Laboratory department (Second year – first semester)

Course code	Course Title	Actual Hours		Credit Hours	
		T	P	T	P
MIC 201	Principle of Microbiology	2	4	2	2
At the end of the course, students should be able to: 1- Understand the role of microscopy in microbiology laboratory. 2- Classify bacteria according to shape and morphology. 3- Understand the physical and chemical factors required for cultivation of microbes in the lab. 4- Apply microbial staining procedures. 5- Know the basic of microbial metabolism and genetics.					
BIO 203	Basic Biochemistry	2	-	2	-
1. The course includes principles of organic chemistry including Bonds, Molecular formulae, Structural formula. 2. Enable the student to study the bio-organic compounds present in the body such as carbohydrates, lipids, proteins and vitamins. 3. Study the physico-chemical importance of the bio-organic compounds in the body.					
MLT 205	Technology of Clinical chemistry	2	4	2	2
This course includes Laboratory supplies and measurements. It includes also analytical techniques and instruments used in clinical chemistry.					
MLT 206	Introduction to Hematology	2	4	2	2
At the end of the course the student should be able to: 1- know formation &physiology of blood cells 2- know the technique of collection of blood 3- Preparation ,staining by Romanowsky 4- Perform CBC manually &by cell counters 5- Identify normal &abnormal RBC&WBC morphology 6- Perform tests of coagulation disorders					
MLT 208	Medical Parasitology	3	4	3	2
1. Study the geographic distribution of parasites 2. Study of biology, morphology and life cycles of parasites 3. Study of pathogenesis and pathology of parasites 4. Study of clinical picture of patients suffering from parasitic infections 5. Study of laboratory diagnosis of parasites 6. Study of treatment and control of parasitic infections					
TQM 210	Total Quality Management	1	-	1	-
١. التعريفات والمفاهيم الأساسية لإدارة الجودة الشاملة ٢. التطور الزمني في مجال الجودة ورواد الجودة،وظائف ومهارات الإدارة ٣. مبادئ ومراحل الجودة، أدولت الجودة وكيفية استخدامها ٤. بناء فريق العمل،مهارات التواصل،بناء تحسين الأداء ٥. الاعتماد، نظام المنظمة الدولية للقياس، فوائد تطبيق الجودة					

٦. تجارب وتطبيقات الجودة في المجال الصحي.

Laboratory department (Second year – Second semester)

Course code	Course Title	Actual Hours		Credit Hours	
		T	P	T	P
MIC 202	Medical Microbiology(1)	3	4	3	2

1. Study the impact of microbes on human health
2. Study of handling, isolation, detection and identification of diseases causing microorganisms from clinical specimens like
   - Micrococcaceae
   - Streptococci and related genera
   - Aerobic gram negative cocci
   - Enterobacteriaceae
   - Non-fermentative gram negative bacilli
   - Gram negative facultative anaerobic bacilli
   - Vibrionaceae
   - Anaerobic spore forming gram positive bacilli
   - Aerobic spore forming gram positive bacilli
   - Aerobic gram positive non spore forming bacilli
   - Spirochetes

BIO 204	Clinical Biochemistry (1)	3	4	3	2

1. This course includes metabolisms of carbohydrates, lipids, proteins, nucleic acids.
Encountered variety of diseases with emphasis on materials and methods used for chemical diagnosis of related disorders.

MLT 207	Hematology (1)	2	4	2	2

The course is designed to
1. Familiarize the students with the basics of anemia's and advanced technical knowledge and skill used for their diagnosis.
2. Familiarize students on automation in hematology

MLT 209	Basic Immunology	2	2	2	1

1. The course is designed to
2. Familiarize the students with the nature and components of immune system.
3. Make the students able to perform immunologic techniques used for diagnosis of some infectious and other immunologic diseases.

MLT 211	Hospital Infection control	2	-	2	-

The student should:
1. Understand the terms: Hospital acquired infection, nosocomial infection, colonization, disinfection, sterilization, surveillance, integrated environmental committee
2. Understand the concept of hospital acquired infection
3. Recognize the epidemiology of hospital acquired infection
4. Explain the prevention of infections and decontamination of different areas of laboratories
5. Identify the role of laboratory technician in infection control committee
6. Know the prevention and control of hospital acquired infection

HED 220	Health education	1	-	1	-

1- Probe health education and its historical, philosophical and scientific rode.
2- Well understand of the major definitions of HE.
3- Recognize the major HE goals, objectives field

Laboratory department (third year – first semester)

Course code	Course Title	Actual Hours		Credit Hours	
		T	P	T	P
MLT 301	Histocytotechnology(1)	2	4	2	2
The course is designed to give the students with the basics theoretical understanding and skill in: 1. Preparation of different types of specimens for microscopic examination 2. Enabling the student to know the histology of different types of tissues.					
MIC 303	Medical Microbiology(2)	3	4	3	2
1. Study the characteristics, structure and classification of fungi 2. Study metabolism and reproduction of fungi 3. Study important diseases caused by fungi 4. Methods of detection and diagnosis of fungal infections 5. Study of general properties of viruses 6. Study of isolation and cultivation of viral infections 7. Study of relation of fungi to cancer Study of latent and slow viral infections					
BIO 305	Clinical Biochemistry(2)	3	4	3	2
- The course includes the study of mineral metabolism chemistry of body fluids, blood gases, tissue. - Organ metabolism and the analytical procedures used for the assessment of their functions.					
MLT 306	Clinical Practice(1)	-	6	-	2
1. Training in biochemistry lab on the operation of fully automated chemical analyzers, quality control of the biochemical assays 2. Training in the haematology lab on the processing of bone marrow smears for he diagnosis of leukemia 3. Training in the immunology lab on the immunologic methods for diagnosis of viral infections					
MLT 308	Hematology(2)	2	4	2	2
The course is designed to: 1. Familiarize the students with the basics concepts of normal & abnormal bone marrow 2. Acquisition of knowledge & skills to perform the laboratory test s carried out in the diagnosis of leukemias. The student shall able to perform exercises of quality management					

Laboratory department (Third year – Second semester)

Course code	Course Title	Actual Hours		Credit Hours	
		T	P	T	P
MLT 302	Histocytotechnology(٢)	2	4	2	2
The course includes: 1. Study of microtomes and microtome knives, section cutting, 2. Study of frozen sections, mounting, staining, coverslipping Study of receiving and processing surgical specimens and the principles of recording and storage.					
MLT 307	Clinical Practice(٢)	-	6	-	2
1. Training in the blood bank on collection and processing of blood collected from donors. 2. Training in the histocytotechnology lab on tissue processing, section cutting and frozen section techniques 3. Training in the molecular diagnosis section on the preparation and processing of DNA and RNA for the diagnosis of infectious and genetic disorders Training on the methods of hormonal assays including RIA and EIA.					
MLT 309	Blood Banking	1	4	1	2
The student should be able to have a knowledge of 1. Immnohaematology and the skills to perform blood grouping, pretransfusion testing of blood, compatibility tests 2. preparation o blood components, donor handling and blood collection and the quality management in blood bank					
MLT 310	Endocrinology & Hormones	2	2	2	1
1. The course focuses on definition of endocrinology, mechanism of hormone action and classification of hormones. 2. Study of different hormones and disease conditions related to hyper and hypo- functions of the endocrine. 3. Study of different methods of hormonal assays.					
MLT 311	Molecular Diagnostics	1	2	1	1
1. Study components and structure of Nucleic acids 2. Study the nature of gene and genome complexity 3. Study the nature of genetic code 4. Study manipulations of nucleic acids 5. Applications of molecular diagnosis 6. Human genome project 7. Future of DNA technology					
MLT 312	Lab.Adminstration	1	-	1	-
1. Definition of clinical laboratories, their main responsibilities. 2. Knowledge of basic concepts of planning, organization, employment and management. 3. Assessment of competencies in relation to man-power working in laboratory, knowledge of systems used for up-grading their technical skills and knowledge, writing reports, budgeting and ordering					

laboratory supplies and maintaining requirements.