**Level 1**

**SEMISTER 1A**

|  |  |  |
| --- | --- | --- |
| Course code | Course title | Credit hours |
| Lect. | Pract. | total |
| MMIP- ANAT 101 | Anatomy& embryology(1) | 2 | 0.5 | 2.5 |
| MMIP- PHYS 102 | Physiology(1) | 5 | 1 | 6 |
| MMIP- HIST 103 | Histology(1) | 3 | 1 | 4 |
| MMIP- BIO 104 | Biochemistry(1) | 2 | 1 | 3 |
| MMIP- EN 105 | English | 2 |  | 2 |
| MMIP- CBL 106 | Community Based Learning 1 |  | 1 | 1 |
| MMIP- UN 01 | Computer |  | 2 | 2 |
| MMIP- E 01/02/03/… | Elective (Group A) | 1 |  | 1 |
|  |  |  |  |  |
| **TOTAL** | **15** | **6.5** | **21.5** |

**N.B.: this semester is a prerequisite for the first stage( the three preclinical levels).**

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| **Anatomy and Embryology I** |

**Course content**

|  |  |  |
| --- | --- | --- |
| Topic | Total hours  | Number of hours |
| **Total****lectures** | **Practical****groups** | **Tutorial**  |
| Topics actually taught |  |  |  |  |
| 1. Introduction to human anatomy
 |  |  |  |  |
| 1st Week | **Orientation, Anatomical position, terms & movements**  | **Bones**  | **13.5** | **6** | **8** | **1.5** |
| 2nd week | **Joints** | **Skin, fascia & Muscles** |
| 3rd week | **Cardiovascular & lymphatic system** | **Central nervous system** |
| 1. Anatomy of the upper limb
 |  |  |  |  |
| 4th week | **Pectoral region (1)** | **Pectoral region (2) &****Axilla (1)** | **27** | **12** | **12** | **3** |
| 5th week | **Axilla (2)** | **The back** |
| 6th week | **Scapular region** | **The arm** |
| 7th week | **Cubital fossa &****Forearm (1)** | **Forearm (2)** |
| 8th week | **Retinaculae&****Hand (1)** | **Hand (2)** |
| 9th week | **Joints** | **Nerve injuries** |
| 1. General embryology
 | **12.5** | **10** | 12 | 2.5 |
| 10th week | **Gametogenesis** | **Fertilization** |
| 11th week  | **Implantation**  | **Midline structures**  |
| 12th week | **Formation of embryonic disc** | **Folding** |
| 13th week  | **Fetal membranes** | **Umbilical cord & placenta** |
| 14th week  | **Twins**  | **Congenital anomalies**  |
| 15th week Revision  | **14.5** | **2.5** | 13 | 0 |
| TOTAL |  | **82.5** | **30.5** | **45** | 7 |

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| **Medical Physiology and Biophysics I** |

 **Course contents:-**

**Detailed topics of course topics:**

| **Week** | **Title** | **Teaching method** | **Credit hours** | **Actual hours** |
| --- | --- | --- | --- | --- |
| 1 | Physiology of the cell | Lecture | 2 | 2 |
| 1 | Body fluids | Lecture | 2 | 2 |
| 1 | General Physiology | Tutorial | 1 | 1 |
| 1 | Hematocrit value | Practical | 1 | 2 |
| 2 | Homeostasis | Lecture | 2 | 2 |
| 2 | General functions of the blood & plasma proteins | Lecture | 2 | 2 |
| 2 | General Physiology | Tutorial | 1 | 1 |
| 2 | Erythrocyte sedimentation rate | Practical | 1 | 2 |
| 3 | Functions of RBCs | Lecture | 2 | 2 |
| 3 | Easy Fatigability-1 | PBL | 2 | 2 |
| 3 | Blood | Tutorial | 1 | 1 |
| 3 | Osmotic fragility test | Practical | 1 | 2 |
| 4 | Easy Fatigability-2 | PBL | 2 | 2 |
| 4 | Easy Fatigability-3 | PBL | 2 | 2 |
| 4 | Blood | Tutorial | 1 | 1 |
| 4 | Measurement of Hb content | Practical | 1 | 1 |
| 5 | Anemias& polycythemias | Lecture | 2 | 2 |
| 5 | Hemostasis  | Lecture | 2 | 2 |
| 5 | Blood | Tutorial | 1 | 1 |
| 5 |  Blood indices | Practical | 1 | 1 |
| 6 | Blood coagulation | Lecture | 2 | 2 |
| 6 | Functions of leukocytes | Lecture | 2 | 2 |
| 6 | Blood | Tutorial | 1 | 1 |
| 6 | Bleeding & coagulation time | Practical | 1 | 2 |
| 7 | Immunity & leukocytes-1 | Lecture | 2 | 2 |
| 7 | Immunity & leukocytes-2  | Lecture | 1 | 1 |
| 7 | Blood groups-Functions of lymphatic organs & tissues | Lecture | 1 | 1 |
| 7 | Blood | Tutorial | 1 | 1 |
| 7 | Blood grouping | Practical | 1 | 2 |
| 8 | Physiologic organization of autonomic outflow | Lecture | 2 | 2 |
| 8 | Chemical transmission at autonomic junctions | Lecture | 2 | 2 |
| 8 | Autonomic NS | Tutorial | 1 | 1 |
| 8 | Frog’s sciatic-gastrocnemius preparation | Practical | 1 | 2 |
| 9 | Responses to sympath.stim | Lecture | 2 | 2 |
| 9 | Responses to parasympath.stim. | Lecture | 2 | 2 |
| 9 | Autonomic NS | Tutorial | 1 | 1 |
| 9 | Record of simple muscle twitch | Practical | 1 | 2 |
| 10 | Autonomic reflexes & higher control  | Lecture | 1 | 1 |
| 10 | Drugs affecting autonomic nervous system | Lecture | 1 | 1 |
| 10 | Membrane potential  | Lecture | 2 | 2 |
| 10 | Autonomic NS | Tutorial | 1 | 1 |
| 10 | Gradation of muscle contraction | Practical | 1 | 2 |
| 11 | Autonomic NS from anatomical & physiological points of view | Seminar | 2 | 2 |
| 11 | Action potential | Lecture | 2 | 2 |
| 11 | Nerve & Muscle | Tutorial | 1 | 1 |
| 11 | Effect of temperature & fatigue on simple muscle twitch-Site of fatigue | Practical | 1 | 2 |
| 12 | Neuromuscular transmission | Lecture | 2 | 2 |
| 12 | Excitation-contraction coupling | Lecture | 2 | 2 |
| 12 | Nerve & Muscle | Tutorial | 1 | 1 |
| 12 | Effect of two successive & several stimuli on muscle contraction | Practical | 1 | 2 |
| 13 | Contraction and excitation of smooth muscle | Lecture | 2 | 2 |
| 13 | Functional histology of the cardiac muscle | Lecture | 2 | 2 |
| 13 | Cardiac muscle | Tutorial | 1 | 2 |
| 13 | Revision | Practical | 1 | 2 |
| 14 | Cardiac muscle properties: excitability | Lecture | 2 | 2 |
| 14 | Cardiac muscle properties: rhythmicity | Lecture | 2 | 2 |
| 14 | Cardiac muscle | Tutorial | 1 | 1 |
| 15 | Cardiac muscle properties: conductivity | Lecture | 2 | 2 |
| 15 | Cardiac muscle properties: contractility | Lecture | 2 | 2 |
| 15 | Cardiac muscle | Tutorial | 1 | 1 |

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| **Histology I** |

**Course contents**

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| --- | --- | --- | --- | --- |
| **Week** | **Topics** | **Title** | **Teaching method** | **Actual hours** |
| **1st week** | **1 : Introduction &Microtechniques** | **Introduction &Microtechniques** | **Lecture+**  | **2** |
| **Hiatologicalmethodsof preparation and staining** | **practical** | **2** |
| **Cytology:****(Memberanousorganells)** | **(LM & EM of Cell membrane,****Mitochondria)** | **Lecture+ Tutorial+practical** | **2** |
| **LM & EM of Cell membrane,****Mitochondria** | **practical** | **2** |
| **Endoplasmic reticulum, Golgi apparatus, Lysosomes** | **Lecture+ Tutorial+practical** | **2** |
| **EM Golgi+ RER+ SER apparatus, Lysosomes** | **practical** | **2** |
| **2nd week** | **Non Membranous organelles** | **Ribosomes,Cytoskeleton,****Centrioles, Cilia** | **Lecture+ Tutorial+practical** | **2** |
| **EM of Ribosomes,Cytoskeleton,****Centrioles, Cilia** | **practical** | **2** |
| **Non Membranous organelles** | **Cytoplasmic inclusions** | **Lecture+ Tutorial+practical** | **2** |
| **EM of Cytoplasmic inclusions** | **practical** | **2** |
| **Epithelium** | **General characteristics of epithelium & its types** | **Lecture+ Tutorial+practical** | **4** |
| **LM of diff types of surface epith(Simple&stratified)** | **practical** | **2** |
| **3rd week** | **Epithelium** | **Glandular epithelium** | **Lecture+ Tutorial+practical** | **2** |
| **L M of Glandular epithelium+Neuro-epith** | **practical** | **2** |
| **3rd week**  | **Connective Tissue** | **Cells of C.T. proper** | **Lecture+ Tutorial+practical** | **4** |
| **C.T (lig. Nuchae + umbilical cord)** | **practical** | **2** |
| **4th week** | **Connective Tissue** | **Types of C.T. proper** | **Lecture+ Tutorial+practical** | **2** |
| **Revision practical CT** | **practical** | **2** |
| **Blood &Hemopoiesis** | **Structure & function of RBCs &WBCs** | **Lecture+ Tutorial+practical** | **2** |
| **Blood film** | **practical** | **2** |
| **5th week** | **Blood &Hemopoiesis** | **Structure & function of WBCs& platelets+****Hemopoiesis** | **Lecture+ Tutorial+practical** | **2** |
| **LM of Bone marrow** | **practical** | **2** |
| **Lymphatic (Immune) System** | **lymph node & spleen** | **Lecture+ Tutorial+practical** | **2** |
| **LM of lymph node & spleen** | **practical** | **2** |
| **6th week** | **Lymphatic (Immune) System** | **Tonsils****& thymus** | **Lecture+ Tutorial+practical** | **2** |
| **LM of Tonsils****& thymus** | **practical** | **2** |
| **7th week** |  |  |
| **8th week** | **Muscular Tissue** | **Skeletal muscle** | **Lecture+ Tutorial+practical** | **2** |
| **Skeletal ms (L.S+ T.S+ ms spindle)** | **practical** | **2** |
| **9th week** | **Muscular Tissue** | **Cardiac muscle& Smooth muscle** | **Lecture+ Tutorial+practical** | **2** |
| **Cardiac ms + moderator band** | **practical** | **2** |
|  **10th week** | **Nervous Tissue:** | **Neurons & Types of nerve fibers** | **Lecture+ Tutorial+practical** | **2** |
|  | **Nervous Tissue:** | **( Nerve trunk H& E + osmic acid)** | **practical** | **2** |
| **11th week** | **Degeneration & Regeneration of nerve , Neuroglia** | **Lecture+ Tutorial+practical** | **2** |
| **(Spinal gang. H& E + silver &sympath gang. H& E )** | **practical** | **2** |
| **12th week** | **Revision** | **Revision** | **Lecture+ Tutorial+practical** | **2** |
| **Revision** | **practical** | **2** |
| **13th week** | **Revision** | **Revision** | **Lecture+ Tutorial+practical** | **2** |
| **Revision** | **practical** | **2** |
| **14th week** | **Revision** | **Revision** | **Lecture+ Tutorial+practical** | **2** |
| **15th week** | **Revision** | **Revision** | **Lecture+ Tutorial+practical** | **2** |

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| **Medical Biochemistry I** |

**Course Contents**

| **Topic** | **Week** | **Title** | **Teaching method** | **Actual hours** |
| --- | --- | --- | --- | --- |
| Physical chemistry | 1 | Solution | Lecture | 2 |
| 1 | Molish test | Practical |  2 |
| 2 | PH | Lecture | 2 |
| 2 | Iodine, Fehling and Bendict | Practical | 2  |
| 3 | Acidosis&alkalosis | Lecture | 2 |
| 3 | Barfoied | Practical | 2  |
| 4 | Buffers | Lecture | 2 |
|  | 4 | Ketose&Selwanoff | Practical | 2  |
| Carbohydratechemistry | 5 | Importance of carbohydrate | Lecture | 2 |
| 5 | Revision | Practical | 2  |
| 6 | Classification of carbohydrates | Lecture | 2 |
| 6 | Revision | Practical | 2  |
| 7 | Polysaccharides | Lecture | 2 |
|  | 7 | Protein (Biuret test) | Practical | 2  |
| Lipid Chemistry | 8 | Importance of lipid | Lecture | 2 |
| 8 | Heller& heat coagulation | Practical | 2 |
| 9 | Classification of lipids | Lecture | 2 |
| 9 | Full & ½ saturation & acidification test | Practical | 2 |
| 10 | Compound lipids | Lecture | 2 |
|  | 10 | Colour reaction | Practical | 2  |
| Protein chemistry | 11 | Importance of proteins | Lecture | 2 |
| 11 | Revision | Practical | 2  |
| 12 | Amino acids | Lecture | 2 |
| 12 | Revision | Practical | 2  |
| 13 | Structures of proteins, classification of proteins | Lecture | 4 |
| 13 | Revision | Practical | 2  |
| 14 | Hemoglobin | Lecture | 2 |
|  | 14 | Final practical exam  | Practical  | 2 |

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| **English Language** |

**Course Contents**

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| --- | --- | --- |
| **TOPIC** | **% Total hours** | **Number of hours** |
| **Total** | **Lectures** | **Others** |
| **Medical Terminology** | 26 | 8 | 8 | 0 |
| **Comrehension** | 20 | 6 | 6 | 0 |
| **Writing Paragraph** | 20 | 6 | 6 | 0 |
| **Writing Essay** | 24 | 7 | 7 | 0 |
| **Professional Communication** | 10 | 3 | 3 | 0 |
| **Total** | **100%** | **30** | **30** | **0** |

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| **Community based learning I** |

**Course Contents:**

|  |  |  |
| --- | --- | --- |
| Week  | Topic  | Specialty  |
| Second  | Levels of health care in Egypt  | Public health  |
| 3rd | Communication skills and patient satisfaction  | Public health  |
| 4th | --------- |  |
| 5th | CBC report, conditions with increased ESR | Clinical pathology  |
| 6th | Blood grouping & morphology of blood cells  |  |
| 7th | Demonstration of anemia &purpura cases  | Pediatric  |
| 8th | Heamatology | Internal medicine |
| 9th | Lymph node examination Splenic examination  | Surgery  |
| 10th | ---------- |  |
| 11th | Galvanic & faradic stimulation of medial & radial nerve  | Rheumatology  |
| 12th | Galvanic & faradic stimulation of ulnar nerve | Rheumatology  |
| 13th | Neuromuscular junction  | Rheumatology  |
| 14th | Revision  | Course coordinator  |
| 15th | Exam  | Course coordinator  |

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| **Computer** |

**- Course Contents**

|  |  |
| --- | --- |
| **TOPIC** | **Practical hours** |
|
| Computer compnenets | 10 |
| Using Windows operating system | 10 |
| Using basic applications of windows | 8 |
| Using *Microsoft word* | 16 |
| Using Microsoft excel | 16 |
| **Total** | **60** |

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| **Elective course** |

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| **Level 1A** |
| **Course No** | **Course Title** | **Contact Hours** | **Credits** |
| **Theory** | **Practical** |
| **MMIP-E-01** | **Professional development 1: communication & presentation skills** | **0.5** | **0.5** | **1** |

**Course Contents:**

1. Introduction to communication.

2. Communication in health care.

3. The process and components of communication.

4. The goals, reasons, and hurdles of communication.

5. The psychology of communication.

6. Effective communication.

7. Healthcare team communication.

8. Massages and Meaning.

• Verbal

• Non verbal

• Computer

9. Interpersonal communication

• Provider-patient communication.

• Intercultural communication

• Gender and communication

10. Listening

11. Conflict resolution and negotiation skills.

12. Qualities of outstanding presenters.

13. Techniques to raise self-confidence

**SEMISTER 1B**

|  |  |  |
| --- | --- | --- |
| **Course code** | **Course title** | **Credit hours** |
| **Lect.** | **Pract.** | **Total** |
| MMIP- ANAT 107 | Anatomy& embryology 2\* | 3.5 | 2.5 | 6 |
| MMIP- PHYS 108 | Physiology 2\* | 3 | 0.5 | 3.5 |
| MMIP- HIST 109 | Histology 2\* | 2 | 1 | 3 |
| MMIP- BIO 110 | Biochemistry 2 | 3 | 1 | 4 |
| MMIP- COM 111 | Community 1 | 1.5 | 0.5 | 2 |
| MMIP- CBL 112 | Community Based Learning 2  |  | 1 | 1 |
| MMIP- UN 02 | Human rights | 2 |  | 2 |
| **TOTAL** | **15** | **6.5** | **21.5** |

**\*: courses should be selected together in the same semester.**

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| **Anatomy and Embryology II** |

 **Course Contents**

| **Topic** | **Week** | **Title** | **Teaching method** | **Credit hours** | **Actual hours** |
| --- | --- | --- | --- | --- | --- |
| **Chest**  | **1** | **1)Introduction to mediastinum, heart 1****2) Heart 2** | **Lecture****Tutorial** | **1.5****2** | **3.5** |
| **2** | **1)Pericardium****2)Blood vessels and nerves** | **Lecture****Case study** | **1.5****2** | **3.5** |
| **3** | **1) Thoracic wall 1****2) Thoracic wall 2** | **Lecture** | **1.5****2** | **3.5** |
| **4** | **1) Pleura****2)Lung and lymphatic drainage of the thorax** | **Lecture****Tutorial** | **1.5****2** | **3.5** |
| **5** | **1)Embryology of CVS 1****2)Embryology of CVS 2** | **Lecture** | **1.5****2** | **3.5** |
| **6** | **1)Embryology CVS 3****2)Embryology of respiratory system** | **Lecture** | **1.5****2** | **3.5** |
| **Lowe limb****Anatomy of lower** **limb** | **7** | **1) Front of the thigh 1****2)Front of the thigh 2** | **Lecture** | **2****1.5** | **3.5** |
| **8** | **1)Medial aspect of the thigh****2)Gluteal region** | **Lecture** | **1.5****2** | **3.5** |
| **9** | **1)Back of the thigh -popliteal fossa****2)Front of the leg and dorsum of the foot** | **Lecture** | **1.5****2** | **3.5** |
| **10** | **1)Lateral and back of the leg****2)sole** | **Lecture****Tutorial** | **1.5****2** | **3.5** |
| **11** | **1)Joints 1****2)Joints 2- vessels and lymphatics** | **Lecture****Case study** | **1.5****2** | **3.5** |
| **12** | **1)Embryology 1****2)Embryology 2** | **Lecture****Tutorial** | **1.5****2** | **3.5** |

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| **Medical Physiology and Biophysics II** |

**Course Contents:**

**Detailed topics of course topics:**

| **week** | **Title** | **Teaching method** | **Credit hours** | **Actual hours** |
| --- | --- | --- | --- | --- |
| 1 | The cardiac cycle | Lecture | 2 | 2 |
| 1 | The heart rate | Lecture | 1 | 1 |
| 1 | Palpation of radial pulseAuscultation of heart sounds | Practical | 1 | 2 |
| 2 | The cardiac output | Lecture | 2 | 2 |
| 2 | Heart | Tutorial | 1 | 1 |
| 3 | The cardiac work output, reserve and energetics | Lecture | 1 | 1 |
| 3 | The normal electrocardiogram | Lecture | 2 | 2 |
| 3 | Electrocardiography (ECG) | Practical | 1 | 2 |
| 4 | Abnormal electrocardiogram | Lecture | 2 | 2 |
| 4 | Heart | Tutorial | 1 | 1 |
| 5 | Hemodynamics | Lecture | 2 | 2 |
| 5 | Arterial blood pressure | Lecture | 1 | 1 |
| 5 | Measurement of arterial blood pressure | Practical | 1 | 2 |
| 6 | A case of Hypertension-1 | PBL | 2 | 2 |
| 6 | A case of Hypertension-2 | PBL | 1 | 1 |
| 6 | Reactive hyperemia Capillary reactions to mechanical stimuli | Practical | 1 | 2 |
| 7 | A case of Hypertension-3 | PBL | 2 | 2 |
| 7 | Vascular | Tutorial | 1 | 1 |
| 8 | Regulation of arterial blood pressure | Lecture | 2 | 2 |
| 8 | Vascular | Tutorial | 1 | 1 |
| 9 | Capillary circulation | Lecture | 2 | 2 |
| 9 | Pathophysiology of hypertension | Lecture | 1 | 1 |
| 9 | Capillary fragility test | Practical | 1 | 2 |
| 10 | Physiology of lymphatic and venous system | Lecture | 1 | 1 |
| 10 | Coronary and cerebral circulations | Lecture | 1 | 1 |
| 10 | Vascular | Tutorial | 1 | 1 |
| 11 | Pulmonary circulation | Lecture | 1 | 1 |
| 11 | Cutaneous and fetal circulations | Lecture | 1 | 1 |
| 11 | Cardiovascular adjustment in health and disease | Lecture | 1 | 1 |
| 11 | Lung volumes & capacities | Practical | 1 | 1 |
| 12 | Mechanics of ventilation and lung volumes & capacities | Lecture | 1 | 1 |
| 12 | Gas exchange through respiratory membrane | Lecture | 2 | 2 |
| 12 | Auscultation of breath sounds | Practical | 1 | 1 |
| 13 | Oxygen & carbon dioxide transport in blood | Lecture | 2 | 2 |
| 13 | Control of respiration | Lecture | 1 | 1 |
| 13 | Revision | Practical | 1 | 1 |
| 14 | Regulation of respiration | Lecture | 1 | 1 |
| 14 | Respiratory disorders | Seminar | 2 | 2 |
| 15 | Respiratory insufficiency | Lecture | 1 | 1 |
| 15 | High altitude & diving physiology | Lecture | 1 | 1 |
| 15 | Respiration | Tutorial | 1 | 1 |

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| **Histology II** |

**Course contents**

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| --- | --- | --- | --- | --- |
| **Week** | **Topics** | **Title** | **Teaching method** | **Actual hours** |
| **1st week** | **Vascular System** | **Structure of blood vessels + arteries** | **Lecture+ Tutorial+practical** | **2** |
| **Aorta+med size A& V** | **practical** | **2** |
| **2nd week** | **Vascular System** | **Veins****&Arteriovenous connections** | **Lecture+ Tutorial+practical** | **2** |
| **basilar A** | **practical** | **2** |
| **3rd week** | **Special CT** | **Cartilage** | **Lecture+ Tutorial+practical** | **2** |
| **Hyaline + Elastic cartilage** | **practical** | **2** |
| **4th week** | **Special CT** | **Bone cells+ types** | **Lecture+ Tutorial+practical** | **2** |
| **Ground+cancelous + compact bone** | **practical** | **2** |
| **5th week** | **Special CT** | **Ossification** | **Lecture+ Tutorial+practical** | **2** |
| **Growing bone** | **practical** | **2** |
| **6th week** | **Cytogenetics** | **Nucleus & Nucleolus** | **Lecture+ Tutorial+practical** | **2** |
| **EM Nucleus & Nucleolus** | **practical** | **2** |
| **7th week** | **Cytogenetics** | **Cell division** | **Lecture+ Tutorial+practical** | **2** |
| **EM for mitosis** | **practical** | **2** |
| **8th week** | **Cytogenetics** | **Chromosomal abnormalities** | **Lecture+ Tutorial+practical** | **2** |
| **Abnormal shape of chromosomes** | **practical** | **2** |
| **9th week** | **Respiratory system** | **Respiratory passage+Trachea and bronchi** | **Lecture+ Tutorial+practical** | **2** |
| **Trachea** | **practical** | **2** |
|  **10th week** | **Respiratory system** | **Lung** | **Lecture+ Tutorial+practical** | **2** |
| **Lung ( adult+ fetal+ injected lung)** | **practical** | **2** |
| **11th week** | **Skin** | **Skin** | **Lecture** | **2** |
| **Thick skin** | **practical** | **2** |
| **12th week** | **Skin** | **Skin Appendage** | **Lecture** | **2** |
| **Thin skin** | **practical** | **2** |
| **13th week** | **Revision** | **Revision** | **Lecture** | **2** |
| **Revision** | **practical** | **2** |
| **14th week** | **Revision** | **Revision** | **Lecture** | **2** |
| **Revision** | **practical** | **2** |
| **15th week** | **Revision** | **Revision** | **Lecture** | **2** |
| **Revision** | **practical** | **2** |

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| **Medical Biochemistry II** |

**Course Contents**

| **Topic** | **Week** | **Title** | **Teaching method** | **Actual hours** |
| --- | --- | --- | --- | --- |
| Enzymes | 1 | -Enzyme nomenclature &clssification-Isoenzymes | Lecture | 3 |
| 1 | Enzyme curves | Practical | 2 |
| 2 | Enzyme Kinetic | Lecture | 3 |
| 2 | Electrophoresis | Practical | 2 |
|  | 3 | Regulation of Enzyme activity- macrominerals | Lecture | 21 |
|  | 3 | Chromatography | Practical | 2 |
| Minerals | 4 | Macromineralsmicrominerals | Lecture | 3 |
|  | 4 | PH meter& idea on Hypercalcemia case | Practical | 2 |
| Nutrition | 5 | MicromineralsNutrition  | Lecture | 12 |
|  | 5 | Disscusion on hypercalcemia case &Idea on iron deficiency anemia case | Practical | 2 |
| Membrane | 6 | Biological membrane | Lecture | 3 |
|  | 6 | Disscusion on iron deficiency anemia&Idea on Wilson,s disease case | Practical | 2 |
| Molecular Biology | 7 | Nucleotide chemistry | Lecture | 3 |
| 7 | Disscusion on Wilson,s disease case & idea on Marasmes&kwashorkior case | Practical | 2 |
| 8 | Nucleic acid structure and function & DNA organization | Lecture | 3 |
| 8 | Disscusion on Mrsmes&kwashorkior case&Idea on xerodermiapigmentosa | Practical | 2 |
| 9 | DNA synthesis & replication | Lecture | 3 |
| 9 | Disscusion on Xerodermiapigmentosa&idea on hereditary nonpolyposis cancer colon | Practical | 2 |
| 10 | RNA & protein Synthesis  | Lecture | 3 |
| 10 | Disscusion on hereditary nonpolyposis cancer colon | Practical | 2 |
| 11 | Mutation &Posttranslational modification&regulation of gene Expression  | Lecture | 3 |
| 11 | Revision | Practical | 2 |
|  | 12 | Recombinant DNA technology | Lecture | 3 |
|  | 12 | Revision | Practical | 2 |
|  | 13 | Oxidant& antioxidants | Lecture | 3 |
|  | 13 |  Final practical Exam | Practical | 2 |
|  | 14 | Cancer& oncogene& tumor suppressor gene&apoptosis | Lecture | 3 |
|  | 15 | Polypeptide growth factor, tumor markers &stem cell |  | 3 |

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| **Community I** |

**Contents**

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| --- | --- | --- | --- |
| **week** | **Title** | **Teaching methods** | **Actual hours** |
| 1 | **Introduction to general epidemiology**  | Lecture | 1.5 |
|  | **Epidemiological triad** | Practical  | 1.0 |
| 2 | **Disease process, disease burden** | Lecture | 1.5 |
|  | **Natural history of the disease**  | Practical  | 1.0 |
| 3 | **Levels of disease prevention**  | lecture | 1.5 |
|  | **Surveillance**  | Practical  | 1.0 |
| 4 | **Screening test**  | lecture | 1.5 |
|  | **Validity measurement** | Practical  | 1.0 |
| 5 | **Health system in Egypt**  | lecture | 1.5 |
|  | **Services introduced by 3ry level of HC** | Practical  | 1.0 |
| 6 | **Primary health care**  | lecture | 1.5 |
|  | **Indicators of service utilization** | Practical  | 1.0 |
| 7 | **General concepts of optimum nutrition**  | lecture | 1.5 |
|  | **Nutritional needs in different age groups** | Practical  | 1.0 |
| 8 | **Food pyramid guide****Healthy eating plat**  | Lecture  | 1.5 |
|  | **Quality** | PBL | 1.0 |
| 9 | **Quality in health service provision** | PBL | 1.5 |
|  | **Quality** | PBL | 1.0 |
| 10 | **Pillars of quality**  | Lecture  | 1.5 |
|  | **Quality standard in hospital**  | Field study | 1.0 |
| 11 | **Public health administration**  | lecture | 1.5 |
|  | **How to put a plan to study health problem** | Practical  | 1.0 |
| 12 | **Public health administration**  | lecture | 1.5 |
|  | **Application of different types of evaluation**  | Practical  | 1.0 |
| 13 | **Revision**  |  | 1.5 |
| 14 | **Revision**  |  | 1.5 |

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| **Community based learning II** |

**Course Contents:**

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| Week  | Topic  | Specialty  |
| Second  | Basic life support  | Emergency  |
| 3rd | Blood pressure and heart beats | Emergency  |
| 4th | Surveillance system in Egypt  | University hospital |
| 5th | Surveillance in university hospital | Health administration department |
| 6th | Micro and macrominerals assessment  | Clinical pathology |
| 7th | ECG techniques& ECG reading  | Skill lab |
| 8th | **Nutritional deficiency** **Kwashiorkor & marasmus**  | **Pediatric**  |
| 9th | Basics of normal X ray reading | Radiology  |
| 10th | Pulmonary function tests | Public health |
| 11th | Quality parameters in hospitals | Public health |
| 12th | Skeletal affection of lower limb | Rheumatology  |
| 13th | Skeletal affection of lower limb | Rheumatology  |
| 14th | Revision  | Course coordinator  |
| 15th | Exam  | Course coordinator  |

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|  **حقوق الإنسانHuman Rights** |

**محتوى المقرر**

* الأصول التاريخية لحقوق الإنسان.
* المصادر الدولية لحقوق الإنسان العالمية والأقليمية .
* المصادر الوطنية لحقوق الإنسان.
* الأجهزة العالمية القائمة على حماية حقوق الإنسان.
* الحماية الوطنية لحقوق الإنسان.
* حقوق الإنسان فى الشريعة الإسلامية .
* عرض لبعض طوائف حقوق الإنسان.