The Hashemite University

عمادة التطوير الأكاديمي والتواصل الدولي
Deanship of Academic Development and International Outreach

الجامعة الهاشمية

عمادة التطوير الأكاديمي و التواصل الدولي

Deanship of Academic Development and International Outreach

Syllabus*: General Medicine 1 (0111503401) First/Second Semester 2023 /2024

COURSE INFORMATION	**Course Code:** 1615031403
Course Name: General Medicine 1 **Semester:** 4th Year, First and Second Semesters **Department:** Department of Internal Medicine **Faculty:** Medicine	**Section:** General Medicine **Core Curriculum**: Seminars, lectures and Practicalsessions
Day(s) and Time(s): Sunday till Thursday: 08:00-16:00 **Classroom:** Prince Hamza Hospital, King Hussein medical center, Prince Hashim Military Hospital, Alzarqa Govermental Hospital	**Credit Hours:** 8 **Prerequisites**: Pass All preclinical courses

COURSE DESCRIPTION

- This clinical rotation in general medicine is offered to fourth year medical students. It will extend over a period of 8 weeks of blended learning (20% online education and 80% face-to-face education). It includes: Hospital Bedside Teaching: the 8 weeks subdivided into five sub-rotations in four different hospitals (hospital names mentioned above). Students are divided in groups of 10 – 11 students, each group of students are supervised one clinical instructor.
- Seminars: Problem based seminars, four seminars per week, each seminar is presented by 2 – 3 students
- Lectures: Subject based lectures, two lectures per week, lectures are presented by the department of medicine faculty members.

The course will be delivered through a combination of active learning strategies. These will include:

- PowerPoint lectures and active classroom based discussion
- Collaborative learning through small groups acting in an interdisciplinary context.
- Relevant films and documentaries
- Video lectures
- E-learning resources(representing 20%) : e-reading assignments and practice quizzes through Model and Microsoft Team

FACULTY INFORMATION

Name	**Dr. Mohammad Hassan Al-thnaibat**
Academic Title:	**Assistant Professor**
Office Location:	**Prince Hamzeh Teaching Hospital**
Telephone Number:	
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Office Hours:	**Wednesday** 09.00-12.00

REFERENCES AND LEARNING RESOURCES

Required Textbook:

(These are suggestions. Students are encouraged to discuss with their staff for appropriate material).

- MACLEOD'S Clinical Examination
- Bates' Guide to Physical Examination and History-Taking
- KUMAR & CLARK. Clinical Medicine
- DAVIDSON Textbook of Medicine

Useful Web Resources: Uptodate

Course Learning Outcomes:

General Learning outcomes

By the end of this course, students are expected to:

1. Obtain a comprehensive history for medical problems.
2. Acquire the basic skills of physical examination.
3. Identify and explain abnormal signs.
4. Formulate a case summary and differential diagnosis list.
5. Suggest relevant investigations.
6. Suggest management plan.

Participation

Class participation and attendance are important elements of every student's learning experience at The Hashemite University, and the student is expected to attend all classes. A student should not miss more than 15% of the classes during a semester. *Those exceeding this limit of 15% will receive a failing grade regardless of their performance*. It is a student's responsibility to monitor the frequency of their own absences. **Attendance record begins on the first day of class irrespective of the period allotted to drop/add and late registration. It is a student's responsibility to sign-in; failure to do so will result in a non-attendance being recorded.**

In exceptional cases, the student, with the instructor's prior permission, could be exempted from attending a class provided that the number of such occasions does not exceed the limit allowed by the University. The instructor will determine the acceptability of an absence for being absent. A student who misses more than 25% of classes and has a valid excuse for being absent will be allowed to withdraw from the course.

Plagiarism

Plagiarism is considered a serious academic offence and can result in your work losing marks or being failed. HU expects its students to adopt and abide by the highest standards of conduct in their interaction with their professors, peers, and the wider University community. As such, a student is expected not to engage in behaviors that compromise his/her own integrity as well as that of the Hashemite University.

Plagiarism includes the following examples and it applies to all student assignments or submitted work:

- **Use of the work, ideas, images or words of someone else without his/her permission or reference to them.**
- **Use of someone else's wording, name, phrase, sentence, paragraph or essay without using quotation marks.**
- **Misrepresentation of the sources that were used.**

<u>The instructor has the right to fail the coursework or deduct marks where plagiarism is detected</u>

Late or Missed Assignments

In all cases of assessment, students who fails to attend an exam, class project or deliver a presentation on the scheduled date without prior permission, and/or are unable to provide a medical note, will automatically receive a fail grade for this part of the assessment.

- Submitting a term paper on time is a key part of the assessment process. Students who fail to submit their work by the deadline specified will automatically receive a 10% penalty. Assignments handed in more than 24 hours late will receive a further 10% penalty. Each subsequent 24 hours will result in a further 10% penalty.
- In cases where a student misses an assessment on account of a medical reason or with prior permission; in line with University regulations an incomplete grade for the specific assessment will be awarded and an alternative assessment or extension can be arranged.

Student Complaints Policy

Students at The Hashemite University have the right to pursue complaints related to faculty, staff, and other students. The nature of the complaints may be either academic or non-academic. For more information about the policy and processes related to this policy, you may refer to the students' handbook.

COURSE ASSESSMENT

Course Calendar and Assessment

Students will be graded through the following means of assessment and their final grade will be calculated from the forms of assessment as listed below with their grade weighting taken into account. The criteria for grading are listed at the end of the syllabus

Assessment	**Grade weighting**	Deadline Assessment
Evaluation	20%	Daily
OSCE and Mini OSCE Exams	35%	End of Rotation
Final MCQ Exam	45%	End of year

Description of Exams

Test questions will predominately come from material presented in the lectures. Semester exams will be conducted during the regularly scheduled lecture period. Exam will consist of a combination of multiple choice, short answer, match, true and false and/or descriptive questions.

Homework: Will be given for each chapter, while the chapter in progress you are supposed to work on them continuously and submit in next lecture when I finish the chapter.

You are also expected to work on in-chapter examples, self-tests and representative number of end of chapter problems. The answers of self-tests and end of chapter exercises are given at the end of the book.

Quizzes: Unannounced quizzes will be given during or/and at the end of each chapter based upon the previous lectures. It will enforce that you come prepared to the class.

Grades are not negotiable and are awarded according to the following criteria*:

Letter Grade	Description	Grade Points
A+	Excellent	4.00
A		3.75
A-		3.50
B+	Very Good	3.25
B		3.00
B-		2.75
C+	Good	2.50
C		2.25
C-		2.00
D+	Pass	1.75
D	Pass	1.50
F	Fail	0.00
I	Incomplete	-

WEEKLY LECTURE SCHEDULE AND CONTENT DISTRIBUTION

Topics covered in lectures and seminars

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.
E. Rheumatic fever.
F. Hypertension: essential and secondary.
G. Cardiomyopathy and Pericardial diseases.
H. Arrhythmias.
1. Distinction between ventricular and supraventricular rhythms.
2. Atrial fibrillation, atrial flutter.
3. Heart block 1^{o}, 2^{o}, 3^{o}.
4. Bundle branch and hemiblocks.
5. Main supraventricular tachycardias.
I. Infective endocarditits
J. Cardiac tumors
k. Pulmonary cardiac diseases
L. Hyperlipidemia
M. Any other topic as decided by the Instructor.

II. History Skills

A. Complete and Comprehensive History of the cardiovascular system.
B. Obtain history of risk factors for coronary artery disease.
C. Obtain history for rheumatic fever or congenital heart disease.
D. Recognize importance of family history in assessment of cardiovascular disease.
E. Use all modalities in "pain" history to distinguish coronary artery disease from other causes of chest pain.
F. In hypertensive patient, obtain careful history of medication compliance.

III. Physical Exam Skills

A. Complete and comprehensive physical examination of the cardiovascular system.
B. Determine venous pressure by examination of neck veins.
C. Assess arterial pulses and recognize pulsus alternans, bisferiens pulse, and paradoxical pulse.
D. Perform hepatojugular reflux test to assess venous pressure.
E. On cardiac auscultation, recognize:
1. Systolic and diastolic murmur--effects of physiologic and pharmacologic interventions.
2. Pericardial friction rub.
E. On cardiac auscultation, recognize:
1. S-1, S-2, and normal physiologic splitting.
2. S-3, S-4, and how they are best appreciated.
3. Systolic and diastolic murmur--effects of physiologic and pharmacologic interventions.

4. Special characteristics of the murmur of MVP and HCM.
5. Pericardial friction rub.

IV. Diagnostic Tests
A. Recognize a normal EKG.
B. Recognize a normal Chest X-ray.

V. Therapeutic Interventions
A. Know therapeutic indications for angioplasty and other therapeutic applications of catheterization.
B. Describe therapeutic approach to clinical syndromes described before.

DISEASES OF THE KIDNEY AND URINARY TRACT

I. Knowledge/Mix of Diseases/Patients
A. Renal anatomy and physiology
B. Acute renal failure--The student must distinguish prerenal, renal, and post renal disease using clinical and laboratory parameters.
C. Chronic renal failure and its associated metabolic-endocrine, GI, cardiovascular hematologic, and neuromuscular complications.
D. Glomerulonephritis: Nephritis syndrome
E. Nephrotic syndrome
F. Tubulointerstitial disease.
G. Renal cystic disease
H. Acid base disorders
I. Water disorders
J. K disorders
K. Calcium disorders
L. UTI and pyelonephritis
M. Any other topic as decided by the Instructor.

II. History Skills
In the patient who presents with a problem of the urinary tract, the student will determine by history:
A. Complete and Comprehensive History of the renal system.
B. Frequency and volume of urine (polyuria, oliguria, anuria).
C. Urine color, hematuria.
D. Dysuria, diminished stream.
E. Effects of nephrotoxic drugs or drugs that effect bladder emptying or urine color
F. The clinical syndrome of uremia.

III. Physical Exam Skills
A. Complete and comprehensive exam of the Renal system.
B. Recognize signs of uremia--cognitive, asterixis, odor of breath.
C. Auscultate for bruits
D. Attempt to palpate for kidneys.
E. Percuss bladder size.

IV. 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.

V. 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.

DISORDERS OF THE RESPIRATORY SYSTEM

I. Knowledge/Mix of Diseases/Patients

A. Obstructive air way diseases

1. Asthma.
2. COPD.
3. Bronchiectasis Cystic Fibrosis.
5. Cystic fibrosis.

B. Diffuse Parenchymal Lung diseases/Interstitial Lung diseases.

1. Idiopathic Pulmonary Fibrosis and other idiopathic ILDs
2- Occupational/Drug induced/environmental related lung disease.
2. Hypersensitivity pneumonias.
3. Sarcoidosis.
4. Idiopathic pulmonary fibrosis.

C. Infectious lung diseases

1. Community acquired pneumonia.
2. Nosocomial pneumonias.
3. Tuberculosis.
4- Other lung infections

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. History Skills

A. Complete and Comprehensive history of the respiratory system.

B. Correctly characterize respiratory symptoms of dyspnea, cough, and expectoration.

C. Obtain careful history of accidental or occupational exposure to potential lung toxins.

D. Obtain a precise history of tobacco use, including passive cigarette smoke.

E. Obtain family history for cystic fibrosis, emphysema, asthma, tuberculosis, collagen vascular diseases, and lung neoplasm.

F. Obtain history of drug exposure and medication use.

G. Determine risk factors for HIV and TB.

III. Physical Exam Skills

A. Complete and comprehensive physical examination of the respiratory system.

B. Examine the chest by inspection

1. Identify abnormal respiratory patterns.
2. Recognize findings suggesting pulmonary disease such as deviated trachea, digital clubbing, etc.

B. Examine the chest by palpation

1. Appreciate the significance of supraclavicular adenopathy, tenderness, chest expansion, tactile vocal fremitus, etc.

C. Examine the chest by percussion

1. Distinguish normal and abnormal resonance.
2. Further define areas of dullness by special maneuvers such as vocal and tactile fremitus.

D. Examine the chest by auscultation

1. Recognize normal breath sounds.
2. Recognize adventitious breath sounds such as crackles and wheezes, etc
3. Understand the diagnostic implications of the adventitious sound.

IV. Diagnostic Test Skills

A. The student should be able to:

1. Interpret CXR
2. Interpret arterial blood gases.
3. Understand the use of the pulse oxymeter.
4. Interpret spirometry including Flow-Volume loops.
5. Interpret the chemical profile of pleural effusions.

B. The student should understand the indications for:

1. CXR
2. ABG
3. Pulmonary function tests.
4. Thoracentesis.
5. Lung biopsy.

V. Therapeutic Skills

A. The student must be familiar with the general management of all diseases listed in 1.

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 AND METABOLISM

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.
   d. 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. History Skills

A. Demonstrates knowledge necessary to take a proper history for a patient suspected of having an endocrine or metabolic disorder.

B. In a patient with diabetes mellitus, the student must obtain and put in chronological order a detailed history of the disease, including all complications, hospitalizations, medications.

III. Physical Exam

A. Know importance of:
   1. Weight.
   2. Height.
   3. Skeletal proportions.

B. Recognize exophthalmus and abnormal ocular motility.

C. Evaluate thyroid size, nodularity, tenderness, and bruit.

D. Evaluate skin-temperature, moisture, pigmentation, pretibial myxedema, diabetic dermopathy.

E. Evaluate quality of voice.

F. Evaluate texture and pattern of hair.

G. Recognize diabetic retinopathy.

IV. Diagnostic Skills

A. Understand the use of thyroid function tests.

B. Describe the tests necessary to diagnose diseases listed in 1.

V. Therapeutic Interventions

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

1. L-thyroxin.
2. Glucocorticoids.
3. Antithyroid drugs.
4. Oral hypoglycemics.
5. Insulin (all forms).

GASTROENTEROLOGY AND HEPATOLOGY

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.

G. Large Bowel diseases

1. Polyps and surveillance
2. Chronic diarrhea
3. Colon cancer and management

II. History Skills

In obtaining history from a patient with a GI complaint:

A. Describe all characteristics of abdominal pain.

B. Obtain a History in a methodical way and Create an appropriate differential diagnosis.

C. Recognize potential importance of family history and medication history and GI side effects of all drugs.

D. History of diet, weight, food intolerance, bowel pattern, and bleeding.

E. Compare and contrast history of inflammatory bowel disease vs. irritable bowel syndrome.

F. Precise history taking in GERD and dysphagia.

III. Physical Exam Skills

A. Students must do complete exam of abdomen and rectal exam including:

1. Auscultation for bowel sounds and bruits.
2. Percussion for liver size.

3. Palpation for spleen.

B. Recognize need for additional physical exam maneuvers such as:

1. Shifting dullness and fluid wave when ascites is suspected.
2. Murphy's sign for right upper quadrant pain or tenderness.
3. Eliciting signs of peritonitis.
4. Perform rectal digital exam and check for fecal blood.

IV. 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.
D. Indications for upper and lower GI endoscopies.

V. Therapeutic Skills

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 (Hodgkin's, non-Hodgkin's and plasma cell myeloma).
I. Clotting disorders
1. Platelet and vessel wall.
2. Coagulation and thrombosis.
3. Hypercoagulable state.

II. History Skills

A. Knowing presenting signs of anemia.
B. Recognize that dizziness, shortness of breath, headache, exercise intolerance, and sensitivity to cold may be presenting symptoms of anemia.
C. Recognize that symptoms of angina, claudication, TIA may be unmasked by anemia.
D. Recognize the value of reviewing all previous hematologic lab data in evaluation of hematologic disorders.
E. Recognize symptoms of platelet disorders (spontaneous mucocutaneous bleeding, immediate bleeding with trivial trauma) versus symptoms of clotting-factor deficiency (delayed bleeding, deep muscular hematomas, and hemarthroses).
F. Recognize the importance of "B" symptoms (fever, night-sweats, weight loss) in patients with lymphoma.
G. Recognize the importance of the family history in patients with anemia and coagulation disorders.

III. Physical Diagnosis Skills

A. Recognize ecchymotic or petechial rash.

B. Palpate all lymph node areas, spleen and liver.

IV. 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.

V. 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 pneumonia.

B. Viral infection

Various viral infections such as Influenza A, B, H1N1, Hepatitis, HIV and the latest COVID19.

C. Fever of unknown origin.

II. History Skills

A. Demonstrate at bedside ability to elicit history with special attention to relevant travel and residential history, animal contact, work and recreational activity, drug use and sexual history.

B. Elicit any co-existing disease which may be relevant to pathogenesis of infection.

III. Physical Examination

A. Demonstrate ability to perform thorough physical exam in effort to determine source of infection.

B. Recognize skin lesions which may provide diagnostic clues to etiology of infection.

C. Recognize fever patterns and their possible diagnostic indications.

D. Perform Kernig and Brudzinski tests in evaluating for meningitis.

IV. Diagnostic Tests

A. Obtain sputum on patients with pneumonia.

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

V. Therapeutic Interventions

A. Choose appropriate antibiotic regimens for most common infections.
B. Know major side effects of antibiotics.

RHEUMATOLOGY

I. Knowledge

A. Clinical manifestations of SLE.
B. Rheumatoid arthritis.
C. Scleroderma and Raynauds Disease
D. Mixed connective tissue disease.
E. Sjogren's syndrome.
F. Axial Spondyloarthropathies
G. Vasculitic syndromes including Behcet's Disease.
H. Sarcoidosis.
I. Osteoarthritis.
J. Psoriatic arthritis and Enteropathic Arthritis
K. FMF.
L. Gout.
M. Inflammatory Muscle Diseases

II. History Skills

A. Demonstrate ability to elicit history of multisystem disease. Know importance of extra-articular symptoms such as rash, uveitis, aphthous ulcers, alopecia, and pleuritic pain.
B. In patient with joint disease, determine presence or absence of morning stiffness, redness, heat, swelling, restricted movement.

III. Physical Exam Skills

A. Know the physical findings associated with each of the diseases listed in 1.
B. Evaluate each joint for swelling, erythema, tenderness, crepitation, contracture, deformity.
C. Determine range of motion and compare to normal. Identify Heberden node, Bouchard node, ulnar deviation, Swan neck deformity.
D. Elicit joint effusion.
E. Examine the spine. Evaluate chest expansion for spondylitis.

IV. Diagnostic Tests

The student should be able to:
A. Know the basics of diagnostic joint aspiration.
B. Know when to order the following tests: rheumatoid factor, ant - DNA, anti SM,ANA, ANCA & Anti CCP Antibody.

V. Therapeutic Interventions

A. Know general treatment options for all diseases listed in 1