syllabus of histopathology for third year

الفصل الأول: ٦٠ ساعة

الفصل الثاني : ٦٠ ساعة

Reference Books:

1-Robbin's Basic Pathology 8th Edition; Kumar, Abbas, Fausto & Mitchell 2007

2-Muir's Text Book of Pathology, 13th Edition; Roderick N M MacSween &
KeithWhaley 1994

3-Stevens: Core pathology, 3ed edition 2010.

4- Practical booklet 2010

الفصل الاول

SubjectNo. of lectures

General Pathology

1-Introduction……1 hour	د. سؤدد عاصم عبد القادر
2- Cell injury,Cell death and Adaptations ……4 hours	د. سؤدد عاصم عبد القادر.
3-Inflammation,Healing & Repairs ……...8 hours	د. سوسن صالح الهارون
4- Microbial Infections…….8hours	د. نبراس سليم المعمار

5- Immunopatholgy…….6 hours د. نبراس سليم + د. جاسم محمد الذياب

6-Disturbnces of blood flow and

body fluid…….....….5hours د. سؤدد عاصم عبد القادر

7-Medical Genetics……5 hours د. سعد عبد الباقي

8- Neoplasia …… ….. 10hours د. جاسم محمد الذياب

الفصل الثانى

Systemic Pathology

9-Blood& lymphatic's vessels….3hours د. سعد عبد الباقي

10- Heart……. 5hours . د. سعد عبد الباقي

11-Respiratory system…….. 9 hours د.جاسم محمد الذياب

12-Hematopoietic system…….7 hours د.صادق خلف

13- Lymphoreticular system……. 4hours. د. سوسن صالح الهارون

14-Oral cavity and gastro-

Intestinal tract……7hours .د. سؤدد عاصم عبد القادر

15-Liver, biliary tract & pancreas…7hours د.عبير علي حسين

16-Kidney & urinary tract system…8hours د. سوسن صالح الهارون

17-Female genital system……...5hours د. سؤدد عاصم عبد القادر..

18-The breast…….……3hour … د. اسيل حامد جاسم

19-Male genital system ……..3hours د.جاسم محمد الذياب

20-Endocrine system.……4hours . د. نور صبيح

21-Bone, joints and

skeletal muscles…….4hours د.اسيل حامد جاسم

22-Central and peripheral

nervous system…… د. سعد عبد الباقي

B- Practical part (4 hours per week)the main objectives of practical sessions is to support the theory and to help the students to comprehend the basic principles in:

a- How to take specimens for Histopathological examination. The ways of preservation and fixation and the main histopathological techniques.
b-How to use the microscopes.
c- Examination of available of pathological specimens.
d- Examination of standard slides to demonstrate the microscopic changes in the diseased tissue or organ.

C- Tutorials (one hour per week) to give the student the opportunity for further information and to give the opportunity to the teachers to assess the standards of their methods of teaching.

	Subject	**Number of Lectures**
1	**Introduction**	**1**
	Definition & branches of pathology ıses and etiology of diseases nogenesis and nature of diseases rphological changes of diseasePrognosis and nplications	
2	**Cell injury, cell death and Adaptations**	**4**
	Overview of cellular response to stress & noxious stimuli Cellular adaptations to stress. -Hypertrophy -Hyperplasia -Atrophy -Metaplasia Causes of cell injury The morphology of cell and tissue injury -Reversible injury -Necrosis -Patterns of tissue necrosis -Subcellular responses to injury Mechanisms of cell injury Examples of irreversible cell injury and necrosis -Coagulative necrosis	

	-Caseous necrosis -Liquefactive necrosis -Fatty necrosis -Fibrinoid necrosis -Gangrenous necrosis Apoptosis Intracellular accumulations -Fatty change -Pigmentation (Exogenous and endogenous) -Pathological calcification	
3	**<u>Acute And Chronic Inflammation</u>**	**6**
	Overview of Inflammation - Definition - Causes Types: -Acute Inflammation *-Vascular changes* *-Change in vascular blood flow & caliber* *-Increased vascular permeability* *-Leukocytes cellular events* *-Leukocyte recruitment* *-Margination and rolling* *-Adhesion and transmigrations* *-Chemotaxis* *-Leukocytes activation*	

	-Phagocytosis *-Killing and degradation of microbes* *-Outcomes of Acute Inflammation* *-Morphological patterns of acute Inflammation* *-Serous Inflammation* *-Fibrinous Inflammation* *-Suppurative (purulent) Inflammation* *-Catarrhal inflammation* *-Ulceration* *-Gangrenous Inflammation* *-Pseudomembranous Inflammation* *-Chemical Mediators* *-Cell – derived mediators* *-Plasma protein – derived mediators* -Chronic Inflammation *-Chronic inflammatory cells and mediators* *-Granulomatous inflammation* *-Morphological pattern of chronic inflammation* Systemic effects of Inflammation	
4	**<u>Tissue Repair: Regeneration, Healing and Fibrosis</u>**	**2**
	Overview of tissue repair. -Regeneration *-The control of cell proliferation* *-The cell cycle* *-Proliferative capacities of tissues* *-Growth factors* *-Extracellular matrix (ECM) and cell-matrix interactions* *-Roles of extracellular matrix.*	

	-Components of extracellular Matrix -Repair by connective tissue *-Angiogenesis* *-Migration of fibroblasts and ECM deposition (Scar formation)* *-ECM and Tissue Remodeling* Cutaneous wound healing -Healing by first intention -Healing by second intention -Wound strength Pathologic Aspects of Repair Factors Affecting Wound Healing -Local Factors -Systemic Factors	
5	**Microbial Infections**	**8**
	Introduction to microbial infections Non-specific defense mechanisms Categories of infectious agents Routes of infections How microorganism can cause disease. Viral infections -Introduction -Mechanisms of viral injury at cellular level. -Transient viral infection -Latent viral infection -Slow viral infection -H1N1 viral infection Bacterial infections -Pathogenesis of bacterial infections -Acute bacterial infections -Acute bacterial infections general types	

	-Common pyogenic bacteria -Gangrene *Definitionand types* -Chronic bacterial infections - *Mycobacteriumtuberculosis* *-Leprosy* *-Syphilis* *-Fungal infections*	

6	**Immunopathology**	**6**
	Introduction: Innate & adaptive immunity Cell & tissue of immune system Over review of normal immune responses Hypersensitivity diseases: -Types of Hypersensitivity diseases *-Type I HSR* *-Type II HSR* *-Type III HSR* *-Type IV HSR* -Rejection of transplants -Auto-immune disease -Immunodeficiency diseases *-Primary Immunodeficiency* *-Secondary immunodeficiency* -Amyloidosis	

7	**Disturbances of blood flow and body fluid**	**5**

	Introduction Edema and types Hyperemia andcongestion Hemorrhage Shock -Cardiogenic shock -Hypovolemic shock -Septic shock -Stages of shock Hypoxia -Ischemia -Infarction Review of normal homeostasis Thrombosis -Causes -Fate of thrombi Embolism -Pulmonary thromboembolism -Systemic thromboembolism -Types of emboli	
8	**<u>Medical Genetics</u>**	**5**
	Mutations Mendelian disorders (Diseases caused by single-gene defects) -Transmission patterns of single-gene disorders *-Autosomal dominant disorders* *-Autosomal recessive disorders* *-X-linked disorders* Disorders wit multifactorial inheritance Cytogenetic disorders -Cytogenetic disorders involving autosomes *-Trisomy 21(Down syndrome)*	

	-Cytogenetic disorders involving sex chromosomes -*Klinefelter syndrome* -*Turner syndrome* Single gene disorders with atypical patterns of inheritance -Triplet repeat mutation: Fragile X- syndrome -Diseases caused by mutation of mitochondrial genes -Genomic imprinting: Prader-Willi and Angelman syndromes Congenital anomalies Diagnosis of genetic diseases -Florescence in situ hybridization -Molecular detection of genetic diseases -Indications for genetic analysis	
9	**<u>Neoplasia</u>**	**10**
	Definition Nomenclature Hamartoma Teratoma Characteristics of benign and malignant neoplasms. -Atypia & dysplasia -Tumor grade and stage -Invasion & metastasis -*Mechanism of invasion & metastasis* -*Tumor angiogenesis.* -*Kinetic of tumor cell growth* Tumor immunity – Tumor antigens – anti-tumor effecter mechanisms. -Tumor & immunosurveilance. Carcinogenesis.-Chemical, radiation and viral	

	Molecular basis of cancer. The clinical effect of neoplasia.	

Systemic Pathology		
10	**Cardiovascular system**	**8**
	The Blood Vessels - Vascular wall cells and their response to injury - *Endothelial cells: Function and dysfunction* - *Vascular smooth muscle cells* - *Intimal thickening – A response to vascular intimal injury* - Atherosclerosis - Hypertensive vascular disease - *Pathogenesis of hypertension* - *Mechanisms of essential hypertension* - *Vascular pathology in hypertension* - Aneurysms - *Abdominal aortic aneurysm* - *Aortic dissection* - Vasculitis - *Giant cell(Temporal) arteritis.* - *Thromboangiitis obliterance (Buerger Disease)* -Tumors - *Benign tumors* *-Hemangioma* *-Lymphangioma* - *Intermediate (Borderline) tumors* *-Kaposi sarcoma* - *Malignant tumors*	

	-Angiosarcoma **The Heart** - Congestive heart failure -Ischemic heart diseases - *Angina pectoris* - *Myocardial infarction* - *Chronic ischemic heart disease* - *Sudden cardiac death* -Valvular heart diseases - *Rheumatic fever and heart disease* - *Infective Endocarditis* - Primary myocardial diseases - *Myocarditis* - Congenital heart disease - *Left-to-right shunts* *-Atrial septal defects* *-Ventricular septal defects* *-Patent ductus arteriosus* - *Right-to-left shunts* *-Tetralogy of Fallot* *-Transposition of great arteries* - Pericardial diseases - *Pericarditis* - *Pericardial effusions* - Cardiac tumors	

11	**Respiratory system**	**9**

	Upper respiratory tract -Nose *-Nasal sinuses -inflammatory conditions & tumors.* *-Nasopharynx – inflammatory conditions* *-Tumors.* *-Angiofibroma* *-Nasopharyngeal carcinoma* -Larynx. *-Benign tumors,* *-Singer's nodule* *-Polyp* *-Squamous papilloma* *-Malignant tumors* *-Squamous cell carcinoma* Lower respiratory tract - Atelectasis (collapse) - Acute Lung injury - Obstructive Pulmonary Disease *-Bronchial asthma.* *-Chronic bronchitis.* *-Bronchiectasis* *-Emphysema* *-Centrilobular emphysema* *-Panacinar emphysema* *-Pathogenesis* -Restrictive defect *-Chest wall disorders* *-Interstitial lung diseases* *-Acute respiratory distress syndrome* *-Chronic restrictive lung diseases* *-Pneumoconiosis* *-Interstitial fibrosis of unknown etiology*	

	-infiltrative lesions -Pneumonia *-Bronchopneumonia* *-Lobar pneumonia* -Pulmonary hypertension. *-Causes* *-Pathological changes* -Pneumoconiosis. *-Classification* *-Pathological changes* *-Complications* -Tumors *-Bronchial carcinoid.* *-Typical* *-Atypical* *-Small cell neuroendocrine carcinoma.* *- large cell neuroendocrine carcinoma* *-Bronchial carcinoma.* *-Squamous cell carcinoma* *-Adenocarcinoma* *-Small cell carcinoma* *-Large cell carcinoma* -Pleura. *-Tumors* *-Mesothelioma* *-Benign* *-Malignant* -Secondary tumor.	

12	**The Hematopoietic system**	**7**

	Red cell Disorders - Anemia of blood loss: Hemorrhage - Hemolytic Anemia *-Hereditary spherocytosis* *-Sickle cell anemia* *- Thalassemia* *-G6PD deficiency* *-Paroxysmal nocturnal hemoglobinuria* *-Immunohemolytic anemia* *-Hemolytic anemia from mechanical trauma.* -Anemia of diminished erythopoiesis -Polycythemia White cell Disorders - Non-neoplastic disorders of white cells - Neoplastic proliferation of white cells - Leukaemias -Myeloproliferative disorders Plasma cell disorders -Multiple myeloma Bleeding disorders -Ideopathic thrombocytopenic purpura -Hemophilia -Von-Willbrand disease	
13	**<u>Lymphoreticular system</u>**	**4**
	Reactive lymphadenopathy - Acute non-specific lymphadenitis - Chronic non-specific lymphadenitis - Granulomatous lymphadenitis - Miscellaneous non-neoplastic diseases Neoplastic lymphadenopathy	

	-Hodgkin's lymphoma - Non-Hodgkin's lymphoma *-Low-grade B-cell lymphoma* *-Low-grade T- cell lymphoma* *-High- grade B- cell lymphoma* *-High – grade T- cell lymphoma* Metastatic lymphadenopathy Disorders of spleen -Hypersplenism -Splenomegaly Disorders of the Thymus - Thymic Hyperplasia - Thymoma	

14	**Oral cavity and the Gastrointestinal Tract**	**7**
	Oral cavity -Ulcerative and inflammatory lesions -Aphthous ulcer -Herpes virus infection -Oral candidiasis -Aids and Kaposi sarcoma Esophagus - Anatomic and motor disorders -Achalasia - Hiatal hernia - Varices - Esophagitis (causes and types) - Barrett's esophagus - Esophageal carcinoma. Stomach -Gastritis *-Acute gastritis*	

	-*Chronic gastritis* -Gastric ulceration -*Acute gastric ulceration* - *peptic ulcers* -Gastric tumors - *Gastric polyps* - *Gastric Carcinoma* - *Etiology and pathogenesis* Small and large intestine - Inflammatory bowel disease -*Crohn's disease* -*Ulcerative colitis* - Tumors of small and large intestines -*Non- neoplastic polyps* -*Adenomas* -*Familial polyposis syndromes* -*Colorectal carcinoma* -*Neoplasms of small intestine* -*Other tumors of gastro-intestinal tract , Gastro-intestinal* *lymphoma and Carcinoid* Appendix -Appendicitis -Appendicular tumors	
15	**<u>Liver, Gall bladder and pancreas</u>**	**7**
	Liver -Micro architecture of liver -Liver cell reaction to injury -Hepatitis -*Viral* -*Alcoholic* -Liver cirrhosis	

	-Tumors Gall bladder -Cholelithiasis -*Pure stones* -*Mixed stone* -Acute cholecystitis -Chronic cholecystitis -Tumors Pancreas -Acute pancreatitis -Chronic pancreatitis -Tumors -*Tumors of exocrine pancreas* -*Tumors of endocrine pancreas*	

16	**<u>Kidney and Urinary Tract System</u>**	**8**
	Clinical manifestations of renal diseases Glomerular diseases -Pathogenesis of glomerular diseases - *Circulating Immune complexes* - *In-situ complexes* - *Cell-mediated immune glomerulonephritis* - *Mediators of immune injury* - *Other mechanisms of glomerular injury* -The nephrotic syndrome - *Minimal – change disease (lipoid nephrosis)* - *Focal and segmental glomerulosclerosis* - *Membranous nephropathy (Membranous glomerulonephritis)* - *Membranoproliferative glomerulonephritis* -The nephritic syndrome	

	-Acute post infections (post streptococcal) *-Glomerulonephritis* *-lgA nephropathy (Berger disease)* *- Hereditary nephritis* *- Rapidly progressive (Crescentic)glomerulonephritis* -Chronic glomerulonephritis Diseases affecting tubules and interstitium -Tubulointerstitial nephritis -Acute pyelonephritis -Chronic pyelonephritis and reflux nephropathy -Drug induced interstitial nephritis -Acute tubular necrosis Diseases involving blood vessels -Benign nephrosclerosis -Malignant hypertension and malignant nephrosclerosis -Thrombotic microangiopathies Cystic diseases of the kidney -Simple cysts -Autosomal dominant (adult) polycystic kidney diseases -Autosomal recessive (childhood) polycystic kidney diseases -Medullary cystic diseases Urinary outflow obstruction -Renal stones -Hydronephrosis Tumors -Renal cell carcinoma -Wilm's tumor -Tumors of the renal pelvis and calyces	

	Diseases of urinary tract -Ureter *-Obstruction* *- Tumors* -Urinary bladder *-Acute cystitis* *-Chronic cystitis* *-Special forms of cystitis* *-Tumors* -Urethra *-Inflammation* *-Tumors*	

17	**<u>The female genital system</u>**	**5**
	Vulva - Vulvitis *-Contact dermatitis* -Non-neoplastic epithelial disorders. *-Lichen sclerosus* *-Lichen simplex* -Tumors *-Condylomas and low grade Vulvar Intraepithelial Neoplasia.* *-High grade Vulvar Intraepithelial Neoplasia and carcinoma of vulva.* Vagina -Vaginitis -Vaginal Intra- Epithelial neoplasia and squamous	

	cell carcinoma -Sarcoma Botryoides Cervix - Cervicitis -Tumors of the cervix *-Cervical Intraepithelial Neoplasia and squamous cell* *carcinoma.* -Endocervical polyp. Body of uterus - Endometritis - Adenomyosis - Endometriosis - Endometrial hyperplasia - Tumors of Endometrium and myometrium - *Endometrial polyp* - *Leiomyoma* *-Endometrial carcinoma* Ovaries - Non- neoplastic cysts *-Follicular and luteal cyst* *-Polycystic ovaries* *-Chocolate cyst.* - Tumor of the ovary - *Surface epithelial stromal tumors* *-Serous tumors* *-Mucinous tumors* *-Endometrioid tumors* *-Brenner tumors* *-Germ cell tumors*	

	-Teratomas *-Benign (mature) cystic teratoma* *-Immature malignant teratoma* *-Specialized teratoma* *-Dysgerminoma* *-Choriocarcinoma* *-Yolk sac tumor* *-Sex cord stromal tumors* *-Granulosa cell tumor* *-Thecoma- fibroma* *-Sertoli- Leydig cell tumors* *- Metastatic* *-Krukenberg's tumor.* Diseases of placenta (pregnancy) - Ectopic pregnancy - Gestational trophoblastic disease *-Hydatidiform mole, complete and partial* *-Invasive Mole* *-Choriocarcinoma*	
18	<u>Breast</u>	**3**
	Normal breast Benign breast lesions: Infections -Acute pyogenic infections -Tuberculosis Non infective inflammatory lesions - Mammary ductectasia - Granulomatous mastitis	

	- Traumatic fat necrosis - Reaction to foreign body - Galactocele Fibrocystic disease of the breast Benign tumors of the breast: -Fibroadenoma -Adenoma -Papilloma Breast carcinoma -Risk factors -Classification *-In situ carcinoma : ductal, lobular* *-Invasive carcinoma* *-Ductal carcinoma(classical & subtypes)* *-Tubular carcinoma* *-Prognosis of breast carcinoma* Miscellaneous tumors of the breast : Phyllodes tumor, lymphoma Tumors of male breast	

19	**<u>Male genital System</u>**	**3**
	Testicular neoplasms -Germ cell tumor *Seminoma - Variants* *- Non seminomatous* *-Teratomas* *-Embryonal carcinoma* *-Yolk sac tumor* *-Choriocarcinoma* *- Mixed germ cell tumor* - Sex cord stromal tumor *- Sertoli-Leydig cell tumor*	

	-Mixed testicular tumor - Testicular lymphoma Prostate -Prostatic Hyperplasia -Prostatic carcinoma	

20	**<u>Bones, Joints, and skeletal muscles</u>**	**4**
	Diseases of bone -Infections of bone *-Pyogenic osteomyelitis* *-Tuberculous osteomyelitis* - Vitamin D deficiency rickets and osteomalacia - Paget's disease of bone - Bone tumors *-Bone forming tumors: osteoma, osteoid osteoma, osteogenicsarcom* *- Cartilage forming tumors:* *-Osteochondroma* *-Chondroblastoma* *-Miscellaneous tumors* *-Ewing sarcoma* *-Giant cell tumor* *-Metastatic tumors of bone*	

21	**<u>The Endocrine System</u>**	**4**
	Pituitary -Hyperpitutarism and Pituitary Adenomas -Prolactinomas -Growth Hormone – producing Adenomas -Corticotroph Cell Adenomas -Other Anterior Pituitary Neoplasms -Hypopituitarism -Posterior Pituitary Syndromes Thyroid -Hyperthyroidism -Hypothyroidism -Thyroiditis -Chronic lymphocytic (Hashimoto) thyroiditis -Sub acute granulomatous (de Quervain) -Sub acute lymphocytic thyroiditis -Other forms of thyroiditis -Graves diseases -Diffuse and multinodular goiter -Neoplasms of the Thyroid *-Adenomas* *-Carcinomas* *-Papillary Carcinoma* *-Follicular Carcinoma* *-Medullary Carcinoma* *-Anaplastic Carcinoma* Parathyroid Glands -Hyperparathyroidism -Primary Hyperparathyroidism -Secondary Hyperparathyroidism -Hyperparathyroidism	

	Adrenal Cortex -Adrenocortical hyperfunction (hyperaderenalism) -Hypercortisolism (Cushing syndrome) -Hyperaldosteronism -Adernogenital syndromes -Adrenal insufficiency -Acute adrenocortical insufficiency -Chronic adrenocortical insufficiency (Addison disease) -Adrenocortical neoplasms Adrenal Medulla -Pheochomocytoma	

22	**<u>The central and peripheral nervous system</u>**	**4**
	Cells of the nervous system -Neurons -Astrocytes -Oligodendrocytes -Ependymal cells -Microglia Edema and hydrocephalus -Cerebral edema -Hydrocephalus Vascular diseases -Global hypoxic-ischemic encephalopathy -Infarcts -Intracranial hemorrhage *-Primary brain parenchymal hemorrhage* *-Saccular aneurysm and subarachnoidal*	

	hemorrhage Central nervous system trauma -Epidural hematoma -Subdural hematoma Infections of the nervous system -Leptomeningitis *-Acute purulent leptomeningitis* *-Acute lymphocytic (viral)meningitis* *-Chronic meningitis* -Parenchymal infections (encephalitis) *-Brain abscess* *-Viral encephalitis* Neoplasms of the central nervous system -Primary neuroglial tumors(Gliomas) *-Astrocytomas* *-Oligodendrogliomas* *-Ependymomas* -Primitive neuroepithelial neoplasms -Meningiomas -Metastatic neoplasms	

Appendix 2

Program of lectures for the Fourth year students in Forensic Medicine

اسم المادة: الطب العدلي

المرحلة: الرابعة

عدد الساعات النظرية: ٦٠ ساعة

عدد الساعات العملية: ٦٠ ساعة

اسم التدريسي : عبد الكريم قاسم محمد

عدد الوحدات:
٦ وحدات

Program of lectures for the fourth year students in Forensic Medicine

A. Theory (60 hours): 2 lectures (hours) per week.

Reference books:

1. ***Forensic Pathology***
   THIA NOURY HASSAN 1980
2. ***Forensic Medicine***
   BERNARD KNIGHT

-	Subject	No.of lectures	Lecturer
1	Introduction	2hour	د. عبدالكريم قاسم محمد
2	Medico-legal cases &duties of physician	8 hour	=

3	**Diagnosis of death and postmortem changes**	**4 hours**	=
4	**Types & examination of wounds**	**10 hours**	=
5	**Effects of injuries (causes of death)**	**2 hours**	=
6	**Regional injuries**	**2 hours**	=
7	**Firearm and explosive**	**4 hours**	=
8	**The manner of death**	**2 hour**	=
9	**Death from burns-heat shock-hypothermia & electrocution**	**5 hours**	=
10	**Transportation injuries (RTA)**	**2 hour**	=
11	**Asphyxial death**	**4 hour**	=
12	**Sudden death**	**3 hours**	=
13	**Sexual offences**	**4 hours**	=
14	**Toxicology**	**4 hours**	=
15	**Identification**	**4 hours**	=