of clinical chemistry	interactive-visual	Oral-written quiz-practical application
27	4	Analysis pathological cases in terms of functional performance in children.	Case studies according to the principles of clinical chemistry	interactive-visual	Oral-written quiz-practical application
28	4	Analysis pathological conditions in terms of functional performance in prostate cancer patients.	Case studies according to the principles of clinical chemistry	interactive-visual	Oral-written quiz-practical application
29	4	Analysis pathological diseases conditions in terms of functional performance in asthma patients.	Errors in calculations related to biochemistry	interactive-visual	Oral-written quiz-practical application

30	4	Analysis pathological cases in terms of functional performance in patients with cerebral palsy.	Errors in calculations related to biochemistry	interactive-visual	Oral-written quiz-practical application
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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)	1. S. Walker, G. Beckett, P. Rae, P. Ashby, Clinical Biochemistry Book, 9th edition. Wiley-Blackwell, 2013. 2. D. W. Oxtoby, H. p. Gillis, A. Campion, H. H. Helal, K. P. Gaither, Principle of Modern Chemistry Book, 7th edition, learning, 2018. 3. David Harvey, Modern Analytical Chemistry Book, MC-Graw-Hill, 2020. 4. Martin A Crool, Clinical Biochemistry and Metabolic Medicine Book, 8th edition, 2012
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	

1. Course Name:
Clinical Immunology
2. Course Code:
3. Semester / Year:
First term–Yerly
4. Description Preparation Date:
9/1/2025
5. Available Attendance Forms:
Face to face
6. Number of Credit Hours (Total) / Number of Units (Total):
6/8
7. Course administrator's name (mention all, if more than one name)
Name: MSc Nazim Naeem Tahir Email: n9999995@gmail.com
8. Course Objectives
Course Objectives Basic Knowledge Understand the fundamentals of immunology, including the structure and function of immune organs cells, and molecules. Recognize innate and adaptive immune responses and their mechanisms. Laboratory Diagnostics: Learn laboratory techniques for diagnosing immune-related diseases (e.g., ELISA, Western blot). Apply safety and quality standards in immunology laboratories. Immunological Diseases: Study autoimmune diseases (e.g., lupus), immunodeficiency disorders, and hypersensitivity reactions. Interaction Between Immunity and Other Diseases: Understand the role of the immune system in chronic diseases and organ transplantation. Learn about modern immunotherapies. Practical Application: Develop skills to analyze and interpret immunological tests and correlate findings with clinical diagnoses. Research and Development: Enhance critical thinking and research skills in immunology. Contribute to the development of diagnostic tools and immunological treatments. Communication with the Medical Team: Improve communication skills with physicians to interpret immunological findings and provide therapeutic recommendations

9. Teaching and Learning Strategies

Strategy	Lectures Discussions Presentations Lab work Practical activities
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10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
Syllabus of The Theoretical Course					
1+2	4	Immune causes , symptoms and laboratory diagnosis of RA And SLE	Rheumatoid Arthritis SLE	Interactive Face to face	Exams and quizzes Discussions
3+4	4	Signs and symptoms and laboratory diagnosis of AS and SS	AS and SS	Interactive Face to face	Exams and quizzes
5+6	4	Immunology reasons, symptom and laboratory diagnosis of Behcet' Disease, Celiac disease ,PA andT1DM	Behcet' Disease, Celiac disease ,PA andT1DM	Interactive Face to face	Exams and quizzes Discussions
7	2	Sign and symptom and laboratory diagnosis of inflammatory bowel diseases	Inflammatory bowel diseases	Interactive Face to face	Exams and quizzes Discussions
8	2	Sign and symptom and laboratory diagnosis of immune biliary diseases	immune biliary diseases	Interactive Face to face	Exams and quizzes
9	2	Immune etiology, symptoms and laboratory diagnosis of AIH	Auto immune Hepatitis	Interactive Face to face	Exams and quizzes
10-16	14	Immune defect ,symptoms and laboratory diagnosis of renal diseases	Renal disease Membranous glomerulonephritis Lupus nephritis Postinfectious glomerulonephritis Anti-glomerular basement membrane disease IgA nephropathy	Interactive Face to face	Exams and quizzes Discussions

17-20	8	The most common immune respiratory system, symptoms and laboratory diagnosis	Drug-Induced Pulmonary Disease Eosinophilic Pneumonia Occupational lung diseases Asthma Non-allergic bronchi	Interactive Face to face	Exams and quizzes Discussions
21-22	4	Causes, symptoms and laboratory diagnosis of hypersensitivity	Hypersensitivity	Interactive Face to face	Exams and quizzes
23	2	Sign and symptom and laboratory diagnosis of AIHA	Autoimmune hemolytic anemia	Interactive Face to face	Exams and quizzes
24	2	Sign and symptom and laboratory diagnosis of Eczema and contact dermatitis	Eczema and contact dermatitis	Interactive Face to face	Exams and quizzes Discussions
25-26	4	Sign and symptom and laboratory diagnosis of thyroid diseases	Immune thyroid diseases	Interactive Face to face	Exams and quizzes Discussions
27-28	4	Knowledge of most tumor markers	Tumors	Interactive Face to face	Exams and quizzes
29-30	4	Role of immunity in transplantation	Transplantation	Interactive Face to face	Exams and quizzes

Syllabus of The Practical Course

1-6	12	laboratory diagnosis for RA,SLE AS,SS, Behcet' Disease and T1DM	RA, SLE, AS, SS, Behcet' Disease And T1DM	Interactive Face to face In lab	Oral, written quiz and practical applications
7-9	6	Practical diagnosis for immune GIT diseases	immune GIT diseases	Interactive Face to face In lab	Oral, written quiz and practical applications
9-16	14	The most laboratory Investigation for immune renal diseases	immune renal diseases	Interactive Face to face In lab	Oral, written quiz and practical applications
17-20	8	Practical training for important Lab-tests for respiratory immune diseases	Respiratory immune diseases	Interactive Face to face In lab	Oral, written quiz and practical applications
21-22	4	Hypersensitivity lab-diagnosis	Hypersensitivity	Interactive Face to face In lab	Oral, written quiz and practical applications
23	2	Combs tests	AIHA	Interactive Face to face In lab	Oral, written quiz and practical applications
24	2	Eczema and CD investigations	Eczema and CD	Interactive	Oral, written

				Face to face In lab	quiz and practical applications
25-26	4	Lab -tests for thyroid diseases	Thyroid diseases	Interactive Face to face In lab	Oral, written quiz and practical applications
27-28	4	The bio marker work in lab	Tumors	Interactive Face to face In lab	Oral, written quiz and practical applications
29-30	4	Most immune investigations transplantations	Transplantations	Interactive Face to face In lab	Oral, written quiz and practical applications

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)	Ministry source
Main references (sources)	Janeway's Immunobiology • : Kenneth Murphy Roitt's Essential Immunology • : Peter J. Delves, Seamus J. Martin, Dennis R. Burton
Recommended books and references (scientific journals, reports...)	Journal of Clinical Immunology Clinical and Experimental Immunology
Electronic References, Websites	PubMed Google scholar

1. Course Name:	
Histopathology	
2. Course Code: /	
3. Semester / Year:	
1st & 2nd semester / 2024 - 2025	
4. Description Preparation Date:	
2/1/2025	
5. Available Attendance Forms:	
Morning/evening	
6. Number of Credit Hours (Total):	
30hours / Number of Units (Total):5 units	
7. Course administrator's name (mention all, if more than one name)	
Name: Moayad Jilab Abed	
Email: Moayadjilab@gmail.com	
8. Course Objectives	
Course Objectives	• A knowledge: -to teach the students histopathology theoretically & practically about definition of diseases, causes, types & characteristics 2-histopathological changes & how to make the diagnosis. 3- to know the traditional & modern techniques to diagnose the disease (eg. (Tissue processing, immunohistochemistry & use of different dyes to reach the diagnosis)). • C 2: Respecting religious traditions and social norms in biological studies
9. Teaching and Learning Strategies	
Strategy	A- teaching goals : 1-teach the medical basis of human diseases 2- teach the medical laboratories techniques 3- laboratory diagnosis of human diseases 4- Precautions & protection of lab. Hazards. 5- to prepare tools used for diagnosis. B- skills goals : 1- to work in medical laboratories & diagnose human diseases. 2- to prepare the basic laboratory materials needed for processing & diagnosis of cancer. 3- Techniques used for protection from laboratory hazards. 4- How to get lab. Materials from the markets.

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
Syllabus of The Theoretical Course					
1	1	The student will remember and learn Introduction to Histopathology and lung diseases .	Lung (atelectasias, acute lung injury)	Lectures and - Discussion Brainstorming	Theory exams- - Discussions
2	1	The student will understand and learn chronic pulmonary diseases	Lung (chronic bronchitis pulmonary embolism)	Lectures and - Discussion Brainstorming	Theory exams- - Discussions
3	1	The student will learn lung tumors and its types	Lung tumors	Lectures and - Discussion Brainstorming	Theory exams- - Discussions
4	1	The student will learn glomerular disease	Kidney (glomerular disease)	Lectures and - Discussion Brainstorming	Theory exams- Discussions
5	1	The student will learn immunity disease of kidney	Kidney (nephrotic syndrome, IgA nephropathy (Berger disease)	Lectures and - Discussion Brainstorming	Theory exams- - Discussions
6	1	The student will learn kidney tumor	Kidney tumors	Lectures and - Discussion Brainstorming	Theory exams- - Discussions
7	1	The student will learn oral cavity diseases	Cancer of the oral cavity and tongue	Lectures and - Discussion Brainstorming	Theory exams- - Discussions
8	1	The student will learn Esophagus Diseases and tumors	Esophagus (laceration, varices, esophageal carcinoma)	Lectures and - Discussion Brainstorming	Theory exams- - Discussions
9	1	The student will learn stomach diseases and tumors	Stomach (gastritis, ulcer, carcinoma)	Lectures and - Discussion Brainstorming	Theory exams- - Discussions

10	1	The student will learn large intestine	Large intestines (hemorrhoids, malabsorption syndrome)	Lectures and - Discussion Brainstorming	Theory exams- - Discussions
11	1	The student will learn Crohn disease	Crohn disease	Lectures and - Discussion Brainstorming	Theory exams- - Discussions
12	1	The student will learn Large intestines tumors	Large intestines tumors	Lectures and - Discussion Brainstorming	Theory exams- - Discussions
13	1	The student will learn liver	Liver (hepatic infection, failure, cirrhosis)	Lectures and - Discussion Brainstorming	Theory exams- - Discussions
14	1	The student will learn Hepatic tum	Hepatic tumors	Lectures and - Discussion Brainstorming	Theory exams- - Discussions
15	1	The student will learn Gall bladder diseases and tumors	Gall bladder (cholecystitis, tumors)	Lectures and - Discussion Brainstorming	Theory exams- - Discussions
16	1	The student will learn Pancreas diseases (pancreatitis)	Pancreas (pancreatitis)	Lectures and - Discussion Brainstorming	Theory exams- - Discussions
17	1	The student will learn Pancreatic neoplasma	Pancreatic neoplasma	Lectures and - Discussion Brainstorming	Theory exams- - Discussions
18	1	The student will learn Male genital system diseases (testicular atrophy, lesions, neoplasma)	Male genital system (testicular atrophy, lesions, neoplasma)	Lectures and - Discussion Brainstorming	Theory exams- - Discussions
19	1	The student will learn Male genital system (prostatitis, tumor)	Male genital system (prostatitis, tumors)	Lectures and - Discussion Brainstorming	Theory exams- Discussions
20	1	The student will learn Female genital system	Female genital system (cervical tumor of the cervix)	Lectures and - Discussion Brainstorming	Theory exams- - Discussions

		(cervicitis, tumor of the cervix)			
21	1	The student will learn Uterus (endometritis, endometriosis , tumor of the uterus)	Uterus (endometritis, endometriosis , tumor of the uterus)	Lectures and - Discussion Brainstorming	Theory exams- - Discussions
22	1	The student will learn Breast (fibrocystic changes, tumors of the breast)	Breast (fibrocystic changes, tumors of the breast)	Lectures and - Discussion Brainstorming	Theory exams- - Discussions
23	1	The student will learn Endocrine system (hyperpituitarism and pituitary adenoma)	Endocrine system (hyperpituitarism and pituitary adenoma)	Lectures and - Discussion Brainstorming	Theory exams- - Discussions
24	1	The student will learn Thyroid (thyroiditis, thyroid neoplasma)	Thyroid (thyroiditis, thyroid neoplasma)	Lectures and - Discussion Brainstorming	Theory exams- - Discussions
25	1	The student will learn Bone tumors	Bone tumors	Lectures and - Discussion Brainstorming	Theory exams- - Discussions
26	1	The student will learn Skin (acute eczematous dermatitis, psoriasis)	Skin (acute eczematous dermatitis, psoriasis)	Lectures and - Discussion Brainstorming	Theory exams- - Discussions
27	1	The student will learn Skin tumors	Skin tumors	Lectures and - Discussion Brainstorming	Theory exams- - Discussions
28	1	The student will learn Nervous system (brain tumor)	Nervous system (brain tumor)	Lectures and - Discussion Brainstorming	Theory exams- - Discussions
29	1	The student will learn	Nervous system (diseases of the	Lectures and - Discussion	Theory exams- -
4					

		Nervous system (diseases of the peripheral nervous system)	peripheral nervous system)	Brainstorming	Discussions
30	1	The student will learn Pancreas (pancreatitis)	Pancreas (pancreatitis)	Lectures and - Discussion Brainstorming	Theory exams- - Discussions
Syllabus of The Practical Course					
1	5	The student will remember introduction to Histopathology and learn lung diseases .	Lung (atelectasias, acute lung injury)	practical lessons – Discussion and Brainstorming	Practical exam – and Discussions
2	5	The student will understand and learn chronic pulmonary diseases	Lung (chronic bronchitis pulmonary embolism)	practical lessons – Discussion and Brainstorming	Practical exam – and Discussions
3	5	The student will learn lung tumors and its types	Lung tumors	practical lessons – Discussion and Brainstorming	Practical exam – and Discussions
4	5	The student will learn glomerular disease	Kidney (glomerular disease)	practical lessons – Discussion and Brainstorming	Practical exam – and Discussions
5	5	The student will learn immunity disease of kidney	Kidney (nephrotic syndrome, IgA nephropathy (Berger disease)	practical lessons – Discussion and Brainstorming	Practical exam – and Discussions
6	5	The student will learn kidney tumor	Kidney tumors	practical lessons – Discussion and Brainstorming	Practical exam – and Discussions
7	5	The student will learn oral cavity diseases	Cancer of the oral cavity and tongue	practical lessons – Discussion and	Practical exam – and Discussions

				Brainstorming	
8	5	The student will learn Esophagus Diseases and tumors	Esophagus (lacivation, varices, esophageal carcinoma)	practical lessons – Discussion and Brainstorming	Practical exam – and Discussions
9	5	The student will learn stomach diseases and tumors	Stomach (gastritis, ulcer, carcinoma)	practical lessons – Discussion and Brainstorming	Practical exam – and Discussions
10	5	The student will learn large intestine	Large intestines (hemorrhoids, malabsorption syndrome)	practical lessons – Discussion and Brainstorming	Practical exam – and Discussions
11	5	The student will learn Crohn disease	Crohn disease	practical lessons – Discussion and Brainstorming	Practical exam – and Discussions
12	5	The student will learn Large intestines tumors	Large intestines tumors	practical lessons – Discussion and Brainstorming	Practical exam – and Discussions
13	5	The student will learn liver	Liver (hepatic infection, failure, cirrhosis)	practical lessons – Discussion and Brainstorming	Practical exam – and Discussions
14	5	The student will learn Hepatic tum	Hepatic tumors	practical lessons – Discussion and Brainstorming	Practical exam – and Discussions
15	5	The student will learn Gall bladder diseases and tumors	Gall bladder (cholecystitis, tumors)	practical lessons – Discussion and Brainstorming	Practical exam – and Discussions
16	5	The student will learn Pancreas diseases	Pancreas (pancreatitis)	practical lessons – Discussion	Practical exam – and Discussions
6					

		(pancreatitis)		and Brainstorming	
17	5	The student will learn Pancreatic neoplasma	Pancreatic neoplasma	practical lessons – Discussion and Brainstorming	Practical exam – and Discussions
18	5	The student will learn Male genital system diseases (testicular atrophy, lesions, neoplasma)	Male genital system (testicular atrophy, lesions, neoplasma)	practical lessons – Discussion and Brainstorming	Practical exam – and Discussions
19	5	The student will learn Male genital system (prostatitis, tumor)	Male genital system (prostatitis, tumors)	practical lessons – Discussion and Brainstorming	Practical exam – and Discussions
20	5	The student will learn Female genital system (cervicitis, tumor of the cervix)	Female genital system (cervicitis, tumor of the cervix)	practical lessons – Discussion and Brainstorming	Practical exam – and Discussions
21	5	The student will learn Uterus (endometritis, endometriosis , tumor of the ute	Uterus (endometritis, endometriosis , tumor of the uterus)	practical lessons – Discussion and Brainstorming	Practical exam – and Discussions
22	5	The student will learn Breast (fibrocystic changes, tumors of the breast)	Breast (fibrocystic changes, tumors of the breast)	practical lessons – Discussion and Brainstorming	Practical exam – and Discussions
23	5	The student will learn Endocrine system (hyperpituitarism and pituitary adenoma)	Endocrine system (hyperpituitarism and pituitary adenoma)	practical lessons – Discussion and Brainstorming	Practical exam – and Discussions
24	5	The student will	Thyroid	practical	Practical exam
7					

		learn Thyroid (thyroiditis, thyroid neoplasma)	(thyroiditis, thyroid neoplasma)	lessons – Discussion and Brainstorming	– and Discussions
25	5	The student will learn Bone tumors	Bone tumors	practical lessons – Discussion and Brainstorming	Practical exam – and Discussions
26	5	The student will learn Skin (acute eczematous dermatitis, psoriasis)	Skin (acute eczematous dermatitis, psoriasis)	practical lessons – Discussion and Brainstorming	Practical exam – and Discussions
27	5	The student will learn Skin tumors	Skin tumors	practical lessons – Discussion and Brainstorming	Practical exam – and Discussions
28	5	The student will learn Nervous system (brain tumor)	Nervous system (brain tumor)	practical lessons – Discussion and Brainstorming	Practical exam – and Discussions
29	5	The student will learn Nervous system (diseases of the peripheral nervous system)	Nervous system (diseases of the peripheral nervous system)	practical lessons – Discussion and Brainstorming	Practical exam – and Discussions
30	5	The student will learn Pancreas (pancreatitis)	Pancreas (pancreatitis)	practical lessons – Discussion and Brainstorming	Practical exam – and Discussions

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)	Pathologic basis of diseases, 8th edition, 2012 - Junqueira's basic histology, 15th edition, 2018
Main references (sources)	- Pathology illustrated, 17th edition, 2011.

Recommended books and references (scientific journals, reports...)	1-NCBI 2- PubMed You tube
Electronic References, Websites	1-NCBI 2- PubMed

1. Course Name :	
Research methods	
2. Course Code:	
3. Semester / Year:	
First semester/first year	
4. Description Preparation Date:	
10 - 1- 2025	
5. Available Attendance Forms:	
Attendance in class	
6.Number of Credit Hours (Total) / Number of Units (Total):	
30 hours	
7. Course administrator's name (mention all, if more than one name)	
Name: Dr. Nabil Tabaja - M.sc. Shams Yousef Ali Email: : shamsyousifali@gmail.com	
8. Course Objectives	
Course Objectives : The student able to : • How to write a research paper using a scientific methodology • Developing the student's abilities in the field of scientific research as well as his ability to perceive, understand and comprehend the criteria on which he relies in choosing a research topic and choosing the appropriate method for the research topic and methods of collecting data and information and choosing methods of analyzing this data and information to reach the research goal. • Developing a comprehensive understanding of the concepts of research methods. • Writing the research paper in a systematic manner • Gaining experience in writing scientific research	
9. Teaching and Learning Strategies	
Strategy	1. Actively participate in class discussions about research writing methods. 2. Implement the steps accurately and with understanding. 3. Effectively communicate knowledge of research writing methods to diverse audiences. 4. Increase educational activities that focus on developments in research writing methods.

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10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
Syllabus of Theoretical part					
1	1	Introduction a comprehensive information to describe scientific research	Research Methodology	Interactive lectures	Direct questions in class
2	1	Understanding the types of scientific research	What are the research objectives	Interactive lectures supported by presentations	Quiz
3	1	Understanding the uses of each type of research and learning how to study it	What are the research objectives	In-class lecture	Direct questions in class
4	1	Learning about the mechanism of taking samples and methods of preserving samples	Sampling - Epidemiological studies	The instructor prepares lectures about the lecture in paper and electronic form and presents them to the students.	Direct questions in class
5	1	Understanding the types of studies and a comprehensive description of each study	What are the limitations of the study (research)	Interactive lectures supported by presentations	Direct questions in class

The following evaluation methods are adopted:

- Distribution of students' grades from 30 points for the entire course, and the student is subject to two university exams.
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- Pursuit exam: 15 points
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- Final exam: 70 points

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

Academic description of Medical Laboratories department for Research
methods
- Fourth Stage

Dr. Nabil Tabaja

M.SC. Shams Yousef Ali

1. Course Name:					
blood transfusion					
2. Course Code:					
3. Semester / Year:					
2024_ 2025					
4. Description Preparation Date:					
10 -1-2025					
5. Available Attendance Forms:					
Presence					
6. Number of Credit Hours (Total) / Number of Units (Total):					
120 hours - 6 / 8 units					
7. Course administrator's name (mention all, if more than one name)					
Name: Talal Hasan Jaber Email: talal078122@gmail.com					
8. Course Objectives					
Course Objectives			• Provide a complete picture of what happens during blood transfusion. • Complete knowledge of blood donation methods. • Knowledge and methods of avoiding diseases acquired during blood transfusion.		
9. Teaching and Learning Strategies					
Strategy		Use live student presentation, brainstorming, and Q&A.			
10. Course Structure					
Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
Syllabus of The Theoretical Course					
1	2	Learn about the work of blood banks	Introduction to Blood banking	Data show	Participation Examination
2	2	How to identify donors	Blood donation	Data show	Participation Examination
3	2	Knowing the status of the blood donor	selection of donation	Data show	Participation Examination

4	2	Donor screening	Test for donated blood	Data show	Participation Examination
5.6	2	Donor screening	Test for donated blood	Data show	Participation Examination
7	2	Blood type determination	Human blood groups	Data show	Participation Examination
8	2	Blood type determination	human blood groups	Data show	Participation Examination
9	2	Rh factor identification	Rh systems	Data show	Participation Examination
10	2	Know the causes of hemolysis in newborns	Hemolytic disease of newborn	Data show	Participation Examination
11	2	Study of blood transfusion complications	Complication of blood transfusion	Data show	Participation Examination
12	2	And diseases	Complication of blood transfusion	Data show	Participation Examination
13	2		Complication of blood transfusion	Data show	Participation Examination
14	2	Knowing diseases transmitted through blood transfusion	Transmission of disease by blood transfusion	Data show	Participation Examination
15	2	AIDS transmission through blood transfusion	Adis and blood transfusion	Data show	Participation Examination
16	2	Learn about the types of bags that	Types of anticoagulants use in hematology	Data show	Participation Examination
17	2	transport and store blood.	Types of anticoagulants use in hematology	Data show	Participation Examination
18	2	Learn about autologous blood donation	Autologous blood transfusion	Data show	Participation Examination
19	2	The relationship between blood transfusion and hemolysis	Hemolytic anemia	Data show	Participation Examination
20	2	Blood transfusion and its relation to bleeding	Homeostasis & bleeding disorders	Data show	Participation Examination
21	2	Platelet disorders resulting from blood transfusion	Platelet disorders	Data show	Participation Examination
22	2	Identifying clotting factor abnormalities that occur after blood transfusion	Coagulating disorders	Data show	Participation Examination
23.24	2	Learn how to check for blood clotting disorders.	Tests of hemostatic function	Data show	Participation Examination
25.26	2	Blood clotting disorders caused by	Acquired	Data show	Participation Examination

		blood transfusion	coagulation disorders		
27	2	Genetic relationship to blood transfusion	Autosomal dominant inheritance	Data show	Participation Examination
28	2	Learn how to take the test	Coombes test	Data show	Participation Examination
29	2	Learn how to take the test	Coombes test	Data show	Participation Examination
30	2	Learn how to take the test	Coombes test	Data show	Participation Examination

Syllabus of The Practical Course

1	4	Learn about the work of blood banks	Blood bank	Laboratory work	Participation and Examination
2	4	Blood type determination	Human blood groups	Laboratory work	Participation and Examination
3	4	Blood type determination	Human blood groups	Laboratory work	Participation and Examination
4	4	Rh factor identification	RhBLOODGROUP SYSTEM	Laboratory work	Participation and Examination
5	4	Know the causes of hemolysis in newborns	Complications of HDN	Laboratory work	Participation and Examination
6	4	Study of blood transfusion complications And diseases	Complication of Blood Transfusion	Laboratory work	Participation and Examination
7	4	In search antibodies tha tattack red blood cells	Direct Coombs test	Laboratory work	Participation and Examination
8	4	In search antibodies tha tattack red blood cells	Indirect Coombs test	Laboratory work	Participation and Examination
9	4	Knowledge of of anticoagulants	Types of Anticoagulants	Laboratory work	Participation and Examination
10	4	Detecting errors in determining blood type	Cross matching test	Laboratory work	Participation and Examination
11	4	Detecting errors in determining blood type	Cross matching test	Laboratory work	Participation and Examination
12	4	How to identify	Blood donation	Laboratory	Participation

		donors		work	and Examination
13	4	How to identify donors	Blood donation	Laboratory work	Participation and Examination
14	4	AIDS transmission through blood transfusion	Adis and blood transfusion	Laboratory work	Participation and Examination
15	4	AIDS transmission through blood transfusion	Adis and blood transfusion	Laboratory work	Participation and Examination

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)	Blood transfusion book
Recommended books and references (scientific journals, reports...)	Blood transfusion for Issam bin Saad Al-Ghamdi
Electronic References, Websites	academia