**Level 2**

**SEMISTER 2A**

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| --- | --- | --- | --- | --- |
| 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.**

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| **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  Week | **Ant. Abd. Wall (1)** | | **Ant. Abd. Wall (2)** | **45** | **18** | **24** | | **3** |
| 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** |
| 1. Embryology of the gastrointestinal tract | | | | **5** | **4** | **0** | | 1 |
| 7th week | **Embryology of GIT1** | | **Embryology of GIT2** |  |  |  | |  |
| 8th week | **Embryology of GIT3** | |  |  |  |  | |  |
| 1. 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** | |  |  |  |  | |  |
| 1. 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 |

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| **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 |
| 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 |
| 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 |
| 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 |
| 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 |

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| **Histology III** |

**Course contents**

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| --- | --- | --- | --- | --- |
| **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 injected** | **practical** | **2** |
| **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+ appedex** | **practical** | **2** |
| **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** |

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| **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. NaglaaGhanaym | 3 | 3 |
| 2 | Biosynthesis of thyroid and adrenal hormones, Ca regulating hormons | Lecture | Dr. Yaserghobashi | 2 | 2 |
| 3 | Glycolysis & oxidation of pyrvate | Lecture | Prof. Maathirkamel | 2 | 2 |
| 3 | Physical properties of urine | practical | Dr. SalyHefnawi | 0.5 | 1 |
| 4 | Citric acid cycle, biosynthesis of pancreatic hormones | Lecture | Prof. Maathirkamel, Dr. Yaserghobashi | 3 | 3 |
| 4 | Normal urine constituent | Practical | Dr. SalyHefnawi | 0.5 | 1 |
| 5 | HMP shunt and uronic pathway | Lecture | Prof. Maathirkamel | 2 | 2 |
| 5 | glucosuria | Practical | Dr. SalyHefnawi | 0.5 | 1 |
| 6 | Glycogen metabolism | Lecture | Prof. Maathirkamel | 2 | 2 |
| 6 | Proteinuria | Practical | Dr. SalyHefnawi | 0.5 | 1 |
| 7 | Gluconeogenesis & blood glucose level | Lecture | Prof. Maathirkamel | 2 | 2 |
| 7 | Ketonuria&chyluria | Practical | Dr. SalyHefnawi | 0.5 | 1 |
| 8 | Metabolism of hexoses | Lecture | Prof. Maathirkamel | 2 | 2 |
| 8 | Urine report | Practical | Dr. SalyHefnawi | 0.5 | 1 |
| 9 | Fatty acid synthesis | Lecture | Dr. Yaserghobashi | 2 | 2 |
| 9 | Urine report | Practical | Dr. SalyHefnawi | 0.5 | 1 |
| 10 | Fatty acid oxidation | Lecture | Dr. Yaserghobashi | 2 | 2 |
| 10 | milk | Practical | Dr. SalyHefnawi | 0.5 | 1 |
| 11 | Metabolism of keton bodies | Lecture | Dr. Yaserghobashi | 2 | 2 |
| 11 | Semen &CSF | Practical | Dr. SalyHefnawi | 0.5 | 1 |
|  | metabolism of acylglycerol&eicosanoides | Lecture | Dr. Yaserghobashi | 2 | 2 |
| 12 | revision | Practical | Dr. SalyHefnawi | 0.5 | 1 |
| 13 | Metabolism of cholesterol and bile synth | Lecture | Dr. Yaserghobashi | 2 | 2 |
| 13 | revision | Practical | Dr. SalyHefnawi | 0.5 | 1 |
| 14 | Lipid transport | Lecture | Dr. Yaserghobashi | 2 | 2 |
| 14 | Practical exam | Practical | Dr. SalyHefnawi | 0.5 | 1 |

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| **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)

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| **Community based learning III** |

**Course Contents:**

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| --- | --- | --- |
| 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.**

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| **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  Submandibular region | Lecture | 1.5  2  2 | 5.5 |
| 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  neuro  Anatomy of lower  limb | 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 |
| 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 |

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| **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 & discrimination and steriognosis. | Practical | 2 |
| 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 & emotions-1 | Lecture | 2 |
| 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 |
| 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 |

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| **Histology IV** |

**Course contents**

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| --- | --- | --- | --- | --- |
| **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+ cerebellum** | **Lecture+ Tutorial** | **1.5** |
| **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** |

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| **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 nitrogen | Lecture | 3 |
| 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 vitamins | Lecture | 3 |
| 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 |

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| **Community based learning IV** |

**Course Contents:**

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| --- | --- | --- |
| **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 |