Level 2

SEMISTER 2A

Course code	Course title	Credit hours		
		Lect.	Pract.	total
MMIP- ANAT 201	**Anatomy 3***	**4**	**2.5**	**6.5**
MMIP- PHYS 202	**Physiology 3***	**5**	**1**	**6**
MMIP- HIST 203	**Histology 3***	**2**	**1**	**3**
MMIP- BIO 204	**Biochemistry 3**	**2**	**0.5**	**2.5**
MMIP- PB 205	**Psychology & Behavioral sciences**	**2**		**2**
MMIP- CBL 206	**Community Based Learning 3**		**1**	**1**
		15	**6**	**21**

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

Anatomy and Embryology III

Course contents:

Topic			Total hours	Number of hours		
				Total lectures	Practical groups	Tutorial
Topics actually taught						
1- Anatomy of the abdomen						
1st	**Ant. Abd. Wall (1)**	**Ant. Abd. Wall (2)**	**45**	**18**	**24**	**3**

Week						
2nd Week	**Male external genitalia**	**Peritoneum (1)**				
3rd week	**Peritoneum (2)**	**Stomach, spleen, Coeliac trunk**				
4th week	**Liver & biliary system**	**Duodenum, pancreas & portal vein**				
5th week	**Small intestine & SMA**	**Large intestine & IMA**				
6th week	**Kidney, suprarenal gland Abd. Part of the ureter**	**Post. Abd. Wall**				
2- Embryology of the gastrointestinal tract			**5**	**4**	**0**	1
7th week	**Embryology of GIT1**	**Embryology of GIT2**				
8th week	**Embryology of GIT3**					
3- Anatomy of the pelvis						
8th week		**Pelvic floor**	**37.5**	**14.5**	**20**	**3**
9th week	**Vessels & nerves of the pelvis B.**	**Pelvic part of ureter U.**				
10th week	**Male urethra &prostate**	**Female internal genital organs**				
11th week	**Rectum , anal canal**	**Ischiorectal fossa**				
12th week	**Pudendal canal & its contents**	**Superficial Perineal pouch**				
13th week	**Deep Perineal pouch**					
4- Embryology of the genitourinary system			**5.5**	**4.5**	**0**	1
13th week		**Embryology of genitourinary 1**				
14th week	**Embryology of genitourinary 2**	**Embryology of genitourinary 3**				

15th week Revision		**19.5**	**3.5**	16	0
TOTAL		**112.5**	**44.5**	**60**	8

Medical Physiology and Biophysics III

Course contents:-

Detailed topics of course topics:

week	Title	Teaching method	Credit hours	Actual hours
1	Hypothalamus-pituitary connections	Lecture	2	2
1	Functions of growth hormone	Lecture	2	2
1	Abnormalities of growth hormone secretion	Tutorial	1	1
1	Case Study: Dwarfism	Practical	1	2
2	Prolactin and intermediate lobe	Lecture	1	1
2	Exercise	Lecture	1	1
2	Posterior pituitary hormones	Lecture	2	2
2	Abnormalities of posterior pituitary.	Tutorial	1	1
2	Case Study: Diabetes insipidus	Practical	1	2
3	Function of iodinated thyroid hormones	Lecture	2	2
3	Calcium homeostasis-1	Lecture	1	1
3	Calcium homeostasis-2		1	1

week	Title	Teaching method	Credit hours	Actual hours
3	Thyroid disorders	Tutorial	1	1
3	Case study hyperthyroidism	Practical	1	2
4	Exercise	Lecture	1	1
4	Function of mineralocorticoids	Lecture	1	1
4	Function of cortisol	Lecture	2	2
4	Abnormalities of adrenocortical secretions	Tutorial	1	1
4	Case study: Cushing's syndrome	Practical	1	2
5	Exrecise	Lecture	1	1
5	Action of insulin hormone	Lecture	1	1
5	Function of glucagon & somatostatin Blood glucose regulation	Lecture	1	1
5	Endocrine functions of the kidney, heart, pineal gland & adipose tissue	Lecture	1	1
5	Diabetes mellitus & hyperinsulinism	Tutorial	1	1
5	Case study: Diabetes Mellitus	Practical	1	2
6	Sex determination & puberty	Lecture	1	1
6	Physiology of spermatogenesis	Lecture	2	2
6	Function of testosterone	Lecture	1	1
6	Disorders of male reproductive system	Tutorial	1	1

week	Title	Teaching method	Credit hours	Actual hours
6	Case Study: Virilism	Practical	1	2
7	Physiology of female sexual cycles-1	Lecture	2	2
7	Physiology of female sexual cycles-2	Lecture	2	2
7	Disorders of female reproductive system	Tutorial	1	1
7	Pregnancy test	Practical	1	2
8	Function of estrogens & progestins	Lecture	2	2
8	Physiology of pregnancy and labor	Lecture	1	1
8	Physiology of lactation-menopause	Lecture	1	1
8	Replacement therapy	Tutorial	1	1
8	Case Study: Chronic Renal Failure	Practical	1	2
9	Introduction & renal blood flow	Lecture	1	1
9	Glomerular filtration	Lecture	1	1
9	Tubular transport	Lecture	2	2
9	Kidney	Tutorial	1	1
9	Specific gravity & pH of urine	Practical	1	2
10	Abdominal pain in a pregnant woman-1	PBL	2	2
10	Abdominal pain in a pregnant woman-2	PBL	2	2
10	Kidney	Tutorial	1	1
10	Case study: Diabetic Ketoacidosis	Practical	1	2

week	Title	Teaching method	Credit hours	Actual hours
11	Abdominal pain in a pregnant woman-3	PBL	2	2
11	Physiology of micturition	Lecture	1	1
11	Regulation of extracellular fluid osmolarity & Na^+ conc	Lecture	1	1
11	Kidney	Tutorial	1	1
11	Recording peristaltic movements of rabbit's intestine	Practical	1	2
12	Physiologic buffer systems	Lecture	2	2
12	Acid-base disturbances	Lecture	2	2
12	Acid-base balance	Tutorial	1	1
12	Measurement of body temperature	Practical	1	2
13	Introduction to gastrointestinal physiology	Lecture	1	1
13	Digestion in oral cavity & esophagus	Lecture	1	1
13	Motility & secretions of stomach	Lecture	1	1
13	Pancreatic secretions	Lecture	1	1
13	Digestion	Tutorial	1	1
13	Revision	Practical	1	2
14	Bile salts & pigments	Lecture	1	1
14	Digestion & absorption in small & large intestine	Lecture	1	1

week	Title	Teaching method	Credit hours	Actual hours
14	Regulation of food intake	Lecture	2	2
14	Digestion	Tutorial	1	1
15	Regulation of body temperature	Lecture	2	2
15	Intestinal absorption	Seminar	2	2
15	Digestion	Tutorial	1	1

Histology III

Course contents

Week	Topics	Title	Teaching method	Actual hours
1st week	**Endocrine system**	**Pituitary gland**	**Lecture+ Tutorial**	**2**
		Pituitary gland	**practical**	**2**
2nd week	**Endocrine system**	**Thyroid gland+Parathy+ supra-renal gland**	**Lecture+ Tutorial**	**2**
		Thyroid gland+ supra-renal gland	**practical**	**2**
3rd week	**Male genital system**	**Testis & epidydimis + vas def**	**Lecture+ Tutorial**	**2**

		Testis & epidydimis + vas def	**practical**	**2**
4th week	**Male genital System**	**Spermatic cord + prostat + penis**	**Lecture+ Tutorial**	**2**
		Spermatic cord + prostat + penis	**practical**	**2**
5th week	**Female genital system**	**Ovary +fallopian tube**	**Lecture+ Tutorial**	**2**
		Ovary +fallopian tube	**practical**	**2**
6th week	**Female genital**	**Uterus +Vagina**	**Lecture+ Tutorial**	**2**
		Uterus +Vagina	**practical**	**2**
7th week	**Female genital system**	**resting and lactating mammary gland + placenta**	**Lecture+ Tutorial**	**2**
		resting and lactating mammary gland + placenta	**practical**	**2**
8th week	**Urinary System**	**Kidney**	**Lecture+ Tutorial**	**2**
		Kidney + kidney	**practical**	**2**

		injected		
9th week	**Urinary System**	**Urinary passage**	**Lecture+ Tutorial**	**2**
		Ureter + urinary bladder	**practical**	**2**
10th week	**Digestive System**	**Oral cavity +Oesophagus**	**Lecture+ Tutorial**	**2**
		Lip + tongue+ papilla folliata	**practical**	**2**
11th week	**Digestive System**	**Stomach**	**Lecture+ Tutorial**	**2**
		Oesophagus(dog+ cat) + gastro-esophageal junct	**practical**	**2**
12th week	**Digestive System**	**Small intestine**	**Lecture+ Tutorial**	**2**
		Stomach (fundus +pylorus + Pyloro-duodena	**practical**	**2**
13th week	**Digestive System**	**Large intestine**	**Lecture+ Tutorial**	**2**
		Duodenum+ Ilium+ large intestine+	**practical**	**2**

		appedex		
14th week	**Digestive System**	**Salivary glands+ pancreas**	**Lecture+ Tutorial**	**2**
		Salivary glands(sub-mand+ parotid) + pancreas	**practical**	**2**
15th week	**Digestive System**	**Liver and Gall bladder**	**Lecture+ Tutorial**	**2**
		Liver and Gall bladder+ liver pig	**practical**	**2**

Medical Biochemistry III

Course Contents

Topic	Week	Title	Teaching method	Instructor	Credit hours	Actual hours
Hormons & carbohydrate metabolism Lipid metabolism	1	Mechanism of action of hormones, biosynthesis of pituitary hormones	Lecture	Prof. Naglaa Ghanaym	3	3
	2	Biosynthesis of thyroid and adrenal hormones, Ca regulating hormons	Lecture	Dr. Yaser ghobashi	2	2
	3	Glycolysis & oxidation of	Lecture	Prof. Maathir	2	2

Topic	Week	Title	Teaching method	Instructor	Credit hours	Actual hours
		pyrvate		kamel		
	3	Physical properties of urine	practical	Dr. Saly Hefnawi	0.5	1
	4	Citric acid cycle, biosynthesis of pancreatic hormones	Lecture	Prof. Maathir kamel, Dr. Yaser ghobashi	3	3
	4	Normal urine constituent	Practical	Dr. Saly Hefnawi	0.5	1
	5	HMP shunt and uronic pathway	Lecture	Prof. Maathir kamel	2	2
	5	glucosuria	Practical	Dr. Saly Hefnawi	0.5	1
	6	Glycogen metabolism	Lecture	Prof. Maathir kamel	2	2
	6	Proteinuria	Practical	Dr. Saly Hefnawi	0.5	1
	7	Gluconeogenesis & blood glucose level	Lecture	Prof. Maathir kamel	2	2
	7	Ketonuria &chyluria	Practical	Dr. Saly Hefnawi	0.5	1
	8	Metabolism of hexoses	Lecture	Prof. Maathir kamel	2	2
	8	Urine report	Practical	Dr. Saly	0.5	1

Topic	Week	Title	Teaching method	Instructor	Credit hours	Actual hours
				Hefnawi		
	9	Fatty acid synthesis	Lecture	Dr. Yaser ghobashi	2	2
	9	Urine report	Practical	Dr. Saly Hefnawi	0.5	1
	10	Fatty acid oxidation	Lecture	Dr. Yaser ghobashi	2	2
	10	milk	Practical	Dr. Saly Hefnawi	0.5	1
	11	Metabolism of keton bodies	Lecture	Dr. Yaser ghobashi	2	2
	11	Semen &CSF	Practical	Dr. Saly Hefnawi	0.5	1
		metabolism of acylglycerol & eicosanoides	Lecture	Dr. Yaser ghobashi	2	2
	12	revision	Practical	Dr. Saly Hefnawi	0.5	1
	13	Metabolism of cholesterol and bile synth	Lecture	Dr. Yaser ghobashi	2	2
	13	revision	Practical	Dr. Saly Hefnawi	0.5	1
	14	Lipid transport	Lecture	Dr. Yaser ghobashi	2	2

Topic	Week	Title	Teaching method	Instructor	Credit hours	Actual hours
	14	Practical exam	Practical	Dr. Saly Hefnawi	0.5	1

Psychology

Course contents:

Lecturers: 2 hour for each

1-developmental psychology

a-physical development (2 lecture)

b-cognitive development (2 lecture)

c-psychosocial development(2 lecture)

d-morality development (2 lecture)

e-attachment and development (2 lecture)

f- ego functions (2 lecture)

2- consciousness (2 lecture)

3-sleep (2 lecture)

4- perception

5- thinking

6-memory

7- learning

8- intelligence

9- motives

10-emotions

11- stress

12- frustration

13- aggression

14- defense mechanisms(2 lectures)

15- personality(2 lectures)

Community based learning III

Course Contents:

Week	Topic	Specialty
Second	Overview on pituitary function	Internal medicine
3rd	Thyroid functions and its disturbance	Internal medicine
4th	Screening for congenital hypothyroidiam	Public health
5th	DM related lab. investigations DM related disorders	Clinical pathology Surgery
6th	DM related disorders	Internal medicine
7th	Congenital endocrine disorders	Public health
8th	FSH. LH measurements Pregnancy test Semen analysis	Clinical pathology
9th	Kidney function tests Urine analysis	Clinical pathology
10th	CKD & renal dialysis	Internal medicine
11th	Acid base balance & electrolyte disturbance	Clinical pathology
12th	Control of diarrhea in 1ry health care (IMCI)	Public health

13th	Liver function tests Hepatomegally (examination)	Clinical pathology Internal medicine
14th	Patient with liver disease (presentation) Revision	Internal medicine Course coordinator
15th	Exam	Course coordinator

SEMISTER 2B

Course code	Course title	Credit hours		
		Lect.	Pract.	total
MMIP- ANAT 207	Anatomy 4*	5	3	8
MMIP- PHYS 208	Physiology 4*	5	1	6
MMIP- HIST 209	Histology 4*	1.5	0.5	2
MMIP- BIO 210	Biochemistry 4	3	1	4
MMIP- CBL 211	Community Based Learning 4		1	1
MMIP- E 01/02/03/…	Elective (Group A)	1		1
Total		15.5	6	22

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

Anatomy and Embryology IV

Course content

Topic	Week	Title	Teaching method	Actual hours	`Total
Head and Neck	1	Scalp Face Cranial cavity 1	Lecture Case study	1.5 2 2	5.5
	2	Cranial cavity 2 Orbit 1 Orbit 2	Lecture Case study	1.5 2 2	5.5
	3	Temporal infratemporal 1 Infratemporal - PPF Parotid – facial n	Lecture Tutorial	1.5 2 2	5.5
	4	Superficial dissection of the neck- neck triangles 1 Neck triangles 2	Lecture	1.5 2 2	5.5

Topic	Week	Title	Teaching method	Actual hours	`Total
		Submandibular region			
	5	Thyroid gland- subclavian A Carotid system – venous drainage Lower 4 cranial ns	Lecture Case study	1.5 2 2	5.5
		Cervical plexus, sympathetic chain, styloid apparatus Pharynx Larynx	Lecture Case study	1.5 2 2	5.5
Neuro	7	Nose, paranasal sinuses Mouth, tongue, palate Ear	Tutorial Lecture Case study	1.5 2 2	5.5
	8	Back, lat vertebral ms, prevertebral, suboccipital Lymphatic drainage- joints Embryology 1	Lecture Tutorial	1.5 2 2	5.5
	9	Embryology 2 Embryology 3 Development of nervous system	Lecture	1.5 2 2	5.5
	10	Introduction of nervous system, functional area Internal structure of the cerebrum Limbic system – lateral ventricle	Lecture Case study	1.5 2 2	5.5
	11	Diencephalon 1 Diencephalon 2 Brainstem 1	Lecture Tutorial	1.5 2 2	5.5

Topic	Week	Title	Teaching method	Actual hours	`Total
	12	Brainstem 2- cerebellum 4th ventricle- meninges- blood supply1 Blood supply 2	Lecture Case study Tutorial	1.5 2 2	5.5
	13	Spinal cord	Lecture Case study	2	2

Medical Physiology and Biophysics IV

Course contents:-

Detailed topics of course topics:

week	Title	Teaching method	Actual hours
1	Functional organization of the nervous system	Lecture	1
1	Sensory receptors and transduction	Lecture	2
1	Principles of synaptic transmission	Lecture	2
1	Examination of crude touch, temperature & pain sensations	Practical	2
2	Transmission & processing of signals in neuronal pool	Lecture	2
2	Somatic sensations	Lecture	2
2	Sensory NS	Tutorial	1
2	Examination of tactile localization &	Practical	2

week	Title	Teaching method	Actual hours
	discrimination and steriognosis.		
3	Somatic sensory cortex	Lecture	1
3	Clinical abnormalities of somatic sensations	Lecture	1
3	Motor functions of spinal cord-1	Lecture	2
3	Sensory CNS	Tutorial	1
3	Examination of vibration sense, senses of position	Practical	2
4	Motor functions of spinal cord-2	Lecture	2
4	Bain stem control of motor function	Lecture	2
4	Motor NS	Tutorial	1
4	Examination of muscle state, tone & power	Practical	2
5	Posture & equilibrium	Lecture	1
5	Cortical control of motor function	Lecture	3
5	Motor NS	Tutorial	1
5	Examination of superficial reflexes	Practical	2
6	The basal ganglia	Lecture	2
6	The cerebellum	Lecture	2
6	Motor NS	Tutorial	1
6	Examination of deep reflexes	Practical	2
7	The thalamus & hypothalamus	Lecture	2
7	Neural basis of instinctual behavior &	Lecture	2

week	Title	Teaching method	Actual hours
	emotions-1		
7	Motor NS	Tutorial	1
7	Examination of coordination & gait	Practical	2
8	Neural basis of instinctual behavior & emotions-2	Lecture	2
8	Electrical activity of brain and sleep	Lecture	2
8	Higher brain function	Tutorial	1
8	Testing visual acuity & astigmatism	Practical	2
9	Intellectual functions of brain-1	Lecture	2
9	Intellectual functions of brain-2	Lecture	2
9	Higher brain functions	Tutorial	1
9	Corneal & pupillary light reflexes	Practical	2
10	Memory & learning	Lecture	2
10	A neurological case-1	PBL	2
10	Higher brain function	Tutorial	1
10	Accommodation reflex Perimetery & demonstration of blind spot	Practical	2
11	A neurological case-2	PBL	2
11	A neurological case-3	PBL	2
11	Higher brain function	Tutorial	1
11	Testing of color vision	Practical	2
12	Protective mechanisms of the eye	Lecture	1
12	Optics of vision	Lecture	1

week	Title	Teaching method	Actual hours
12	Fluid system of the eye	Lecture	1
12	The uveal system	Lecture	1
12	Special senses	Tutorial	1
12	Hearing tests and Examination of taste & smell sensations	Practical	2
13	Receptors & neuronal function of the retina	Lecture	2
13	Color vision & automatic regulation of retinal sensitivity	Lecture	2
13	Special Senses	Tutorial	1
13	Revision	Practical	2
14	Central neurophysiology of vision	Lecture	2
14	Eye movements & their control	Lecture	1
14	Vision	Seminar	2
14	Special senses	Tutorial	1
15	Functional structure of & sound transmission in the ear	Lecture	1
15	Central auditory mechanisms & hearing abnormalities	Lecture	1
15	The chemical senses	Lecture	2

Histology IV

Course contents

Week	Topics	Title	Teaching method	Actual hours
1st week	CNS	Spinal cord	Lecture+ Tutorial	1.5
		Spinal cord (cervical+ thoracic+ lumbar)	practical	1
2nd week	CNS	M.O.G	Lecture+ Tutorial	1.5
		M.O.G(sensory+ motor)	practical	1
3rd week	CNS	Pons+ Mid brain	Lecture+ Tutorial	1.5
		M.O.G(open)	practical	1
4th week	CNS	Pathways of sensation	Lecture+ Tutorial	1.5
		Pons+ Mid brain	practical	1
5th week	CNS	Pathways of sensation	Lecture+ Tutorial	1,5
		cerebrum+ cerebellum	practical	1
6th week	CNS	cerebrum+	Lecture+ Tutorial	1.5

		cerebellum		
		Revision	**practical**	**1**
7th week	**Special sense(Ear)**	**External, Middle ear**	**Lecture+ Tutorial**	**1.5**
		Ear pinna	**practical**	**1**
8th week	**Special sense(Ear)**	**Inner ear**	**Lecture**	**1.5**
		(Cochlea & organ of corti)	**Lecture+ Tutorial**	**1**
9th week	**Special sense (Eye)**	**Outer coat of the eye**	**Lecture+ Tutorial**	**1.5**
		(eye lid, sclera, cornea)	**practical**	**1**
10th week	**Special sense (Eye)**	**(Choroid, Retina)**	**Lecture+ Tutorial**	**1.5**
		Retina	**practical**	**1**
11th week	**Revision**	**Revision**	**Lecture+ Tutorial**	**1.5**
		Revision	**practical**	**1**
12th week	**Revision**	**Revision**	**Lecture+ Tutorial**	**1.5**
		Revision	**practical**	**1**
13th week	**Revision**	**Revision**	**Lecture+ Tutorial**	**1.5**

		Revision	**practical**	**1**
14th week	**Revision**	**Revision**	**Lecture**	**1.5**
		Revision	**practical**	**1**
15th week	**Revision**	**Revision**	**Lecture**	**1.5**
		Revision	**practical**	**1**

Medical Biochemistry IV

Course Contents

Topic	Week	Title	Teaching method	Actual hours
	1	Bioenergetics &biological oxidation	Lecture	3
	1	Colorimetry	Practical	2
	2	Protein metabolism - Biosynthesis of essential aa	Lecture	3
	2	Colorimetry	practical	2
	3	Catabolism of carbon skeleton of aa	Lecture	3
	3	Collection of blood	practical	2
	4	Catabolism of proteins& aa	Lecture	3

Topic	Week	Title	Teaching method	Actual hours
		nitrogen		
	4	Determination of blood glucose	Practical	2
	5	Conversion of aa to specalised products	Lecture	3
	5	Determination of total proteins	Practical	2
	6	Metabolic disorders of ptn	Lecture	3
	6	Revision	Practical	2
	7	Integration of metabolism	Lecture	3
	7	Determination of urinary creatinine	Practical	2
	8	Heme synthesis	Lecture	3
	8	Eliza	Practical	2
	9	Heme catabolism	Lecture	3
	9	Electrophoresis curves	Practical	2
	10	Puine synthesis &catabolism	Lecture	3
	10	Oral glucose tolerance test	Practical	2
	11	Purine catabolism, - fat soluble	Lecture	3

Topic	Week	Title	Teaching method	Actual hours
		vitamins		
	11	Revision	Practical	2
	12	Fat soluble vitamins &water soluble vitamins	Lecture	3
	12	Revision	Practical	2
	13	Water soluble vitamins	Lecture	3
	13	Practical Exam	Practical	2
	14	Xenobiotic	Lecture	3
	15	Body fluid	lecture	3

Community based learning IV

Course Contents:

Week	Topic	Specialty
2nd	Sensory examination	Neuropsychiatry
3rd	Motor examination	Neuropsychiatry
4th	**vibration sense, senses of position**	**ENT**
5th	Brain functions (neurobehavioral battery)	Public health
6th	Brain functions (neurobehavioral battery)	Public health

7th	**Visual acuity**	**Ophthalmology**
8th	Coordination and gait EEG reading	Neuropsychiatry
9th	Diabetic complications in surgery Diabetes mellitus lab investigations	Surgery Clinical pathology
10th	DM and its complications DM & OBESITY	Internal medicine
11th	DM complications in eye Color vision &Eye movement control	Ophthalmology
12th	Different types of deafness & examination of hearing acuity	السمعيات
13th	Cranial nerve injury	Rheumatology
14th	Cranial nerve injury	Rheumatology
15th	Revision Exam	Course coordinator