# Logbook of MS of Histology & Cytology

# Personal Data

Name: .....

Department : .....

Mobile Number:.....

E-mail Address: .....

## Master Degree:

Date of registration: ...../...../.....

Signature:

Head of the Department

Vice Dean for research and postgraduate study

## Aim of the Logbook:

To provide evidence that the candidate attained the desired level of competence required to gain the award. In this book, the candidate will document all academic and clinical skills he/she attained during their training.

## Important regulations (for MS candidates):

-**To be legible for the first part MS exam** you have to attend at least 70% of the lectures of each course in the semester as evidenced by the logbook

-**To be legible for the (MCQ online) exam at the end of each of second part semesters** you have to attend at least 70% of the lectures of each course/module in the semester as evidenced by the logbook.

- **To be legible for the final MS exam :**

1- A time interval of 36 months must pass since the **day of registration to the job** for residents and demonstrators and 30 months since the day **of degree registration** for non residents.

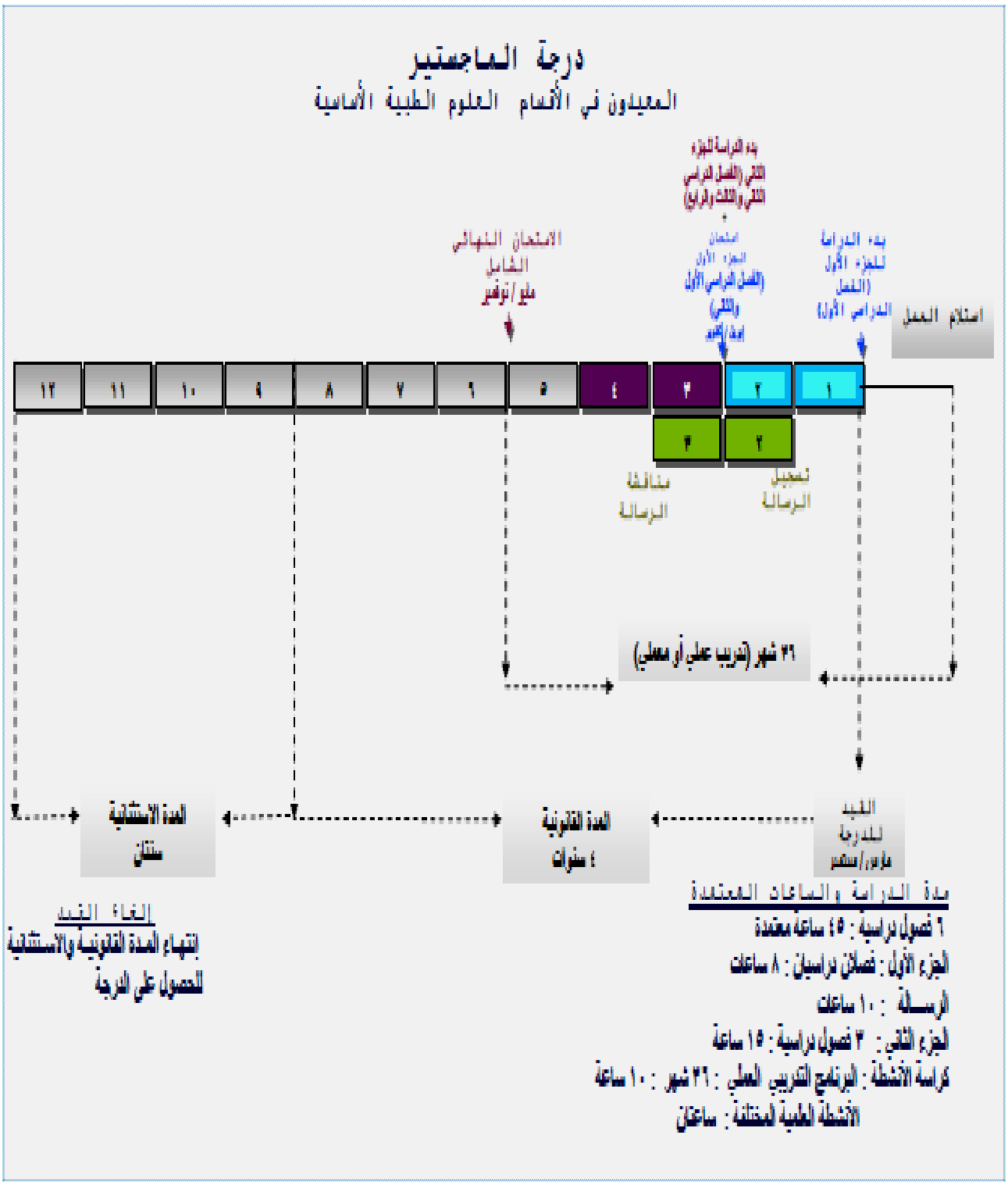
2- You have to spend **a year of daily** clinical/practical training in the department or **two years with three times/week** practical/clinical training.

3-You have to register 4 semesters on Ibn lhaythm registration page.

4- You have to attend 70% of the lectures of each course in the second part of MS degree.

5- You have to fulfill and perform 70% of the practical skills documented in the logbook.

# Bylaws of the MS



# Master Degree in Histology & Cytology (HIST 500)

| | المقـــــــررات | Courses | الكـــود | الساعات المعتمدة | |
|---|---|---|---|---|---|
| الفصل الدراسي الأول والثاني | كيمياء الأنسجة | Histochemistry | HIST 502 HI | 4 | ٨ |
| | يحدد مجلس القسم بالإشتراك مع الطالب مقرر علمي واحد من المقررات الآتية : | | HIST 505 | 4 | |
| | الباثولوجي | Pathology | | | |
| | علم الأجنة | Embryology | HIST 501 | | |
| الفصل الدراسي الثالث والرابع | | | | | ١٥ |
| | علم الأنسجة وبيولوجيا الخلية | Histology & Cell Biology | HIST 502 | 13 | |
| | مقرر اختياري (يختار مقرر واحد): كيمياء الأنسجة المناعية الكيمياء الحيوية العامة | Elective Course: Immunohistochemistry General Biochemistry | HIST 502 IH HIST 504 GB | 2 | |
| كراسة الأنشطة | برنامج التدريب العملي في علم الأنسجة والخلايا<br>- تحضير العينات لفحصها بالميكروسكوب الضوئي<br>- تحضير العينات لفحصها بالميكروسكوب الإلكتروني<br>- أنواع الصباغات المختلفة | | HIST 502 P | | ١٠ |
| | • أنشطة علمية مختلفة | | | | ٢ |
| الرسالة | | | | | ١٠ |
| | إجمالي الساعات المعتمدة | | | | ٤٥ |

# نظام الامتحان وتوزيع الدرجات

الفصل الجزء الأول

| المقرر | الاختبار | الدرجة | | | | إجمالي |
|---|---|---|---|---|---|---|
| | | Written | MCQ | Structured Oral | OSPE | |
| كيمياء الأنسجة | تحريري (٣ ساعات) + شفهي + عملي | ١٤٤ | ٣٦ | ٦٠ | ٦٠ | ٣٠٠ |
| المقرر الذي تم اختيارة | تحريري (٣ ساعات) + شفهي + عملي | ١٤٤ | ٣٦ | ٦٠ | ٦٠ | ٣٠٠ |
| إجمالي الدرجة | | | | | | ٦٠٠ |

الامتحان النهائي الشامل

| المقرر | الاختبار | الدرجة | | | | إجمالي |
|---|---|---|---|---|---|---|
| | | Written | MCQ | Structured Oral | OSPE | |
| علم الأنسجة وبيولوجيا الخلية | إختباران تحريريان مدة كل منهما ثلاث ساعات + اختبار شفهي + اختبار عملي | cytology: general ورقة أولي(١٢٠) بنسبة 30% : 70% Special :Neurohist ورقة ثانية (١٢٠) بنسبة 60% : 40% | ٣٠ + ٣٠ | ١٥٠ | ١٥٠ | ٦٠٠ |
| المقرر الاختياري | اختبار تحريري مدته ساعة | ١٠٠ | | | | |
| إجمالي الدرجة | | | | | | ٧٠٠ |

ملحوظة: سيتم عقد امتحان الفصل MCQ في كل مقرر يتم تدريسه في نهاية الدراسي وتحسب درجاته بنسبة ٢٠% من الدرجة الكلية المخصصة

# Contents

# Section I:

# Scientific Lectures

**Name of the course: Histochemistry**

**Compulsory** **First part**

**Credit hours: 4** **Semester: (spring/fall/summer) year.....**

| Date | Title of the lecture | Lecturer's signature |
|---|---|---|
| | • CONNECTIVE TISSUE STAINS | |
| | • CONNECTIVE TISSUE STAINS<br>• SPECIMEN PREPARATION FOR ENZYME HISTOCHEMISTRY | |
| | • CONNECTIVE TISSUE STAINS<br>• TYPES OF HISTOCHEMICAL REACTIONS | |
| | • MUCINS STAINS<br>• THE USE OF CONTROLS IN FOR ENZYME HISTOCHEMISTRY | |
| | • GLYCOGEN STAINS | |
| | • LIPIDS | |
| | • PROTEINS AND NUCLEIC ACIDS<br>• BONE | |
| | • DECALCIFICATION OF BONE<br>• HISTOCHEMISTRY OF BONE AND CARTILAGE | |

| Date | Title of the lecture | Lecturer's signature |
|---|---|---|
| | • PIGMENTS & MINERALS<br>• ACID AND ALKALINE PHOSPHATASES | |
| | • CYTOP ASMIC GRANULES, AND ORGANELLES | |
| | • SUCCINIC DEHYDROGENASE, ESTERASE STAINS<br>• ATPASE, NADH DIAPHORASE STAINS | |
| | • DIAGNOSTIC APPLICATIONS OF ENZYME HISTOCHEMISTRY | |
| | • AMYLOID<br>• ENZYME HISTOCHEMICAL TECHNIQUES FOR MUSCLE | |
| | • NEUROENDOCRINE | |
| | • TECHNIQUES IN NEUROPATHOLOGY<br>• DIAGNOSTIC APPLICATIONS OF ENZYME HISTOCHEMISTRY | |

**Name of the course: Pathology**

**Elective** **First part**

**Credit hours: 4** **Semester: (spring/fall/summer) year.....**

| Date | Title of the lecture | Lecturer's signature |
|---|---|---|
| | **Reversible cell injury** | |
| | **Irreversible cell injury:**<br>• **Apoptosis** | |
| | **Irreversible cell injury:**<br>• **Necrosis** | |
| | **Intra cellular and extracellular deposition of:**<br>• **Mucin**<br>• **Hyalinosis**<br>• **Amyloidosis**<br>• **Pathological calcification**<br>• **Pathological pigmentation** | |
| | **Acute inflammation** | |
| | **Chronic inflammation** | |
| | **Circulatory disturbance:**<br>• **Hyperaemia**<br>• **Thrombosis**<br>• **Embolism** | |
| | **Circulatory disturbance:**<br>• **Ischemia and Infarction**<br>• **Gangrene** | |

| Date | Title of the lecture | Lecturer's signature |
|---|---|---|
| | **Tissue repair:**<br>• **cell regeneration**<br>• **fibrosis** | |
| | **Cell adaptation:**<br>• **Atrophy**<br>• **Hypertrophy** | |
| | **Cell adaptation:**<br>• **Hyperplasia** | |
| | **Cell adaptation:**<br>• **Metaplesia**<br>• **Displasia** | |
| | **Neoplasia** | |
| | **General pathology of infectious diseases** | |
| | **Diseases of immunity** | |

**Name of the course: Embryology**

**Elective** **First part**

**Credit hours: 4** **Semester: (spring/fall/summer) year.....**

| Date | Title of the lecture | Lecturer's signature |
|---|---|---|
| | General embryology | |
| | Anatomy of male and female genital tracts | |
| | Gametogenesis<br>– Oogenesis<br>– Spermatogenesis | |
| | Female reproductive cycle<br>– Uterine cycle<br>– Ovarian cycle | |
| | First week of pregnancy<br>– Fertilization<br>– Implantation<br>– Decidua formation | |
| | Second week of pregnancy<br>– Cleavage<br>– Changes in the embryonic disc | |
| | Third week of pregnancy<br>– Gastrulation<br>– Notocord formation<br>– Neural tube formation | |

| Date | Title of the lecture | Lecturer's signature |
|---|---|---|
| | Fourth week of pregnancy (organogenesis)<br>• Embryonic disc folding | |
| | Prenatal periods | |
| | Congenital malformations | |
| | Foetal membranes | |
| | Twins | |
| | **Special embryology** | |
| | Development of the gastrointestinal tract | |
| | Development of the cardiovascular system | |
| | Development of the genito-urinary system | |
| | Development of the respiratory system | |
| | Development of the nervous system | |
| | Development of the limbs | |

| Date | Title of the lecture | Lecturer's signature |
|---|---|---|
| | Development of the special sense organs | |
| | Development of body cavities | |
| | Development of the endocrine system | |
| | Development of the pharyngeal apparatus | |
| | Development of head and neck | |

**Name of the course: Histology & Cell biology (Module 1; Cytology)**

**Compulsory** **Second part:**

**Credit hours: 2** **Semester: (spring/fall/summer) year…….**

| Date | Title of the lecture | Lecturer's signature |
|---|---|---|
| | **Introduction** | |
| | -Introduction for histology (principles and techniques) | |
| | -Microscopy: principles, types and applications<br>Microscopy: phase contrast and differential phase microscope – Mercury lamps | |
| | -Microscopy: Ultraviolet, fluorescence microscopy, confocal laser, atom force, Lumneling and probe, scanning electron microscope.<br>-Preparation of sections for TEM and SEM. | |
| | **Membranous Cell organelles** | |
| | -Cell membrane (molecular structure)<br>-Cell coat<br>-Differential centrifugation and density gradient centrifugation | |
| | - Function of the cell membrane | |
| | -Mitochondria: structure, function and diseases<br>-Types of ATPases | |

| Date | Title of the lecture | Lecturer's signature |
|---|---|---|
| | -Endomembranous system:<br>*rER<br>*Ribosomes<br>*sER | |
| | -Endomembranous system:<br>*Golgi apparatus<br>*lysosomes and clinical hint | |
| | -Peroxisomes and clinical hint<br>-Intracytoplasmic vesicle trafficking<br>-Endosomes | |
| | **Non- Membranous Cell organelles** | |
| | -Microtubules<br>-Centriole<br>-Cilia-flagella<br>-Clinical hint | |
| | -Microfilaments<br>-Intermediate filaments<br>-Thick filaments<br>-Clinical hint | |

| Date | Title of the lecture | Lecturer's signature |
|---|---|---|
| | **Cell inclusions** | |
| | **-Cell inclusions: stored food, pigments, crystals.**<br>**-Cytosol and clinical hint** | |
| | **Nucleus** | |
| | ***Introduction**<br>***Nuclear envelope**<br>***Nuclear pores** | |
| | ***Nucleoulus**<br>***Nuclear sap**<br>***Nuclear lamina (clinical hint)**<br>***Dynamics and regulation** | |
| | **-Chromatin:**<br>***Molecular structure**<br>***Clinical hint**<br>***Sex chromatin** | |
| | **Cell division** | |
| | **Cell cycle (Interphase and mitosis)**<br>**Control of cell cycle** | |
| | **-Meiotic cell division:**<br>***Oogenesis**<br>***Spermatocytogenesis** | |

| Date | Title of the lecture | Lecturer's signature |
|---|---|---|
| | **Karyotyping** | |
| | **-Karyotyping**<br>**Morphology of chromosomes**<br>**-Chromosomal anomalies** | |

**Name of the course: Histology & Cell biology (Module 1 ; General Histology )**

**Compulsory** **Second part**

**Credit hours: 4.5** **Semester: (spring/fall/summer) year.....**

| Date | Title of the lecture | Lecturer's signature |
|---|---|---|
| | **Epithelium** | |
| | -Simple epithelium | |
| | -Stratified epithelium | |
| | -Glandular epithelium | |
| | -Basement membrane | |
| | -Neuroepithelium | |
| | -Cell junctions | |
| | **Connective Tissue** | |
| | -C.T. fibres | |
| | -C.T. matrix | |
| | -C.T. cells | |
| | -C.T. proper | |

| Date | Title of the lecture | Lecturer's signature |
|---|---|---|
| | **Cartilage** | |
| | **-Cartilage matrix**<br>**Cartilage cells** | |
| | **- Types of Cartilage**<br>**- Growth of Cartilage**<br>**-Clinical hint** | |
| | **Bone** | |
| | **-Bone cells** | |
| | **- Types of Bone** | |
| | **-Types of bones ossification** | |
| | **- Growth of Bone**<br>**- Factor affecting Bone growth**<br>**-Clinical hint** | |
| | **Muscle Tissue** | |
| | **-Skeletal muscle fibres**<br>**-Triad of tubular system**<br>**-Classification of muscle fibres**<br>**-Cardiac muscle fibres** | |

| Date | Title of the lecture | Lecturer's signature |
|---|---|---|
| | -Wall of the heart<br>-Valves & conducting system<br>-Moderator band | |
| | -Smooth Muscle | |
| | **Blood** | |
| | -Erythrocytes | |
| | -Leucocytes | |
| | -Thrombocytes | |
| | -Structure and types of Bone marrow | |
| | -Haemocytopoiesis | |
| | **Vascular System** | |
| | -General structure of blood vessels | |
| | -Large Arteries | |
| | - Large Veins | |
| | -Medium Sized Artery & Veins<br>-Special types of Medium Sized Artery | |
| | -Arterio-venous connection:<br>1.Blood capillaries<br>2.Blood sinusoids<br>3.A-V anastomosis | |

| Date | Title of the lecture | Lecturer's signature |
|---|---|---|
| | **Nervous Tissue** | |
| | **-Structure of the neuron**<br>**-Types of the neuron** | |
| | **- Structure of the nerve fiber**<br>**-Types of the nerve fiber**<br>**-The peripheral nerve trunk** | |
| | **-Myelination of nerve fiber** | |
| | **-Nerve ganglia** | |
| | **-The synapse** | |
| | **- Types of neuroglia** | |
| | **-Types of degeneration of Nerve Fibers** | |
| | **-Regeneration of Nerve Fibers** | |
| | **-Different Stains for degenerating nerve fibers** | |
| | **Lymphatic System** | |
| | **-Non capsulated lymphoid follicles** | |
| | **-Lymph node** | |
| | **-Spleen** | |
| | **-Tonsils** | |
| | **-Thymus gland** | |
| | **-The macrophage system** | |

| Date | Title of the lecture | Lecturer's signature |
|---|---|---|
| | **Respiratory System** | |
| | **-The conducting portion of the respiratory system** | |
| | **-The respiratory portion of the respiratory system** | |
| | **-Blood air barrier**<br>**-Alveolar macrophage**<br>**-The pleura**<br>**-Blood supply of the lung** | |

**Name of the course: Histology & Cell biology (Module 2 ; Special Histology)**

**Compulsory** **Second part**

**Credit hours: 4** **Semester: (spring/fall/summer) year.....**

| Date | Title of the lecture | Lecturer's signature |
|---|---|---|
| | **Skin** | |
| | -Epidermis of thick skin | |
| | -Dermis of thick skin and Sweat glands | |
| | -Thin skin and hair follicle | |
| | **Urinary system** | |
| | -Urinefous tubule of the kidney | |
| | -Juxtaglomerular apparatus and urinary passages | |
| | **Gastrointestinal Tract** | |
| | -Oral cavity<br>-Esophagus | |
| | -Stomach<br>- Gastro-esophageal junction | |

| | | |
|---|---|---|
| Date | Title of the lecture | Lecturer's signature |
| | **-Small intestine**<br>**- Pyloro-duedenal junction** | |
| | **-Small intestine**<br>**- Pyloro-duodenal junction** | |
| | **- Large intestine**<br>**-Recto-anal junction** | |
| | **Digestive Glands** | |
| | **-Classification of digestive glands**<br>**-Types of salivary glands**<br>**-Structure of salivary glands** | |
| | **-Pancreas (General structure, exocrine part)**<br>**-Pancreas (Islets of langerhans)** | |
| | **-Liver (lobules)**<br>**-Liver(hepatocytes, biliary system)**<br>**-Medical application** | |
| | **Endocrine System** | |
| | **-Development of pituitary gland**<br>**-Histology of pars distalis**<br>**-Structure of pars nervosa**<br>**-Blood supply, medical application** | |

| | | |
|---|---|---|
| Date | Title of the lecture | Lecturer's signature |
| | **-Structure of suprarenal cortex**<br>**-Structure of suprarenal medulla**<br>**-Blood supply, medical application** | |
| | **-Thyroid gland**<br>**-Parathyroid gland, medical application**<br>**-Pineal gland** | |
| | **Male Genital System** | |
| | **-Seminal tubule and Sertoli cells**<br>**- Spermatogensis**<br>**- Intertesticular ducts** | |
| | **- Excretory genital ducts**<br>**- Accessory glands**<br>**- Penis and male urethrae** | |
| | **Female Genital System** | |
| | **-Development of the ovary**<br>**-Ovarian follicles** | |
| | **- Follicular growth**<br>**- Ovulation and corpus luteum**<br>**-Uterine tube** | |
| | **-Uterus, placenta, vagina**<br>**- Mammary gland** | |

**Name of the course: Histology & Cell biology (Module 2 ; Neurohistology)**

**Compulsory** **Second part:**

**Credit hours: 2.5** **Semester: (spring/fall/summer)**

**year.....**

| Date | Title of the lecture | Lecturer's signature |
|---|---|---|
| | **Meninges** | |
| | **CSF** | |
| | **Spinal Cord** | |
| | **Spinal cord** | |
| | **Ascending Tracts** | |
| | **Ascending Tracts** | |
| | **Descending Tracts** | |
| | **Short Tracts** | |
| | **Brain stem** | |
| | **Medulla** | |
| | **Medulla** | |

| | | |
|---|---|---|
| Date | Title of the lecture | Lecturer's signature |
| | **Reticular Formation** | |
| | **Pons** | |
| | **Pons** | |
| | **Midbrain** | |
| | **Midbrain** | |
| | **Ear** | |
| | **Ear 1** | |
| | **Ear 2** | |
| | **Eye** | |
| | **Eye 1** | |
| | **Eye 2** | |
| | **Eye 3** | |
| | **Eye 4** | |
| | **Receptors** | |
| | **Cerebrum** | |
| | **Cerebrum 1** | |
| | **Cerebrum 2** | |
| | **Cerebellum** | |

**Name of the course: Immunohistochemistry**

**Elective:** **Second part:**

**Credit hours: 2** **Semester: (spring/fall/summer) year.....**

| Date | Title of the lecture | Lecturer's signature |
|---|---|---|
| | Introduction and Immunohistochemical theory | |
| | Sample preparation and tissue fixatio immunohistichemical stains | |
| | Types Of antibodies<br>Antibodies production | |
| | Antigen Retrieval techniques | |
| | Types of tissue control in IHC | |
| | Methods of blocking of non specific site During IHC | |
| | Preparation of Coated Slides for IHC | |
| | Direct Immunohistochemisty (IHC) Staining procedures | |
| | Indirect Immunohistochemisty (IHC) Staining Procedures | |
| | Method of Detection of low levels of antigen | |
| | Immuno-Fluorescence techniques | |

| Date | Title of the lecture | Lecturer's signature |
|---|---|---|
| | **Immuno-Electron microscopic techniques** | |
| | **Quality control measures used while performing IHC procedures** | |
| | **Quality control measures used while performing IHC procedures** | |
| | **Application of IHC in the :**<br>**1. Histology & cell Biology**<br>**2. Genetics**<br>**3. Histopathological diagnosis**<br>**4. Medical Research** | |

**Name of the course: General Biochemistry**

**Elective** **Second part**

**Credit hours: 2** **Semester: (spring/fall/summer) year.....**

| Date | Title of the lecture | Lecturer's signature |
|---|---|---|
| | Carbohydrate chemistry & metabolism | |
| | Lipid chemistry & metabolism | |
| | Physical chemistry | |
| | Protein chemistry & general metabolism | |
| | Individual amino acid Metabolism | |
| | Principles of Heme metabolism | |
| | Purine & pyrimidine chemistry & metabolism | |
| | .Metabolic interrelation & minerals | |
| | Mechanism of hormonal action | |
| | Body Fluids | |
| | Basic function of Cell organelles & structure of biological membrane | |

| Date | Title of the lecture | Lecturer's signature |
|---|---|---|
| | Vitamins & enzymes | |
| | Basic knowledge of Cell cycle & apoptosis | |
| | Molecular biology & recombinant DNA | |
| | Biological oxidation &Xenobiotic metabolism | |

# Section II:

# Practical Skills

## List of requirements (may include multiple pages)

| Name of the procedure/operation | Total number required | Observer | Assistant | Independent |
|---|---|---|---|---|
| Obtaining specimens for studying Histochemistry | 4 | | 1 | 3 |
| Obtaining specimens for studying enzyme Histochemistry | 2 | | 1 | 1 |
| Obtaining specimens for studying cytology | 2 | | 1 | 1 |
| Obtaining specimens for studying general histology | 4 | | | 4 |
| Obtaining specimens for studying special histology | 4 | | | 4 |
| Obtaining specimens for studying Neuro-histology | 2 | | | 2 |

| Name of the procedure/operation | Total number required | Observer | Assistant | independent |
|---|---|---|---|---|
| Processing specimens for studying Histochemistry | 4 | | 1 | 3 |
| Processing specimens for studying enzyme Histochemistry | 2 | | 1 | 1 |
| Processing specimens for studying cytology | 2 | | 1 | 1 |
| Processing specimens for studying general histology | 4 | | | 4 |
| Processing specimens for studying special histology | 4 | | | 4 |
| Processing specimens for studying Neuro-histology | 2 | | | 2 |

| Name of the procedure/operation | Total number required | Observer | Assistant | Independent |
|---|---|---|---|---|
| Staining sections for studying Histochemistry | 8 | | 1 | 7 |
| Staining sections for studying enzyme Histochemistry | 2 | | 1 | 1 |
| Staining sections for studying cytology | 2 | | | |
| Staining sections for studying general histology | 4 | | | |
| Staining sections for studying special histology | 4 | | | |
| Staining sections for studying Neuro-histology | 1 | | | |

## Procedures/Operations log (multiple pages)

**(Under each procedure insert a number of rows equal to the no. required)**

| Procedure 1 **Obtaining specimens for studying Histochemistry** | | | |
|---|---|---|---|
| **Level of participation** | **Date** | **Location** | **Signature of supervisor** |
| | | | |
| | | | |
| | | | |
| | | | |
| Procedure 2 **Obtaining specimens for studying enzyme Histochemistry**:……. | | | |
| | | | |
| | | | |

**Level of participation:**

Observer

Assistant

Independent

## Procedures/Operations log (multiple pages)

**(Under each procedure insert a number of rows equal to the no. required)**

| Procedure 3 **Obtaining specimens for studying cytology** | | | |
|---|---|---|---|
| **Level of participation** | **Date** | **Location** | **Signature of supervisor** |
| | | | |
| | | | |
| Procedure 4 **Obtaining specimens for studying general histology** :…… | | | |
| | | | |
| | | | |
| | | | |
| | | | |

**Level of participation:**

Observer

Assistant

Independent

## Procedures/Operations log (multiple pages)

**(Under each procedure insert a number of rows equal to the no. required)**

| Procedure 5 **Obtaining specimens for studying special histology** | | | |
|---|---|---|---|
| **Level of participation** | **Date** | **Location** | **Signature of supervisor** |
| | | | |
| | | | |
| | | | |
| | | | |
| Procedure 6 **Obtaining specimens for studying neurohistology**: …… | | | |
| | | | |
| | | | |

**Level of participation:**

Observer

Assistant

Independent

## Procedures/Operations log (multiple pages)

**(Under each procedure insert a number of rows equal to the no. required)**

| Procedure 7 **Processing specimens for studying Histochemistry** | | | |
|---|---|---|---|
| **Level of participation** | **Date** | **Location** | **Signature of supervisor** |
| | | | |
| | | | |
| | | | |
| | | | |
| Procedure 8 **Processing specimens for studying enzyme Histochemistry**:…… | | | |
| | | | |
| | | | |

**Level of participation:**

Observer

Assistant

Independent

## Procedures/Operations log (multiple pages)

**(Under each procedure insert a number of rows equal to the no. required)**

| Procedure 9 **Processing specimens for studying cytology** | | | |
|---|---|---|---|
| **Level of participation** | **Date** | **Location** | **Signature of supervisor** |
| | | | |
| | | | |
| Procedure 10 **Processing specimens for studying general histology** :…… | | | |
| | | | |
| | | | |
| | | | |
| | | | |

**Level of participation:**

Observer

Assistant

Independent

## Procedures/Operations log (multiple pages)

**(Under each procedure insert a number of rows equal to the no. required)**

| Procedure 11 **Processing specimens for studying special histology** | | | |
|---|---|---|---|
| **Level of participation** | **Date** | **Location** | **Signature of supervisor** |
| | | | |
| | | | |
| | | | |
| | | | |
| Procedure 12 **Processing specimens for studying neurohistology**: …… | | | |
| | | | |
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**Level of participation:**

Observer

Assistant

Independent

## Procedures/Operations log (multiple pages)

**(Under each procedure insert a number of rows equal to the no. required)**

| Procedure 13 **Staining sections for studying Histochemistry** | | | |
|---|---|---|---|
| **Level of participation** | **Date** | **Location** | **Signature of supervisor** |
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**Level of participation:**

Observer

Assistant

Independent

## Procedures/Operations log (multiple pages)

**(Under each procedure insert a number of rows equal to the no. required)**

| Procedure 14 **Staining sections for studying enzyme Histochemistry**:…… | | | |
|---|---|---|---|
| **Level of participation** | **Date** | **Location** | **Signature of supervisor** |
| | | | |
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| Procedure 15 **Staining sections for studying cytology** | | | |
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| Procedure 16 **Staining sections for studying general histology** :……. | | | |
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**Level of participation:**

Observer

Assistant

Independent

## Procedures/Operations log (multiple pages)

**(Under each procedure insert a number of rows equal to the no. required)**

| Procedure 17 **Staining sections for studying special histology** | | | |
|---|---|---|---|
| **Level of participation** | **Date** | **Location** | **Signature of supervisor** |
| | | | |
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| Procedure 18 **Staining sections for studying neurohistology**: …… | | | |
| | | | |

**Level of participation:**

Observer

Assistant

Independent

# Section III: Seminars

## List of requirements:

**1- Seminar attendance: 6 seminars per year**

**2- Seminar performance: 3 seminars per year**

### 1- Attendance

| Date | Topic | Supervisor's signature |
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| Date | Topic | Supervisor's signature |
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## 2- Performance

| Date | Topic | Supervisor's signature |
|---|---|---|
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# Section IV:
# Student teaching sections.

**List of requirements:** attendance of **6** sections per week, performance of 4 sections per week

## 1- Attendance

| Date | Section subject | Supervisor's signature |
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| Date | Section subject | Supervisor's signature |
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## 2- Performance

| Date | Section subject | Supervisor's signature |
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| Date | Section subject | Supervisor's signature |
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# Section V:

# Scientific activities

# (conferences/workshops)

## List of requirements

| Conferences | | | |
|---|---|---|---|
| **Total number required** | **Attendance** | **Organization** | **Presentation** |
| **3/year** | **3/year** | | |
| **Workshops** | | | |
| **Total number required** | **Attendance** | **Organization** | **Presentation** |
| **1/year** | **1/year** | | |

| Activity (Conference/Workshop | Role | Date | Supervisor's signature |
|---|---|---|---|
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**Role:**

-Attendant

-Organizer

-Presenter

| Activity (Conference/Workshop | Role | Date | Supervisor's signature |
|---|---|---|---|
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**Role:**

-Attendant

-Organizer

-Presenter