SCHEDULE
of
PHASE II

PHASE II

PHASE II	
FALL SEMESTER	**SPRING SEMESTER**
BIOPHYSICS	BIOPHYSICS
ANATOMY	MICROBIOLOGY and PARASITOLOGY
MICROBIOLOGY	BIOCHEMISTRY
PHYSIOLOGY	SPECIAL HISTOLOGY and EMBRYOLOGY
BIOCHEMISTRY	ANATOMY
SPECIAL HISTOLOGY and EMBRYOLOGY	PHYSIOLOGY
IMMUNOLOGY	GENERAL PHARMACOLOGY
CLINICAL SKILLS I	GENERAL PATHOLOGY
COMMUNICATION SKILLS and HYPNOSIS	CLINICAL SKILLS II

PHASE II

COURSES with CREDITS

PHASE II / Fall Semester

COURSES	THEORETICAL	PRACTICAL	CREDITS
MDM 242 BIOPHYSICS	2	-	2
MDM 222 ANATOMY	4	4	6
MDM 220 MICROBIOLOGY	3	2	4
MDM 213 PHYSIOLOGY	4	2	5
MDM 221 BIOCHEMISTRY	3	4	5
MDM 231 SPECIAL HISTOLOGY and EMBRYOLOGY	2	2	3
MDM 240 IMMUNOLOGY	2	-	2
MDM 169 CLINICAL SKILLS I	-	2	1
MDM 250 COMMUNICATION SKILLS and HYPNOSIS	1	-	-

TOTAL CREDITS 28

PHASE II

COURSES with CREDITS

PHASE II / Spring Semester

COURSES	THEORETICAL	PRACTICAL	CREDITS
MDM 241 BIOPHYSICS	2	-	2
MDM 261 MICROBIOLOGY and PARASITOLOGY	3	2	4
MDM 223 BIOCHEMISTRY	2	4	4
MDM 232 SPECIAL HISTOLOGY and EMBRYOLOGY	2	2	3
MDM 201 ANATOMY	3	4	5
MDM 203 PHYSIOLOGY	3	2	4
MDM 233 GENERAL PHARMACOLOGY	3	2	4
MDM 230 GENERAL PATHOLOGY	4	2	5
MDM 172 CLINICAL SKILLS II	-	2	1

TOTAL CREDITS 32

PHASE II

2006 – 2007 FACULTY OF MEDICINE PHASE II
FALL SEMESTER WEEKLY COURSE SCHEDULE

	09:00-09:50	10:00-10:50	11:00-11:50	12:00-12:50	13:00-13:50	14:00-14:50	15:00-15:50	16:00-16:50	17:00-17:50
MONDAY	Anatomy MDM222 (T)	Anatomy MDM222 (T)	Anatomy MDM222 (T)	Anatomy MDM222 (T)		Physiology MDM213 (T)	Physiology MDM213 (T)		
TUESDAY	Biophysics MDM242 (T)	Biophysics MDM242 (T)	Special Histology and Embryology MDM231 (T)	Special Histology and Embryology MDM231 (T)		Clinical Skills I MDM169 (P)	Clinical Skills I MDM169 (P)	Special Histology and Embryology MDM231 (P)	Special Histology and Embryology MDM231 (P)
WEDNESDAY		Microbiology MDM220 (T)	Microbiology MDM220 (T)	Microbiology MDM220 (T)			Biochemistry MDM221 (T)	Microbiology MDM220 (P) Physiology MDM213 (P)	Microbiology MDM220 (P) Physiology MDM213 (P)
THURSDAY	Immunology MDM240 (T)	Immunology MDM240 (T)	Biochemistry MDM221 (T)	Biochemistry MDM221 (T)		Biochemistry MDM221 (P)	Biochemistry MDM221 (P)	Biochemistry MDM221 (P)	Biochemistry MDM221 (P)
FRIDAY		Physiology MDM213 (T)	Physiology MDM213 (T)	Communnication Skills and Hypnosis MDM 250		Anatomy MDM222 (P)	Anatomy MDM222 (P)	Anatomy MDM222 (P)	Anatomy MDM222 (P)

PHASE II

2006 – 2007 FACULTY OF MEDICINE PHASE II
SPRING SEMESTER WEEKLY COURSE SCHEDULE

	09:00-09:50	10:00-10:50	11:00-11:50	12:00-12:50	13:00-13:50	14:00-14:50	15:00-15:50	16:00-16:50	17:00-17:50
MONDAY	General Pathology MDM230 (T)	General Pathology MDM230 (T)	Mikrobiology MDM220 (T)	Microbiology MDM220 (T)		Special Histology and Embryology MDM232 (T)	Special Histology and Embryology MDM232 (T)	Microbiology MDM220 (T)	
TUESDAY	Biophysics MDM241 (T)	Biophysics MDM241 (T)	General Pharmacology MDM233 (T)	General Pharmacology MDM233 (T)		General Pathology MDM230 (T)	General Pathology MDM230 (T)	General Pathology MDM230 (P) General Pharmacology MDM233 (P)	General Pathology MDM230 (P) General Pharmacology MDM233 (P)
WEDNESDAY	Physiology MDM203 (T)	Physiology MDM203 (T)	Physiology MDM203 (T)		Biochemistry MDM203 (T)	Biochemistry MDM203 (T)		Special Histology and Embryology MDM232 (P)	Special Histology and Embryology MDM232 (P)
THURSDAY	General Pharmacology MDM233 (T)	Anatomy MDM201 (T)	Anatomy MDM201 (T)	Anatomy MDM201 (T)		Clinical Skills II MDM170 (P)	Clinical Skills II MDM170 (P)	Physiology MDM203 (P) Microbiology MDM220 (P)	Physiology MDM203 (P) Microbiology MDM220 (P)
FRIDAY	Anatomy MDM201 (P)	Anatomy MDM201 (P)	Anatomy MDM201 (P)	Anatomy MDM201 (P)		Biochemistry MDM223 (P)	Biochemistry MDM223 (P)	Biochemistry MDM223 (P)	Biochemistry MDM223 (P)

PHASE II

GENERAL PATHOLOGY

THEORETICAL:

- Introduction to Pathology
- Cellular injury
- Cell death
  - Degenerations
  - Necrosis
- Disturbances of Metabolism
  - Disturbances of glycogen metabolism
  - Disturbances of protein metabolism
  - Disturbances of minerals
  - Disturbances of pigments
- Cell adaptations
- Hemodynamic Disturbances
  - Disorders of body water
  - Disorders of circulation
- Inflammation
  - Acute inflammation
  - Chronic inflammation
  - Granuloma
- Wound healing and tissue repair
  - Regeneration
  - Repair
  - Healing of bone fractures
- Immunopathology
  - Pathology of Autoimmunity
  - Transplantation pathology
- Neoplasia and Oncology
  - Tumor etiology and molecular biology of cancer
  - Pathology of neoplasia
  - Grading and staging
- Enviromental Pathology
  - Physical trauma
  - Chemicals and enviromental pollution
  - Pathology of athmospheric conditions
  - Pathology of irradiation
  - Pathology of drug abuse
- Pathology of Genetic Diseases

PRACTICAL:

- Tissue Sampling and handling
- Tissue processing
- Tissue stains and staining procedures
- Cellular injury and Cell death
  - Degenerations
  - Necrosis
- Disturbances of metabolism

- Disturbances of glycogen metabolism
- Disturbances of protein metabolism
- Disturbances of minerals
- Disturbances of pigments

Cell adaptations
Hemodynamic disturbances
- Disorders of body water
- Disorders of circulation

Inflammation
Wound healing and tissue repair
Immunopathology
Neoplasia and Oncology
Environmental Pathology

BIOCHEMISTRY
THEORETICAL:

Structure and function of erythrocytes
Structure and function of hemoglobin
Hemoglobin synthesis and degradation
Biochemical aspects of anemia
Fibrinolysis and coagulation
Carbohydrate metabolism
- Digestion and absorption
- Glycogenesis and glycogenolysis
- Glycolysis
- Pentose phosphate pathway
- Hormones effecting carbohydrate metabolism

Lipid metabolism
- Digestion and absorption
- Transport and storage
- Lipolysis
- Lipogenesis
- Oxidation of fatty acids
- Cholesterol
- Bile acids
- Triacylglycerol synthesis
- Disorders in lipid metabolism
- Ketone bodies
- Prostaglandins
- Hormones effecting lipid metabolism

Protein metabolism
- Digestion and absorption
- Catabolism of amino acids
- Urea cycle
- Individual amino acids; synthesis, degradation, disorders

Nucleic acid metabolism
Overview of intermediary metabolism
Integration of metabolism and provision of tissue fuel
Nutrition
Metabolism of xenobiotics
Hormones

General prIncıples of hormone action
Hormones of pituitary and hypothalamus

PHASE II

Thyroid hormones
Regulation of calcium metabolism by hormones
Hormones of the adrenal cortex
Hormones of the adrenal medulla
Insulin
Glucagon
Hormones of the gastrointestinal system

Vitamins
Lipid soluble vitamins
Water soluble vitamins
Absorption and transport
Biological functions
Active forms
Defeciencies

Macroelements and microelements
Absorption, transport
Function
Disorders

Nucleic acids
Synthesis of Purine and Pyrimide nucleotides
Regulation of nucleotide syntheses
Disorders concerning nucleotide metabolisms

PRACTICAL:

Spectrophotometry and spectrophotometric determinations
Buffers
Determination of ∝ -amylase activity in saliva
Determination of activity of enzymes of the gastrointestinal tract
Determination of blood glucose level
Total lipid determination in serum
Determination of creatinine in serum
Determination of urea in serum
Urine analysis
Glucose
Acetone
Protein
Hemoglobin
Urobilinogen
Urobilin
Bilirubin
Microscobic examination

Urinary and kidney stones

GENERAL PHARMACOLOGY

THEORETICAL:

General Pharmacology
Introduction to pharmacology
Absorption of drugs
Administration routes of drugs
Biogenic Amines and peptides
Pharmaceutical forms of drugs

Distribution of drugs
Biotransformation of drugs

PHASE II

Elimination of drugs
Clinical Pharmacokinetics
Mechanism of action of drugs
Factors that change drug action
Chemical carcinogenesis
Drug Toxicity
Drug Interaction prIncıples
Mutagenic and teratogenic effects of drugs
New drug development prIncıples
Autacoids and Drug Therapy of Inflammation
Introduction to autacoids, histamine and antagonists
Serotonin and antagonists
Bradykinin and antagonists
Eicosanoids and platelet-activating factor
Analgesic-Antipyretic and Antiinflammatory agents
Drugs used in the treatment of asthma
Chemotherapy of Microbial Diseases
General concepts
β lactam antibiotics
Chloramphenicol, tetracyclin and macrolides
Aminoglycosides
Sulfonamides, trimethoprim-sulfamethoxazole
Protein synthesis inhibitors
Antiseptics and dIsinfectants
Antimicobacterial drugs
Antifungal drugs
Antiviral drugs
Antiretroviral agents
In practical sessions they study:
Dose response relation in isolated preparations
Enzyme induction effect caused by barbiturates
Investigation of local and systemic effects of drugs
Side effects of drugs
Opioid tolerance and dependence induced in mice
Analgesic, antidepressant, anti-inflammatory and diuretic effects of drugs

MICROBIOLOGY
THEORETICAL:
History and scope of microbiology
Laboratory safety
Procaryotic and Eucaryotic cells
Bacterial classification
Microbial Growth and Metabolism;
Growth and cultivation of microorganisms
Collection and Transport of clinical specimens
Microbial evaluation and staining techniques
Setting up a microscope: Tutorial
Microflora of Different Environments
Normal flora
Microbial Pathogenesis: Mechanisms by which microorganisms create diseases
Antimicrobial agents, mechanisms of action and resistance
Antibiotic susceptibility tests

Viruses
Fungi

PHASE II

Sterilization and Disinfection
Diagnosis of an infectious disease
Gram positive cocci
Gram negative cocci
Gram positive aerobic bacilli
Gram positive anerobic bacilli
Gram negative bacilli
Mycobacteria
DNA viruses
RNA viruses
Slow viruses

PRACTICAL:
Wet mount technique: Direct and capsule staining
Staining techniques: Differential staining
Continuation of staining techniques: simple staining
Throat flora
Evaluation of skin flora
Antimicrobial susceptibility testing
Antimicrobial evaluation of dIsinfectants
Evaluation of Stool Flora

MICROBIOLOGY AND PARASITOLOGY
THEORETICAL:
Introduction to parasitology
Protozoa1 and 2
Helminths 1 and 2
Occupational health hazards of a health personnel

PRACTICAL:
Microscobic evaluation of protozoa and helminths
Fungi 1: Cultivation and staining: yeast
Fungi 2: Cultivation and staining: mould
Evaluation of a peripheral blood smear

SPECIAL HISTOLOGY AND EMBRYOLOGY
THEORETICAL:
Methods of study for cellular structures in histology
Organelles and inclusions at LM and EM levels
Nucleus and cell division
Introtuction to Embryology
Gametogenesis; Spermatogenesis and Oogenesis
Histology of Lining or Covering Epithelium
Histology of Glandular Epithelium
Histology of Connective tissue
Histology of Cartilage tissue
Histology of Bone tissue
Histology of Muscle tissue
Histology of Nervous tissue
Histology of Skin and Appendage
Week I; Fertilization

Week II: Bilaminar Embryo to Implantation
Week III: Gastrulation

PHASE II

Week III; Neurulation
Week IV; Folding Embryo or Body Forming
Formation of Basic Organs and Fetal Period
Congenital Malformations
Extraembrionic Structures and Delivery
Head and Face Development
Limb Development
Histology of Circulatory Systems
Development of the Circulatory Systems
Histology of the Respiratory Systems; Conducting Portions and Respiratory Portions
Development of the Respiratory Systems
Blood & Haemopoesis
Histology of Lymph Organs
Development of Lymph Organs
Histology of Upper Gastrointestinal Tract
Histology of Lower Gastrointestinal Tract
Histology of APUD System
Gland Associated with the Digestive System
Development of the Digestive System
Histology of Urinary System
Development of the Urinary System
Histology of Central Nervous System
Development of the CNS
Histology of Endocrine System
Development of the Endocrine Systems
Histology of Sensory Organs (Ear)
Histology of Sensory Organs (Eye)
Development of the Ear and Eye
Histology of the Male Genital System
Histology of the Female Genital System
Development of the Reproductive System

PRACTICAL:

Organelles and inclusions at LM and EM levels
Nucleus and cell division
Histology of Lining or Covering Epithelium
Histology of Glandular Epithelium
Histology of Connective tissue
Histology of Cartilage tissue
Histology of Bone tissue
Histology of Muscle tissue
Histology of Nervous tissue
Histology of Skin and Appendage
Histology of Circulatory Systems
Histology of the Respiratory Systems; Conducting Portions and Respiratory Portions
Histology of Lymph Organs
Histology of Upper Gastrointestinal Tract
Histology of Lower Gastrointestinal Tract
Gland Associated with the Digestive System
Histology of Urinary System
Histology of Central Nervous System

Histology of Endocrine System
Histology of Sensory Organs

PHASE II

Histology of the Male Genital System
Histology of the Female Genital System

ANATOMY
THEORETICAL:
RESPIRATORY AND CARDIOVASCULAR SYSTEM
The nose, associated structures and paranasal sinuses,
The pharynx,
The larynx,
The trachea and the lungs,
The thoracic wall,
The diaphragm and the mediastinum,
Heart and pericardium,
The root and the neck,
Anatomy of the vessels (arterial and venous system),
Anatomy of lymphoid organs; Lymphoid circulation.
GASTROINTESTINAL SYSTEM
Oral cavity and intraoral structures,
Salivary glands,
Temporomandibular joint, muscles of mastication,
Anterior abdominal wall, inguinal canal,
Peritoneum and omenta,
Esophagus, stomach, duedonum and pancreas,
Vessels of the abdomen,
Liver, biliary and portal system,
Jejunum, ileum and colon,
Rectum and anal canal,
Kidney and ureter,
Bladder and urethra.

NERVOUS AND ENDOCRINE SYSTEM
Introduction to the central nervous system,
General structure of the spinal cord,
Spinal cord: Ascending pathway,
Spinal cord: Descending pathway,
Brain stem,
Cerebellum,
Cerebral cortex: functional areas and general topography,
Meninges and dural sinuses of the brain,
Brain ventricles and subarachnoid spaces,
Vessels of the CNS,
Thyroid and parathyroid glands,
Adrenal and thymus glands,
Hypotalamus and pituitary gland,
Limbic system and pineal gland,
Thalamus; Basal ganglia and subthalamus, Cranial nerves,
Autonomic nervous system: Sympathetic;
Autonomic nervous system: Parasympathetic Orbits and its contents;
Visual pathway,
The ear;

Vestibular system and auditory pathway,
Pelvis and perineum,

PHASE II

The nerves and vessels of the pelvis,
Male genital organs,
Female genital organs.

PRACTICAL:

RESPIRATORY AND CARDIOVASCULAR SYSTEM

The nose, associated structures and paranasal sinuses;
The pharynx; larynx,
The trachea and the lungs,
The thoracic wall, the diaphragm and mediastinum,
Heart and pericardium,
The root and the neck, lymphatic organs and lymphoid circulation.

GASTROINTESTINAL SYSTEM

Oral cavity and intraoral structures,
Salivary glands, temporomandibular joint, muscles of mastication,
Anterior abdominal wall, inguinal canal,
Peritoneum and omenta,
Esophagus, stomach, duedonum and pancreas,
Vessels of the abdomen,
Liver, biliary and portal system,
Small and large intestine, rectum and anal canal,
Kidney and ureter;
Bladder and ureth

NERVOUS AND ENDOCRINE SYSTEM

Spinal cord,
Brain stem,
Cerebellum,
Cerebral cortex: functional areas and general topography,
Meninges and dural sinuses of the brain,
Brain ventricles and subarachnoid spaces,
Vessels of the CNS,
Thyroid, parathyroid, adrenal and thymus glands,
Hypotalamus, pituitary, limbic system and pineal gland,
Basal ganglia, thalamus, subthalamus,
Cranial nerves,
Autonomic nervous system,
Orbits and its contents,
The ear,
Pelvis and perineum,
The nerves and vessels of the pelvis,
Male genital organs,
Female genital organs.

PHYSIOLOGY

THEORETICAL:

Physiological properties of cardiac muscle; Regulation of cardiac function
Cardiac cycle
PrIncıples of hemodynamics; Regulation of blood flow
Heart sounds; Arterial pulse; Cardiac output, circulation through specific organs
Regulation of blood pressure
PrIncıples of ECG; Coronary circulation
White and red blood cells; Blood groups

Platelets; coagulation and fibrinolysis
Alveolar ventilation; Diffusion

PHASE II

Transport of gases; Regulation of respiration
Physiology of aviation, space, high altitude and deep sea diving
Thyroid gland
Endocrine pancreas
Adrenal cortex hormones; Adrenal medullary hormones
Introduction to gastrointestinal physiology: gut peptides
Oral digestion and deglutition; Gastric digestion
Exocrine functions of the pancreas the role of bile in digestion
Digestion in small and large intestines, gastrointestinal absorption
Energy metabolism, energy turnover and balance
Body temperature and its regulation, Physiological functions of vitamins
Renal circulation and glomerular functions; Acid-base balance
Tubular functions; Micturition
Female and male reproductive systems
Brain stem and reticular formation; Limbic system; Learning, memory and speech
Cerebrospinal circulation; Motor cortex and corticospinal system
The basal nuclei; Cerebellum
Physiology of hearing and vision vestibular system
Chemical senses; Cutaneous senses; Physiology of plain

PRACTICAL:
Heart sounds; Arterial pulse
Blood pressure measurement
PrIncıples of ECG
Blood cells and blood groups
Pulmonary function tests
Endocrine control: experimental studies
Gastrointestinal motility and gut smooth muscle function
Renal function tests
Physiology of hearing and vision

BIOPHYSICS
THEORETICAL:
Systematic of the Creatures
Atom, Molecule and the Matter
Basic Functional Construction of the Living Tissue
Water as a Life Medium
Bioenergetics
Radiation Biophysics
Laser Beams and their Application in medicine
Infrared Beams and their Application in medicine
Biophysics of the Respiratory System
Biophysics of the Vascular System
Cardiac Pacemakers
Measurement of Blood Pressure
Measurement of Blood Speed
Biophysics of the Neurological System
Pain: its subjectivity, theories
Scientific Basis for Methods in Management of Pain
Neurostimulation and Neuroimplantation
Biofeedback
Acupuncture Technics

PHASE II

IMMUNOLOGY

THEORETICAL:

Innate and adaptive immunity
Organs of immune system
Mounting an immune response
Antigens
Antibodies
Disorders of immune response 1
Disorders of immune response 2
Hypersensitivity reactions I and II
Hypersensitivity reactions III and IV
Immune tolerance
Transplantation and immunity
Cancer and immunity
Detection of Antigen-Antibody reactions (Serological tests) 1
Serological tests 2

CLINICAL SKILLS I

THEORETICAL

Hand Washing
Wearing Steril Gloves
Vital Signs

PRACTICAL

Hand Washing Group / Wearing Steril Gloves Group 1
Hand Washing Group / Wearing Steril Gloves Group 2
Hand Washing Group/ Wearing Steril Gloves Group 3
Hand Washing Group / Wearing Steril Gloves Group 4

Vital Signs Group 1
Vital Signs Group 2
Vital Signs Group 3
Vital Signs Group 4

CLINICAL SKILLS II

PRACTICAL

Bladder Catheterization Group 1
Bladder Catheterization Group 2
Bladder Catheterization Group 3
Bladder Catheterization Group 4
Intramuscular Injection Group 1
Intramuscular Injection Group 2
Intramuscular Injection Group 3
Intramuscular Injection Group 4
Nasogastric Catheterization Group 1
Nasogastric Catheterization Group 2
Nasogastric Catheterization Group 3

PHASE II

COMMUNICATION SKILLS AND HYPNOSIS
THEORETICAL:

Clinical Approach;
Communicating with Patient;
Communicating with Children;
Communicating with Phobic Patients;
Communicating with Patient in the first appointment;
Outlook for Patient Communications;
Introducing the Methods (Physiologic- Psychologic);
Medical Hypnosis;
Methods of Medical Hypnosis;
Preoperative Preparation of the Patient;
Medical Hypnosis with Children;
Clearing Phobi;
Control of Gag Reflex and operations under hypnosis;
Relieving Pain and Control of Pain;
Clinical Applications.