Curriculum for Associate Degree in Medical Laboratories Specialization

The curriculum of associate degree in **"Medical Laboratories"** specialization consists of (72 credit hours) as follows:

Serial No.	Requirements	Credit Hours
First	University Requirements	12
Second	Program Requirements	18
Third	Specialization Requirements	42
Total		**72**

The curriculum of associate degree program in "Medical Laboratories" Specialization

First: University requirements (12 credit hours) as follows:

Course No.	Course Title	Credit Hours	Weekly Contact Hours		Prerequisite
			Theoretical	Practical	
22001101	Arabic Language	3	3	-	
22002101	English Language	3	3	-	
21901100	Islamic Culture	3	3	-	
21702101	Computer Skills	3	1	4	
Total		**12**	**10**	**4**	

Second: Program requirements (18 credit hours) as follows:

Course No.	Course Title	Credit Hours	Weekly Contact Hours		Prerequisite
			Theoretical	Practical	
21301123	Medical Physics	3	3	-	
21301131	Biochemistry	2	2	-	
21301132	Biochemistry/ Practical	1	-	3	21301131*
21102111	Anatomy	3	3	-	
21102113	Physiology	3	3	-	21102111*
21102115	Medical Sociology	3	3	-	
21102117	Medical Terminology	3	3	-	
Total		**18**	**17**	**3**	

* Co-requisite

Third: Specialization Requirements (42 credit hours) as follows:

Course No.	Course Title	Credit Hours	Weekly Contact Hours		Prerequisite
			Theoretical	Practical	
21107211	Pathology	3	3	0	
21107221	Medical Biochemistry	3	2	3	
21107131	Microbiology 1	3	3	0	
211107132	Microbiology 2	3	3	0	21107131
21107133	Microbiology/ Practical	2	0	6	211107132*
21107241	Histology and Microtechniques	3	2	3	
21107251	Immunology	3	2	3	
21107141	Clinical Laboratory Instruments	2	1	3	
21107161	Basics in Hematology	3	2	3	
21107222	Clinical Chemistry	3	2	3	
21107261	Diagnostic Hematology	3	2	3	21107161
21107271	Blood Bank	3	2	3	
21107281	Medical Parasitology	3	2	3	
21107223	Analytical Chemistry	2	2	0	
21107200	Field Training**	3	-	-	
Total		**42**	**28**	**33**	

* Co-requisite

** Field Training equivalent to 280 Training hours

Guiding Plan					
First Year					
First Semester			Second semester		
Course No.	Course Title	Credit Hours	Course No.	Course Title	Credit Hours
22001101	Arabic Language	3	21702101	Computer Skills	3
21901100	Islamic Culture	3	21102117	Medical Terminology	3
21301131	Biochemistry	2	21301123	Medical Physics	3
21301132	Biochemistry/ Practical	1	21107161	Basics in Hematology	3
21102111	Anatomy	3	21107131	Microbiology 1	3
21102113	Physiology	3	22002101	English Language	3
21102115	Medical Sociology	3			
Total		**18**	**Total**		**18**

Second Year					
Third Semester			Fourth semester		
Course No.	Course Title	Credit Hours	Course No.	Course Title	Credit Hours
21107132	Microbiology 2	3	21107133	Microbiology/ Practical	2
21107251	Immunology	3	21107141	Clinical Laboratory Instruments	2
21107221	Medical Biochemistry	3	21107271	Blood Bank	3
21107261	Diagnostic Hematology	3	21107241	Histology and Microtechniques	3
21107211	Pathology	3	21107222	Clinical Chemistry	3
21107281	Medical Parasitology	3	21107223	Analytical Chemistry	2
			21107200	Field Training	3
Total		18	**Total**		18

❖ **تطبق هذه الخطة الدراسية اعتباراً من بداية العام الجامعي 2009/2008**

Brief Course Description

Course Title	Course No	Credit Hours (Theoretical /Practical)
لغة عربية	22001101	3(3، 0)
تتضمن هذه المادة مجموعة من المهارات اللغوية بمستوياتها وأنظمتها المختلفة: الصوتية، والصرفية، والنحوية، والبلاغية، والمعجمية، والتعبيرية، وتشتمل نماذج من النصوص المشرقة: قرآنية ، وشعرية، وقصصية ، من بينها نماذج من الأدب الأردني؛ يتوخى من قراءتها وتذوقها وتحليلها تحليلا أدبيا؛ تنمية الذوق الجمالي لدى الطلاب الدارسين.		
لغة إنجليزية	22002101	3 (3-0)
English 1 is a general course. It covers the syllabuses of listening, speaking, reading, writing, pronunciation and grammar, which are provided in a communicative context. The course is designed for foreign learners of the English language, who have had more than one year of English language study. The extension part would be dealt with in the class situation following the individual differences.		
ثقافة إسلامية	21901100	3(3، 0)
1. تعريف الثقافة الإسلامية وبيان معانيها وموضوعاتها والنظم المتعلقة بها – وظائفها وأهدافها 2. مصادر ومقومات الثقافة الإسلامية والأركان والأسس التي تقوم عليها . 3. خصائص الثقافة الإسلامية . 4. الإسلام والعلم ، والعلاقة بين العلم والإيمان 5. التحديات التي تواجه الثقافة الإسلامية . 6. رد الشبهات التي تثار حول الإسلام . 7. الأخلاق الإسلامية والآداب الشرعية في إطار الثقافة الإسلامية 8. النظم الإسلامية .		
مهارات حاسوب	21702101	3(1،4)
An introduction to computing and the broad field of information technology is given. Topics covered include the basic structure of digital computer system, microcomputer, operating systems, application software, data communication and networks, and the internet. Hands-on learning emphasizes Windows xp, MS-office2000, and the internet.		
Medical Physics	21301123	3(3,0)
This course is designed to acquaint the students with knowledge about forces ad units of forces, energy changes in the body, heat loss from the body, and breathing mechanism. It helps the students acquire knowledge about electric signals of the body, general properties of sound in the body as a drum (percussion in medicine) and vision defects and corrections. Moreover, it makes the students recognize sources of radioactivity, nuclear medicine imaging devices, and the dose in nuclear medicine and therapy with radioactivity.		

Biochemistry	**21301131**	**2(2,0)**
Biochemistry course introduces the basic essential information to the college students to know the biomaterials which we deal with during over daily activities, classification, chemical structure, reactions and how the human body metabolizes such biomolecules work.		
Biochemistry/ Practical	**21301132**	**1(0,3)**
This course deals with performing practical applications for the different classes of biomolecules including carbohydrates, lipids and proteins.		
Anatomy	**21102111**	**3(3,0)**
The course deals with structural anatomy of the body as a whole to provide the students with knowledge of the structure of the body of the human being. This course deals all the systems of the body in an attempt to make it easy for the paramedical students to recognize the organs of the body.		
Physiology	**21102113**	**3(3,0)**
This course is designed to provide the students with the knowledge of the functions performed by the various parts and organs of the human body. It also deals with the integrity of the body systems as a whole to let the student recognize the physiological changes that happen within the human body and how the body systems work.		
علم الاجتماع الطبي	**21102115**	**3(3,0)**
يتناول هذا المساق المضمون المعرفي لعلم الاجتماع من حيث الفكر الاجتماعي والرعاية الصحية. فيقدم عرضا لمفاهيم: الصحة، المرض، الرعاية الصحية، الخدمة الصحية والسلوك المرضي.وكذلك يتناول الدور الذي يمارسه المجتمع في الخدمة الصحية والسياق الاجتماعي للصحة والمرض وانعكاسات مفهوم الصحة والمرض على الخدمات الصحية. ثم يتناول المساق أهم الميادين الدراسية في العلوم الاجتماعية والسلوكية وذلك لفهم السلوك الاجتماعي على المستوى النظري والعملي من التطرق إلى مفاهيم: المعايير، الاتجاهات و القيم.		
Medical Terminology	**21102117**	**3(3,0)**
This course is designed to develop a working knowledge of the language of medicine to let students acquire word building skills by learning word roots, suffixes, prefixes and abbreviations. By relating terms to body systems, students should identify the proper use of words in a medical environment. Knowledge of medical terminology enhances the students' ability to communicate and practice his/her work successfully on the purpose of providing health services.		
Pathology	**21107211**	**3 (3-0)**
This course deals with the causes and mechanisms of human diseases, Therefore it is one of main foundations of medicine, and it serves to bridge basic medical disciplines with clinical sciences. Moreover, it introduces the basic concepts, terminology, etiology, and characteristics of pathological processes		

Medical Biochemistry	**21107221**	**3 (2-3)**
This course deals with structure and properties of biomolecules, such as amino acids, proteins, carbohydrates, lipids, and nucleic acids. The focus of this course will be on the relationship between protein structure and its biological function, generation and storage of metabolic energy, main metabolic pathways and their key steps. In addition, the role of phospholipids in determining the properties of biological membranes and their function will be discussed.		
Microbiology 1	**21107131**	**3 (3-0)**
The course introduces the students into the whatness of microbiology with an emphases put on the general classifications of microbiology, bacteriology and the control of microbial growth. It also deals, with host parasite relationship, virology mycology principles of disease and epidemiology.Moreover,it deals with the mechanism of pathogenicity (Pathogenic Bacteria, Antimicrobial drugs, nosocomial infections),and the management of the collection, transportation, preservation and disposal of samples Finally, it shows how the results are reported and recorded		
Microbiology 2	**21107132**	**3 (3-0)**
The course deals with the Principles of disease and epidemiology and the Mechanism of Pathogenicity and it also deals with the management of the collection, Transportation Preservation and Disposal of samples and how the results are reported and recorded. it also introduces the students to Pathogenic Bacteria , Antimicrobial drugs, Nosocomial infections, Nosocomial infections and the Viral Infections.		
Microbiology/ Practical	**21107133**	**2 (0-6)**
The course deals with the laboratory safety measures, microscopy, preparation, staining and cultivation of bacteria .Concentration is put on the identification of bacteria and the effects of physical and chemical agents on bacteria. Moreover it deals with, fungal microscopy and culture and parasite identification.		
Histology and Microtechniques	**21107241**	**3 (2-3)**
This cours introduces the students to the cells and tissue arrangements of the human body. It deal with the study of the micro anatomical structure and function of the body's major organs .It exposes the students to the principles and practices of preparing clinical specimens for histological examination. The focus is put on the procedures used in fixation, decalcification, processing, embedding and microtomy of specimens. Emphasis is also put on the principles and practices used in a laboratory for demonstrating cellular and non-cellular elements in clinical histology specimens.		
Immunology	**21107251**	**3 (2-3)**
This course deals with innate and acquired defense mechanisms. It focuses on the involvement of the immune system in various disease states and clinical conditions. It also provides an introduction to the principles of antigen-antibody reactions and their application in many laboratory tests.		

Clinical Laboratory Instruments	**21107141**	**2 (1-3)**
This course deals with the principles of clinical laboratory instruments.It introduces the students to the principles of instrumental methods of analysis including visible and ultraviolet spectrophotometry, ,flame photometry, chromatography , electrophoresis , radiation counters and automated chemical analyzers.		
Basics in Hematology	**21107161**	**3 (2-3)**
This course is designed to provide students with needed knowledge to perform a variety of lab test and to knows the different component of the blood and their pathology .it will enable the student to know also the normal hemostase and it's pathology and how to investigate the hemostase and the coagulation abnormalities		
Clinical Chemistry	**21107222**	**3 (2-3)**
This course introduces the students to the study of clinical aspects of assessment of organ function and dysfunction. It also deals with the endocrine function and analysis of disorders in liver ,cardiac, kidney, GI and pancreatic function test. Moreover ,it discusses the Therapeutic drug monitoring,and tumormarkers practices.		
Diagnostic Hematology	**21107261**	**3 (2-3)**
This course deals with both normal conditions and the pathophysiology of various anemia as related to the laboratory involvement in diagnosis and treatment. It introduces the students to the laboratory tests used for differential diagnosis. Moreover, this course guides the students to apply information in detecting analytical discrepancies and insure valid results.		
Blood Bank	**21107271**	**3 (2-3)**
This course focuses on understanding theoretical, practical application and technical performance of blood bank procedures required for transfusion of blood and blood components and for handling and storage of blood and blood components.		
Medical Parasitology	**21107281**	**3 (2-3)**
This course deals with the most common life style on earth: (parasitism) It is a broad survey of parasites of humans, domestic and wild animals, and marine organisms. It deals with major topics include ecological and evolutionary aspects of parasite-host interactions with emphasis on life cycles, anatomy and physiology of parasites, and immunological, pathological and clinical responses of hosts to parasitic infection. Moreover,it discusses the treatment and control of parasites.		
Analytical Chemistry	**21107223**	**2 (2-0)**
This course deals with the Principles of quantitative analytical chemistry including basic statistics, gravimetric and volumetric methods of analysis.		
Field Training	**21107200**	**3 (280 training hours)**
This course introduces the students to practice conducting laboratory tests at various clinical sites ,to gain experience in applying quality control rules, use automated systems, correlation of laboratory results from all disciplines with clinical history.		