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**Monday 25 November 2019**

AN-NAJAH NATIONAL UNIVERSITY

DEPARTMENT OF MEDICINE

Internal Medicine – Junior ILOs

(7221401)

# Course Outline

* **Course Details**

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| Course Title | Internal Medicine – Junior |
| Course Number | 7221401 |
| Prerequisite(s) | Biomedical Sciences Degree GPA > 2.5, TOFEL ITP > 500, IELTS >6.5. |
| Course Type: | Compulsory |
| Credit Hours | 12 |

* **Class Details**

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| Weeks | 12 weeks |
| Time | 5 days/ week 8:00 am- 2:00 pm and 6 (24 hours) on-calls in addition to 4 (2-hour) Lectures/ week. |
| Location | An-Najah National University Hospital and Ministry of Health Hospitals affiliated to An-Najah National University in the northern of West Bank |

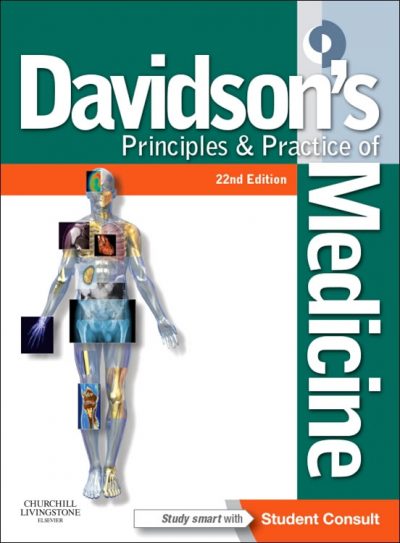
* **Course Description and Objectives**

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| This course is designed for the fourth year and provides training in the care of medical problems of adults. Under supervision, students assume role of physician and take histories, perform physical exams, formulate differential diagnoses, write orders and perform routine procedures. The course includes frequent written and oral presentations of patients and stresses importance of working as a member of the health-care team. Students attend departmental meetings, seminars and lectures and take night shifts with their assigned team.  Students are encouraged to think critically, to develop differential diagnosis, diagnostic outlines, and management plans for the patients they follow. In the Ambulatory Experience component, students are taught how to manage patients outside of the hospital in in-patient environment.  This patient-focused, clinical experience can take place in a hospital clinic, doctor's office, a community clinic, an emergency department, etc. The experience should  provide an emphasis on health promotion and disease prevention, and reinforce and integrate the concepts learned in the introduction to clinical medicine and inpatient Clerkship. |

# Textbooks and References

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| Textbook(s) |
| 1. **Davidson's Principles and Practice of Medicine, 22nd Edition** -With STUDENT CONSULT Online Access. By Nicholas A. Boon, MA, MD, FRCP(Ed), FESC, Nicki R. Colledge, BSc, FRCP(Ed), Brian R. Walker, BSc, MD, FRCP(Ed) and John A. A. Hunter, OBE, BA, MD,FRCP.  2. **Kumar and Clark's Clinical Medicine, 7th Edition** -With STUDENT CONSULT Online Access. By Parveen Kumar, CBE, BSc, MD, FRCP, FRCP(Edin) and Michael L. Clark, MD,FRCP  3. **Macleod's Clinical Examination, 12th Edition -**With STUDENT CONSULT Access. By Graham Douglas, BSc(Hons), MB, ChB, FRCPE, Fiona Nicol, BSc(Hons), MB, BS, FRCGP, FRCPE and Colin Robertson, BA(Hons), MB, ChB, FRCPE, FRCS(Ed) |
| References |
| * **Harrison's Principles of Internal Medicine, 20th Edition.** By J. Larry Jameson, Anthony S. Fauci, Dennis L. Kasper, Stephen L. Hauser, Dan L. Longo, Joseph Loscalzo * **Published Scientific papers.** |

# Textbook Cover



# Topics and Teaching Methods

tended Learning Outcomes ILOsIn

On successful completion of the course, the candidate will be able to

A1. Recognize the definition, causes, pathogenesis, diagnosis & treatment of the following Gastroenterology , Hepatobiliary & pancreatic disorders including, Oesophgeal disorders, Stomach: H pylori- peptic ulcer, Gastritis – Gastropathy- Tumours, Upper and lower GIT bleeding, Small intestine:Malabsorption/ Tumours, Inflammatory bowel disease, Constipation – Diarrhea, Diverticulosis /Tumours of colon,Functional bowl disorders, Acute abdomen / Pritoneal diseases, Jaundice, Acute hepatitis, Chronic hepatitis: viral – autoimmune, Drug inducedNAFLD, Liver cirrhosis & its Complications, Liver cell failure /Liver transplantation, Liver abscesses and other infections, Budd Chiari & Veno-occlusive dis, Drugs & the liver, Gall bladder: stones, inflammation, Tumours, Pancreas: pancreatitis, cancer, GIT and liver diseases of obscure nature.

A2. Recall the definition, causes, pathogenesis, diagnosis & treatment of the following Hematology and oncology topics including, Hematology, Anemias: types, classification,diagnosis, Bone marrow failure, Hemolytic anemia, Myeloproliferative disorders, Splenomegaly, Blood transfusion, White cell disorders, Hemostasis and thrombosis, Oncology, Principles of cancer, chemotherapy, Leukemias / Lymphomas /Myeloma.

A3. Demonstrate sufficient knowledge of the basics,definition, causes, pathogenesis, diagnosis & treatment of the following Endocrinology, Diabetes , Metabolism, And clinical Nutrition aspects including, Introduction /Hypothalamic disorders, Reproduction and pubery & disorders, Growth axis: short stature /Tall stature, Growth hormone abnormalities, Acromegay, gigantismHypopituitrism, Thyroid : Hypo-hyperthyroidism / Goitre, Suprarenal gland: Cushing, Hypoadrenalism / Pheochromocytoma, Thirst axis: DI / SIADH, Calcium metabolism: Parathyroid disorders, Metabolic bone disease, Endocrinology of blood pressure, Neuro-endocrine tumours / MEN, Diabetes and its Complications, Hypoglycemia, Obesity and metabolic syndrome, Inborn errors of metabolism, Lipid metabolism and disorders

A4. Recognize the definition, causes, pathogenesis, diagnosis & treatment of the following Rheumatology and immunology disorders including, Common regional musculoskeletal disorders, OA- RA- Crystal arthritis, Inflammatory arthritis, Seronegative arthropathy, Connective tissue disorders: SLE, Systemic vasulitis, Rheumatologic disorders in systemic diseases, Uric acid disorders, Principles of autoimmune disorders, Immune deficiency disorders, Hypersensitivity

A5. Recall the definition, causes, pathogenesis, diagnosis & treatment of the following Cardiovascular medicine topics including, IHD, Acute coronary syndromes, Arrythmias, Heart failure, HTN, Rheumatic fever, Valvular heart disease, Infective endocarditis, Cardiac muscle disease, Pericardial disease.

A6. Recognize the definition, causes, pathogenesis, diagnosis & treatment of the following Respiratory medicine &Critical care aspects including, Pneumonia, Suppurative lung disease, Lung tumours, Asthma /COPD, Resiratory failure /ARDS, TB, Pleural effusion, Intersitial lung disease, Sarcoidosis /Alveolitis, Basics of Mechanical ventilation.

A7. Recognize the definition, causes, pathogenesis, diagnosis & treatment of the following Renal medicine& electrolytes topics including, Investigation of renal functions, Glomerular disorders, Nephrotic syndrome, Kidney in systemic disorders, , UTI, Interstitial renal disease, HTN & vascular disorders & the kidney Calculi, Drugs & the kidney, Acute renal failure, Chronic renal failure, Water & electrolytes, Acid base disorders, Renal replacement therapy.

A8. Recognize the definition, causes, pathogenesis, diagnosis & treatment of the following Neurology & psychiatry topics including, Mental state assessment, Psychiatric aspects of physical diseases, Depression and anxiety/Eating disorders, Sensory pathway / Motor system, Coma / Cerebrovascular strokes, Epilepsy, Movement disorders / Muscle disease, Paraneoplastic syndromes/brain tumours, Headache, migraine, Cranial nerves /Peripheral nerve lesions.

A9. Recognize the Basic of geriatric medicine(Common problems in the elderly).all departments which were mentioned above have also geriatric patient so students are supposed to learnmake diagnosis and suggest the management and treatment plan of diseases and disorders in old age group and how to deal with each diseases in geriatric patients**.**

A10. Recognize the definition, causes, pathogenesis, diagnosis & treatment of the following Infectious diseases aspects including, Viral infections, Bacterial infections: Brucellosis /Typhoid Parasitic diseases, Fungal infections, STDS /HIV, Emerging viral infections.

A11. Recognize the definition, causes, pathogenesis, diagnosis & treatment of the following General internal medicine topics including, History taking and examination, Ethics and communication, Chest pain / Dyspnea / Polyuria, Syncope, PUO, Fatigue, Laboratory interpretation, Imaging techniques and interpretation , Evidence based medicine, Steps of EBM and some critical appraisal skills.

A12. Recognize the definition, causes, pathogenesis, diagnosis & treatment of the following Emergency medicine aspects including, Shock, Pulmonary embolism, Cardiac arrest and brain death, Advanced life support (ALS), Workshop by ERC..

# Specific Objectives

**Cardiovascular System**

**I. Knowledge/Mix of Diseases/Patients**

A. Ischemic heart disease: unstable angina and myocardial infarction

B. Heart failure

C. Congenital heart disease with onset of manifestations in the adult

D. Valvular heart disease—causes

E. Clinical diagnosis of rheumatic fever

F. Hypertension: essential and secondary

G. Pericarditis

H. Arrhythmias

1. Distinction between ventricular and supraventricular rhythms

2. Atrial fibrillation, atrial flutter

3. Heart block 1o, 2o, 3o

4. Bundle branch and hemiblocks

5. Main supraventricular tachycardias

**II. Diagnostic Tests**

A. Recognize a normal EKG and common EKG abnormalities

B. Recognize a normal Chest X-ray

**III. Therapeutic Interventions**

A. Know therapeutic indications for angioplasty and other therapeutic applications of catheterization

B. Describe therapeutic approach to clinical syndromes described in I.

**Nephrology**

**I. Knowledge/Mix of Diseases/Patients**

A. Acute renal failure--The student must distinguish prerenal, renal, and post renal disease using clinical and laboratory parameters

B. Chronic renal failure and its associated metabolic-endocrine, GI, cardiovascular hematologic, and neuromuscular complications

C. The major glomerulopathies

D. Tubulointerstitial disease

E. Vascular injury

**II. Diagnostic Tests**

The student should be able to:

A. Calculate fractional excretion of sodium as a measure of prerenal vs post renal azotemia

B. Evaluate the patient with glomerulonephritis for multisystem disease

C. Choose the most appropriate imaging test for the specific patient problem

**III. Therapeutic Interventions**

The student should be able to:

A. Manage the patient with acute renal failure and know all indications for dialysis

B. Recognize the possibility of urinary tract obstruction

**Respiratory system**

**I. Knowledge/Mix of Diseases/Patients**

A. Diseases of airflow limitation

1. Asthma

2. Bronchitis

3. Emphysema

4. Bronchiectasis

5. Cystic fibrosis

B. Interstitial lung diseases

1. Occupational lung disease

2. Hypersensitivity pneumonias

3. Sarcoidosis

4. Idiopathic pulmonary fibrosis

C. Infectious lung diseases

1. Community acquired pneumonia

2. Nosocomial pneumonias

3. Tuberculosis

D. Pulmonary vascular lung diseases

1. Pulmonary thromboembolism

2. Pulmonary hypertension

3. Noncardiogenic pulmonary edema (ARDS)

E. Neoplastic disease of the lung

1. Bronchogenic carcinoma

2. Paraneoplastic syndromes

F. Diseases of the pleura

1. Pleural effusion

2. Pneumothorax

**II. Diagnostic Test Skills**

1. Interpret arterial blood gases

2. Understand the use of the pulse oxymeter

3. Interpret spirometry including Flow-Volume loops

4. Interpret the chemical profile of pleural effusions

5.. The student should understand the indications for:

a. Pulmonary function tests

b. Thoracentesis

c. Pleural biopsy

**III. Therapeutic Skills**

A. The student must be familiar with the general management of all diseases listed in I.

B. The student should be able to:

1. Correctly select antimicrobial agents for respiratory infection

2. Recognize a significant reaction to PPD

3. Know the indications and side effects for the commonly used medications in pulmonary medicine

**Endocrinology system**

**I. Knowledge/Mix of Diseases/Patients**

A. Diseases of the pituitary

1. Diabetes insipidus

2. Pituitary tumors

a. Acromegaly

b. Cushing Disease

c. Prolactinoma

3. Hypopituitarism

4. Empty Sella Syndrome

B. Thyroid disease

1. Hypothyroidism causes

2. Hyperthyroidism

a. Graves disease

b. Toxic multinodular goiter

c. Toxic adenoma

d. Factitious

3. Thyroiditis

a. Chronic thyroiditis (Hashimoto's)

b. Subacute thyroiditis (painful and painless)

4. Approach to thyroid nodule

C. Diseases of the adrenal cortex

1. Cushing Syndrome

2. Hyperaldosteronism

3. Addison's Disease

D. Pheochromocytoma

E. Diabetes mellitus

1. Diagnosis

2. Classification and pathogenesis

3. Clinical features

4. Complications

5. Treatment

a. Diet

b. Insulin

c. Oral agents

F. Hypoglycemia

1. Fasting

2. Reactive

G. Disorders of the parathyroid gland and of calcium metabolism

H. Metabolic bone disease

1. Osteoporosis

2. Osteomalacia

3. Paget's

4. Renal osteodystrophy

**II. Therapeutic Interventions**

A. Understand the indications, side effects, and adverse reactions for each of the following:

1. L-thyroxine

2. Glucocorticoids

3. Antithyroid drugs

4. Oral hypoglycemics

5. Insulin (all forms)

**Gastrointestinal systems**

**I. Knowledge/Mix of Diseases/Patients**

A. Diseases of the esophagus: anatomic and motor causes of esophagitis (GERD)

B. H Pylori and PUD

C. Disorders of absorption

D. Inflammatory bowel disease

E. Liver and biliary tract disease

1. Acute and chronic hepatitis

2. Cirrhosis and alcoholic liver disease

3. Approach to patients with abnormal LFTs

F. Pancreatic diseases

1. Acute pancreatitis

2. Chronic pancreatitis

3. Pancreatic cancer

4. Endocrine tumors

**II. Diagnostic Studies**

A. Know indications for paracentesis

B. Know indications for placement of nasogastric tube

C. Properly interpret the following laboratory tests:

1. Serologic studies for viral and autoimmune hepatitis

2. Liver function tests

**III. Therapeutic Skills**

A. The student should know indications, side effects, interactions and follow-up for the most commonly used GI medications (e.g. PPIs, Laxatives, Prokinetic agents)

**Hematology**

**I. Knowledge/Mix of Diseases/Patients**

A. Pathophysiology of anemia

B. Anemia of chronic disease

C. Iron deficiency anemia

D. Megaloblastic anemia

E. Hemolytic anemias (congenital and acquired)

F. Myeloproliferative disorders

G. Leukemias (acute and chronic)

H. Lymphoma (Hodgkins, non-Hodgkins and plasma cell myeloma)

I. Clotting disorders

1. Platelet and vessel wall

2. Coagulation and thrombosis

3. Hypercoagulable state

**II. Diagnostic Skills**

A. Know the value of the following tests in the work-up of a patient with hemolytic anemia:

1. Blood smear review

2. Reticulocyte count

3. Coombs test

4. Serum haptoglobin

5. Glucose 6 phosphate dehydrogenase deficiency

6. Hemoglobin electrophoresis

7. Urine hemosiderin

B. Know the proper evaluation for bleeding disorder

**III. Therapeutic Interventions**

A. Know the appropriate indications for transfusion of erythrocytes and platelets

B. Know indications for fresh frozen plasma, cryoprecipitate, and purified factor concentrates

**Infectious diseases**

**I. Knowledge/Mix of Diseases/Patients**

A. Clinical syndromes

1. Gram-negative sepsis

2. Infective endocarditis

3. Upper and lower respiratory infections

4. Urinary tract infections

5. Soft tissue infection

6. Tuberculosis

7. Mycoplasma pneumoniae pneumonia

B. Viral infection

1. Influenza and prevention

2. Herpes infection,

3. Hepatitis A, B and C

C. Fever of unknown origin

**II. Diagnostic Tests**

A. Obtain sputum on patients with pneumonia

B. Interpret body fluid results (CSF, pleural, peritoneal, joint)

**III. Therapeutic Interventions**

1. Choose appropriate antibiotic regimens for most common infections
2. Know major side effects of antibiotics

**Musculoskeletal system and Rheumatology**

**I. Knowledge**

1. Clinical manifestations of SLE
2. Rheumatoid arthritis
3. Scleroderma
4. Mixed connective tissue disease
5. Sjogren's syndrome
6. Ankylosing spondylitis
7. Vasculitic syndromes
8. Sarcoidosis
9. Osteoarthritis
10. Psoriatic arthritis and arthritis associated with GI diseases
11. FMF
12. Behcet’s disease
13. Gout

**II. Diagnostic Tests**

A. Know the basics of diagnostic joint aspiration

B. Know when to order the following tests: rheumatoid factor, anti DNA, anti SM, anti RNP, anti RO (SSA), anti-LA (SSB), ANCA

**III. Therapeutic Interventions**

1. Know the approach of management of common Musculoskeletal system and Rheumatology diseases and the side effects of the drugs used.

# List of lectures and discussed Subjects and their Objectives

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| **No.** | **Topic** | **Objectives** |
| 1 | Thyroid Disorders | 1. Review important points in the anatomy and physiology of the thyroid gland 2. Describe common thyroid diseases causing thyrotoxicosis or hypothyroidism 3. Describe the clinical manifestations of common thyroid diseases 4. Outline the management of common thyroid diseases |
| 2 | Diabetes Mellitus (DM) and it’s Complications | 1. Define DM 2. Classify DM 3. Describe clinical manifestations of DM 4. Define the investigations used to diagnose DM 5. Identify complications of DM 6. Outline the management of DM |
| 3 | Acute Coronary syndrome and Ischemic Heart Disease (IHD) | 1. Describe the presentation of chronic IHD 2. List the causes of IHD 3. Identify the risk factors for atherosclerosis 4. Define the investigations used to diagnose IHD 5. Outline the current management of chronic IHD |
| 4 | Arrhythmias | 1. Define arrhythmias 2. Describe the mechanisms of arrhythmias 3. Describe the presentation of arrhythmias 4. Define the investigations used to diagnose arrhythmias 5. Outline the treatment of common arrhythmias |
| 5 | Heart Failure (HF) | 1. Define and list causes of HF 2. Review the pathophysiology of HF 3. Describe clinical manifestations of HF 4. Suggest appropriate investigations for HF 5. Outline the treatment for HF 6. Point out the prognostic markers and mortality of HF |
| 6 | Hypertension | 1. Define essential hypertension 2. Mention WHO classification of hypertension 3. Suggest initial investigations for hypertensive patients 4. Identify complications of hypertension 5. Outline the management of hypertension 6. Describe the classes of antihypertensive drugs 7. Recall common causes of secondary hypertension 8. Define the specific features to be included in the history, physical exam, or investigations to suspect secondary hypertension 9. Describe common forms of secondary hypertension, namely: renal artery stenosis, pheochromocytoma and Conn’s syndrome 10. Outline the treatment of secondary hypertension |
| 7 | Liver cirrhosis and portal HTN | 1. Define liver cirrhosis 2. Describe common types of liver cirrhosis 3. Identify the clinical manifestations of liver cirrhosis resulting from both liver cell failure and portal hypertension 4. Outline the management of liver cirrhosis |
| 8 | Peptic Ulcer Disease (PUD) and GERD | 1. Describe the pathogenesis of PUD 2. List the causes of PUD Describe the epidemiology and role of Helicobacter pylori in PUD 3. Identify diagnostic tests of H. pylori infection 4. List complications of PUD and outline their management 5. Identify effective drug regimens for eradication of H. pylori 6. Review the anatomy and physiology of the esophagus 7. List common esophageal diseases 8. Describe the pathogenesis of gastroesophageal reflux disease (GERD) 9. Identify the clinical manifestations of GERD 10. Identify the complications of GERD   Outline the management of GERD |
| 9 | Inflammatory Bowel Disease (IBD) | 1. Review the pathogenesis of IBD (ulcerative colitis and Crohn’s) 2. Describe the clinical, endoscopic and pathological manifestations of IBD 3. Identify the complications of IBD 4. Outline the management of IBD |
| 10 | Hepatitis | 1. Outline the epidemiology of viral hepatitis 2. Classify viral hepatitis 3. Describe the manifestations of acute and chronic viral hepatitis 4. Interpret serologic tests to accurately diagnose the specific cause of acute hepatitis 5. Identify the role of liver biopsy in the management of chronic hepatitis 6. Define complications of acute and chronic hepatitis 7. Outline the treatment for viral hepatitis 8. Identify appropriate candidates for vaccination against HAV and HBV |
| 11 | Pneumonia, bronchitis, pleural disease | 1. Define pneumonia 2. Outline the epidemiology of pneumonia 3. Classify pneumonias 4. Describe the clinical and radiological features of pneumonia 5. Provide a diagnostic approach to pneumonia 6. Identify markers of severity of pneumonia 7. Outline the principles of management of pneumonia |
| 12 | Venous Thromboembolism (VTE) and Pulmonary Embolism | 1. List the risk factors for VTE 2. Describe the presentation and clinical features of VTE 3. Provide a diagnostic algorhythm for deep venous thrombosis (DVT) and pulmonary embolism 4. Outline the treatment and prophylaxis of VTE |
| 13 | Lung cancer | 1. Identify the epidemiology and risk factors for bronchogenic carcinoma 2. Review the pathological classification of bronchogenic carcinoma 3. Describe the clinical manifestations of bronchogenic carcinoma 4. Outline the staging of bronchogenic carcinoma 5. Outline the treatment of bronchogenic carcinoma |
| 14 | Asthma,COPD, Chronic Cor Pulmonale | 1. Describe the defining features and epidemiology of COPD 2. Describe the clinical manifestations of COPD 3. Define the investigations used to diagnose COPD 4. Describe the classes of drugs and modes of delivery available in the management of COPD 5. Outline the management of COPD 6. Define bronchial asthma 7. Classify asthma and list triggering factors of asthma 8. Describe clinical features of asthma with emphasis on markers of severity 9. Define the investigations used to diagnose asthma 10. Outline the stepwise approach to management of asthma based on established international guidelines |
| 15 | Acid-Base Disorders and Blood gases | 1. Review the biochemical bases of ABD 2. Discuss metabolic and respiratory ABD 3. Describe the utility of arterial blood gases in ABD 4. Discuss examples of simple and complex ABD |
| 16 | Electrolytes Abnormalities | 1. Identify the electrolyte composition of different compartments (e.g. intracellular, intravascular, interstitial) 2. Describe the major electrolyte disturbances (Hypo- and hyper kalemia, hypo- and hypernatremia, hypo- and hypercalcemia) 3. Outline principles of management of electrolyte disturbances |
| 17 | Renal Failure | 1. Define RF 2. List major causes of RF 3. Discuss how to assess renal function using creatinine clearance and radiological/ultrasonographic studies 4. List the indications for renal biopsy 5. Discuss briefly lines of management for RF 6. Define CRF 7. List causes of CRF 8. Describe the presentation and clinical manifestations of CRF 9. Suggest a diagnostic approach to patients with CRF 10. Outline the treatment of CRF 11. Identify the indications for renal replacement therapy (dialysis and renal transplantation) |
| 18 | Nephrotic and Nephritic syndrome | 1. Define NS 2. List causes of NS 3. Suggest a diagnostic approach to patients with NS 4. Identify the indications and role of renal biopsy in the management of NS 5. List the complications of NS 6. Outline the treatment of NS |
| 19 | Neurologic History and Physical Examination | 1. Know the key points of the neurological history. 2. Know the appropriate way of physical examination. 3. Know the specific physical tests related to neurological physical examination. |
| 20 | Cardiovascular History and Physical Examination | 1. Know the key points of the Cardiovascular history. 2. Know the appropriate way of physical examination. 3. Know the specific physical tests related to Cardiovascular physical examination. |
| 21 | Respiratory System History and Physical Examination | 1. Know the key points of the respiratory history.  2. Know the appropriate way of physical examination.  3. Know the specific physical tests related to respiratory physical examination. |
| 22 | Gastrointestinal System History and Physical Examination | 1. Know the key points of the gastrointestinal history.  2. Know the appropriate way of physical examination.  3. Know the specific physical tests related to gastrointestinal physical examination. |
| 23 | Hematologic Malignancies | 1. Definition of acute leukemia. 2. Causes of leukemias. 3. Pathogenesis. 4. Symptoms 5. Diagnosis using blood films , bone marrows and flowcytometry. 6. Complications of leukemias . 7. Management of acute leukmias. 8. Types of chronic leukemias, CML, and CLL. 9. Presentations and symptoms . 10. Stages of CML, CLL. 11. Management of CML,CLL. |
| 24 | Approach to Rheumatologic Disease | 1. Introduction to the common rheumatologic diseases 2. Signs and symptoms of rheumatologic disease 3. Labs, Imaging and clinical findings of rheumatologic diseases 4. When to suspect rheumatologic disease |
| 25 | Vasculitis | 1. Know common vasculitis. 2. Understand the pathophysiology of each disease. 3. Know and identify the key histological findings in each disease. 4. Know the treatment of each disease. |
| 26 | Seizures | 1. Know the pathophysiology of seizures. 2. Know how to differentiate between the different types of seizures and their treatment. |
| 27 | ECG | 1. Know the basics of ECG 2. Understand the different components of the ECG leads 3. Ability to identify cardiac and respiratory conditions on ECG. |
| 28 | Approach to Anemia | 1. Identify patients with anemia. 2. Know the different causes of anemia. 3. Know the pathophysiology of each cause of anemia. 4. Treatment of anemia. |
| 29 | Medical Ethics | 1. Introduction into medical ethics. 2. Main medical ethics principles9 autonomy Beneficence (Promotions of what is best for the patient ),and non Non-Maleficence ( avoiding harm) and justice. 3. Examples and practice consequences of main principles 4. Legal issues like informed consent. Do not resuscitate status, 5. Definition of Advance directive and legal issues of it. Confidentiality when we can and when we have to breach confidentiality 6. Euthanasia definition and legal issues. |
| 30 | Interpretation of KFT | 1. Know the different labs tests for the kidney function. 2. Know how to relate the results of these tests to identify and investigate renal diseases. |
| 31 | Multiple Sclerosis, Guillain Barre Syndrome and Myasthenia Gravis | 1. Know the signs and symptoms for each condition. 2. Know the pathophysiology for each condition. 3. Approach for each condition. 4. Management for each condition. |
| 32 | CNS infection | 1. Know the signs and symptoms for CNS infection. 2. Know the pathophysiology for CNS infection. 3. Approach for CNS infection. 4. Management for CNS infection. |
| 33 | Chest x-ray | 1. Know the basics of Chest x-ray  2. Understand the different properties of the Chest x-ray  3. Ability to identify related to diseases and conditions on Chest x-ray. |
| 34 | HIV | 1. Definition of HIV and AIDS 2. Risks and mechanisms of transmissions 3. Presentations. 4. Diagnosis , serologic testing and confirmation tests. 5. AIDS defining presentations, diagnosis and management |
| 35 | Health maintenance and screening | 1. Health maintenance and screening concepts |
| 36 | Malabsorption | 1. Definition of Malabsorption. 2. Causes of malabsorptions. 3. Diagnosis of malabsorption. 4. Management. |
| 37 | Stroke, TIA | 1. Definition of stroke. 2. Causes of stroke. 3. Symptoms of strokes of different locations in brain. 4. Diagnosis of stroke . 5. Management of stroke |
| 38 | Shock | 1. Definition of shock . 2. Types of shocks . 3. Evaluation of patients with shock. 4. Management . |
| 39 | Valvular heart disease | 1. Know the signs and symptoms for each valvular heart disease. 2. Know the pathophysiology for each valvular heart disease. 3. Approach for each valvular heart disease. 4. Management for each valvular heart disease. |
| 40 | Restrictive lung diseases | 1. Define the various lung volumes and capacities 2. Describe the tests used to identify abnormal lung function 3. List the indications for performing PFTs 4. Summarize the basic characteristic features of obstructive and restrictive ventilatory defects 5. Provide a grading system of severity of ventilatory defects |
| 41 | Transfusion medicine | 1. Principles of transfusion medicine |
| 42 | Calcium metabolism | 1. Know the different components of the Calcium metabolism. 2. Know the physiology of Calcium metabolism. 3. Know the diseases related to calcium metabolism. |
| 43 | HIV | 1. Definition 2. Virology, transmission, and prevention 3. AIDS defining illnesses 4. Opportunistic infection in AIDS 5. Management of AIDS |

# Updates and Advances in Internal Medicine:

Students are involved in all of the hospital’s teaching activities including attending morning reports, Journal Clubs, lectures, seminars and Rounds. Updates on guidelines, Case study discussions and other advances in Internal Medicine are usually a part of the Morning report, Journal Clubs and Mid-day activities. Students are involved in carrying out presentations in selected topics and cases nominated by their teaching physicians.

# Integration with Health system and Community

A valued focus on the most common diseases in the Palestinian community which includes DM, HTN, Thalassemia and others. This is more obvious in morning reports, journal clubs and mid-day activities. Students are also in courage to do medical days that takes a picture of screening campaigns in the local Palestinian community that includes blood sugar levels, blood Pressure measurement, ophthalmic and ear examinations.

* **Topics Covered in Clerkships:**

|  |  |
| --- | --- |
| **Week** | **Topics** |
| 1 | History taking and Physical Examination |
| 2 | Cardiovascular system |
| 3 | Respiratory system |
| 4 | Gastrointestinal system |
| 5 | Geriatrics |
| 6 | Nephrology |
| 7 | Musculoskeletal system |
| 8 | Rheumatology |
| 9 | Hematology |
| 10 | Endocrinology system |
| 11 | Neurology |
| 12 | Oncology |
| Note: | * Not all Students have the same order of the weeks’ topics. This is a rough distribution of the topics to weeks, sometimes some topics takes more than one week, others take less. Moreover, it also depends on the attending physician specialty. By the end of the clerkship every student should cover all the above mentioned topics. * Students have a total of 2 weeks were they are trained in a special simulating Lab (skills lab). |

# Assessment

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| **Exam Format** | **Note** | **Weight (%)** |
| OSCE-exam | Practical exams done after the end of the clerkship on real patients to evaluate the medical knowledge of students, ability to take medical history, clinical skills and communication with patients. It includes 5-6 stations each of 7 minutes’ duration. 1-2 of these stations are dry in which students answer cases-questions based on their knowledge in X-Ray, ECG, ABGs and other related basic imaging and tests. | 25% |
| Written exam | An exam done at the end of the academic year to evaluate the medical knowledge. Moreover, these exams were provided from the National Board of Medical Examiners (NBME) in USA which is an independent, not-for-profit organization that serves the public through its high- quality assessments of healthcare professionals. | 60% |
| Evaluation | Evaluation during rotation which depends on: daily attendance of morning report, educational rounds, clinical skills, basic medical procedures, group discussions, seminars, lectures attendance, student attitude and respect for patients and team. | 15% |
| Written cases and Log book | Students are required to write 10 full cases that includes History, Vital sings, Physical examination, Labs, Imaging and Differential diagnosis. A Log book which is provided to students at the beginning of their clerkship which contains the basic and required skills and procedures for their level should be filled and handed by the end of the clerkship. |
| Total |  | 100% |

# Student Evaluation Form During Clerkships

# Internal medicine Log book

**Internal Medicine log book**

Each student is asked to accomplish the following in each month- rotation

1. 10 cases with complete history, physical exam, working diagnosis, most needed lab tests & provisional diagnosis based on the discussant point of view
2. The following clinical skills should be performed by the student

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **The Clinical Skill** | **Signatures of clinical instructors** | | | | | | | | | | | | | |
| **Canula Insertion** |  | | |  | | |  | |  | | |  | | |
| **IV line connection** |  | | |  | | |  | |  | | |  | | |
| **NG tube** |  | | | | | | |  | | | | | | |
| **IM Injection** |  |  | |  |  | |  |  |  | |  |  | |  |
| **SC injection** |  |  | |  |  | |  |  |  | |  |  | |  |
| **Blood Withdrawal** |  | |  | | |  | |  | |  | | |  | |
| **ECG** |  | | | | |  | | | |  | | | | |
| **Foley’s catheter** |  | | | | |  | | | |  | | | | |
| **Glucostick** |  | | |  | | |  | |  | | |  | | |

1. The following procedures should be observed

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **CV line** |  | |  | |  | |
| **ABG’s** |  |  |  |  |  |  |
| **Arterial Line** |  | |  | |  | |
| **LP** |  | |  | |  | |
| **Pleurocentesis** |  | |  | |  | |
| **peritoniocentesis** |  | |  | |  | |
| **Bronchoscopy** |  | |  | |  | |
| **Dialysis** |  | |  | |  | |
| **BM Biopsy** |  | |  | |  | |
| **Upper GI Endoscopy** |  | |  | |  | |
| **Colonoscopy** |  | |  | |  | |
| **ERCP** |  | | | | | |
| **Cardiac Cath** |  | | | | | |

# Important Dates

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| * **At the end of the Clerkship: OSCE Exam** * **At the end of the Academic year: Written Exam** |

# Teaching and Learning Methods

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| **Tools** |
| 1. Lectures. 2. Small-group teaching. 3. Problem-based or case-based learning. 4. Peer assisted learning. 5. Bed-side teaching. 6. Clinical demonstrations. 7. Clinical skills laboratory training. 8. Field exercises in the community. |

# Course **Policies**

* Students should attend all the activities mentioned above during this clerkship every day, and do the required on-calls.
* The maximum allowed absence is 10% of the clerkship’s duration and this only in case of an accepted situation evaluated by the Department of Medicine.
* Students are not allowed to have even a single day off without an accepted reason evaluated by the department of medicine. In that case, 2 points of the clerkship total will be subtracted and this will be added to the student file record.
* Students are required to fill the Log book in by the end of their Clerkship.