

## COURSE PLAN

### FIRST: BASIC INFORMATION

College					
College	: Medicine				
Department	: Surgery				
Course					
Course Title	: General Surgery \				
Course Code	: <b>31507403</b>				
Credit Hours	: 10 h/ 10 weeks				
Year Level	: Fourth Year				
Instructor					
Name	: Dr. Omar Mansour				
Office No.	:10				
Tel (Ext)	0795760090				
E-mail	: <a href="mailto:omar.mansour@bau.edu.jo">omar.mansour@bau.edu.jo</a>				
Office Hours					
Class Times	Building	Day	Start Time	End Time	Room No.
	Lecture Hall Complex at first week	According to timetable			
	Ministry Of Health Medical Centers from second to fourth week	According to timetable			
Text Books					

- Bailey and Love's Short Practice of Surgery
- Browse's Introduction to the Symptoms & Signs of Surgical Disease.
- Schwartz's Principles of Surgery.
- Sabiston Textbook of Surgery; The Biological Basis of Modern Surgical Practice

**SECOND: PROFESSIONAL INFORMATION****COURSE DESCRIPTION**

The eight-week surgical rotation is designed to help the student understand the basic principles of surgery. It will help the students improve their ability to question and examine patients , formulate a proper differential diagnosis , construct a reasonable management plan and describe different treatment options for patients with surgical pathologies.

Daily morning report, teaching rounds/ outpatient clinics / operating room experience , all contribute to the education and maturation of the students knowledge. Daily rounds and faculty/preceptor interactions give students the opportunity to discuss patient problems in detail.

Time is spent on the wards, in outpatient clinics, and in the operating room. The material presented, and the manner in which it is taught, have been designed to include the “core” material in surgery that should be known to all physicians.

Our students rotate in different hospitals with the same standards and level of equipment and facilities.

This course is a for four weeks of clinical training that will cover family medicine involving the training of students to provide comprehensive medical care for all family members utilizing available resources and consultative services with the aim to reach to a quality care. The course also covers subjects related to community health including environmental health, school health, immunization programs as well as medical records and medical informatics.

During this rotation you will be exposed to different health problems commonly seen by Surgeons. Student role includes communication with patients, physical examination and active participation in the management plan.

**COURSE OBJECTIVES**

--

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

The ten-week surgical rotation is an intense clinical experience that introduces students to the basic principles of surgery. Students rotate on the Surgical Teams at various hospitals that are affiliated to the medical school in the university. During the rotations, students learn pre-, peri-, and post-operative evaluation and management of surgical diseases. Time is spent on the wards, in outpatient clinics, and in the operating room.

General Objectives:

At the conclusion of the rotation, the fourth year medical student is expected to:

- Obtain a complete history and perform a complete pertinent physical examination on surgical patients.
- Demonstrate adequate knowledge of surgical diseases.
- Perform both complete and focused patient workup and general surgical management.
- Display professional attitude and function effectively as a member of the health care team.

Specific Objectives of the Course:

After adequate exposure to patient care, independent study of surgical references, comprehension of the material covered in the interactive classroom sessions, and attending bed-side teaching rounds, the student is expected to achieve the following specific objectives:

- Focused history and physical examination.
- To master Communication skills and establishing Rapport with patients.
- focused history and physical examination, communication skills and establishing Rapport with patients.



- Interpreting clinical data by prioritizing problem list and selecting clinical findings and how to test results to support the most likely diagnoses.
- Practice within the ethical norms required of a medical practitioner with due respect to the autonomy of the individual and family and attention to confidentiality, informed consent etc;
- Write complete, accurate, organized and focused medical records;
- Inculcate a scientific inquiring mind and investigate to solve problems; carry out research in primary medical care.
- Learn & acquire management and leadership skills.

**COURSE LEARNING OUTCOMES**

- 1) Knowledge and Understanding
- 2) Professional Skills  
The student should be able to correlate knowledge with the clinical applications.
- 3) Competences (Transferable skill and attributes)

**COURSE SYLLABUS**

**A- Lectures:**

No.	Subject	Specific Objectives
1	Fluids and electrolytes	<ul style="list-style-type: none"> <li><input type="checkbox"/> Describe the extracellular, intracellular and intravascular volume.</li> <li><input type="checkbox"/> List endogenous factors that affect renal control of sodium and water excretion.</li> <li><input type="checkbox"/> Describe the 24-hr sensible and insensible fluid and electrolyte loss in the routine postoperative patient.</li> <li><input type="checkbox"/> Identify the signs and symptoms of dehydration.</li> <li><input type="checkbox"/> List and describe the objective ways of measuring fluid balance.</li> <li><input type="checkbox"/> Know the normal electrolyte values in body secretions.</li> </ul>

		<ul style="list-style-type: none"> <li><input type="checkbox"/> Describe the possible causes(differential diagnosis), appropriate laboratory studies needed, and the treatment of common electrolyte and fluid disorders.</li> </ul>
2	Bleeding disorders and blood transfusion	<ul style="list-style-type: none"> <li><input type="checkbox"/> Discuss medical history and physical findings that might identify the presence and etiology of a bleeding disorder.</li> <li><input type="checkbox"/> List the minimum preoperative screening tests necessary when the patient is asymptomatic.</li> <li><input type="checkbox"/> Name the etiologic factors contributing to bleeding disorders.</li> <li><input type="checkbox"/> Name the common surgical conditions leading to coagulopathy.</li> <li><input type="checkbox"/> Outline the importance of major and minor blood groups.</li> <li><input type="checkbox"/> Describe how to obtain and store blood.</li> <li><input type="checkbox"/> List the indications for blood transfusion in surgical practice.</li> <li><input type="checkbox"/> Recognize hazards of blood transfusion and their prevention (Infections, reactions).</li> <li><input type="checkbox"/> Identify the different components of blood and their indications.</li> </ul>
3	Shock	<ul style="list-style-type: none"> <li><input type="checkbox"/> Define shock.</li> <li><input type="checkbox"/> List the categories of shock.</li> <li><input type="checkbox"/> List causes for each type of shock.</li> <li><input type="checkbox"/> Recognize the hemodynamic features, diagnostic tests, and physical findings that differentiate each type of shock.</li> <li><input type="checkbox"/> Name and briefly describe the monitoring techniques that help in diagnosis and management of shock.</li> <li><input type="checkbox"/> Outline the general principles of fluid, pharmacologic, and possible surgical interventions for each category of shock.</li> </ul>
4	Burns	<ul style="list-style-type: none"> <li><input type="checkbox"/> Obtain relevant history for burns (flame, scald, closed space, exposure time, possible associated injuries)</li> <li><input type="checkbox"/> Describe burn depth and size in a patient with a major burn.</li> <li><input type="checkbox"/> Determine percentage and degree of burns.</li> <li><input type="checkbox"/> List the indications for admission.</li> </ul>

		<ul style="list-style-type: none"> <li><input type="checkbox"/> Discuss pain management.</li> <li><input type="checkbox"/> Outline fluid replacement.</li> <li><input type="checkbox"/> Discuss wound management (open, closed, principles of antiseptic solutions).</li> <li><input type="checkbox"/> Know the value of skin grafting.</li> </ul>
5	Surgical site infection	<ul style="list-style-type: none"> <li><input type="checkbox"/> List the factors that contribute to infection after a surgical procedure. Identify the types of surgical infections.</li> <li><input type="checkbox"/></li> <li><input type="checkbox"/> Describe the principles of prophylactic antibiotic use.</li> <li><input type="checkbox"/> Describe the diagnostic features and treatment for common skin infections.</li> <li><input type="checkbox"/> Describe the clinical features and treatment of anaerobic and synergistic gangrene.</li> <li><input type="checkbox"/> Describe the diagnostic evaluation for an intra-abdominal abscess.</li> <li><input type="checkbox"/> List the causes of postoperative fever and discuss the diagnostic steps for evaluation.</li> </ul>
6	Wound healing and its disorders	<ul style="list-style-type: none"> <li><input type="checkbox"/> Define a wound and describe the sequence and approximate time frame of the phases of wound healing.</li> <li><input type="checkbox"/> Describe the essential elements and significance of granulation tissue.</li> <li><input type="checkbox"/> Describe the three types of wound healing and the elements of each.</li> <li><input type="checkbox"/> Describe the phases of wound healing distinct to each type of wound.</li> <li><input type="checkbox"/> Describe clinical factors that decrease collagen synthesis and retard wound healing.</li> <li><input type="checkbox"/> Describe the rationale for the use of absorbable and nonabsorbable sutures.</li> <li><input type="checkbox"/> Discuss the functions of a dressing.</li> <li><input type="checkbox"/> Define a clean, a contaminated, and an infected wound and describe the management of each.</li> </ul>
7	Trauma	<ul style="list-style-type: none"> <li><input type="checkbox"/> Principles and levels of a trauma system, including prevention &amp; pre-hospital care</li> <li><input type="checkbox"/> Principles of Advanced Trauma Life Support (ATLS) Multi-trauma, Multiple casualty Incidents, Disaster &amp; Triage.</li> <li><input type="checkbox"/> Describe the conditions, signs, and symptoms associated with traumatic upper airway obstruction.</li> <li><input type="checkbox"/></li> </ul>



		<p>Describe the risks associated with the management of an airway in the traumatized patient.</p> <ul style="list-style-type: none"> <li><input type="checkbox"/></li> <li><input type="checkbox"/> Outline the options available and the sequence of steps required to control an airway in the traumatized patient, including protection of the cervical spine.</li> <li><input type="checkbox"/> List the identifying characteristics of patients who are likely to have upper airway</li> </ul>
		<p>obstruction.</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Define shock, including the pathophysiology.</li> <li><input type="checkbox"/> Outline the management of a patient in hemorrhagic shock.</li> <li><input type="checkbox"/> List thoracic injuries that are immediately life threatening and should be identified in the primary survey and those that are potentially life threatening and should be identified in the secondary survey. Outline a treatment plan for each injury.</li> <li><input type="checkbox"/> List the indications for chest tube insertion, pericardiocentesis, and needle thoracostomy. Outline the technique for each.</li> <li><input type="checkbox"/> Define the limits of the abdominal cavity, demonstrate the abdominal examination for trauma and outline the tests that are of use in abdominal trauma.</li> <li><input type="checkbox"/> Differentiate between blunt and penetrating trauma.</li> <li><input type="checkbox"/> List the indications, contraindications, and limitations of peritoneal lavage. Describe a positive peritoneal lavage.</li> <li><input type="checkbox"/> Outline the pathophysiologic events leading to decreased levels of consciousness, including the unique anatomic and physiologic features of head and spinal injuries.</li> <li><input type="checkbox"/> List the three functions assessed by the Glasgow Coma Scale and outline the point scale.</li> <li><input type="checkbox"/> Outline the initial management of the unconscious patient and the patient with suspected spinal cord injury.</li> <li><input type="checkbox"/> List the test results and assessment results that should be passed to neurologic consultants.</li> </ul>



		<ul style="list-style-type: none"> <li><input type="checkbox"/> Outline the differences between non-life-threatening and life threatening extremity injuries and the management of each.</li> <li><input type="checkbox"/> Describe the examination of the extremities in a traumatized patient.</li> <li><input type="checkbox"/> The impact of pelvic fractures in multi-trauma patients.</li> </ul>
8	Benign breast disorders	<ul style="list-style-type: none"> <li><input type="checkbox"/> Identify and describe the major types of breast lumps.</li> <li><input type="checkbox"/> List common risk factors for benign breast disease.</li> <li><input type="checkbox"/> List diagnostic modalities and their sequence in the workup of a patient with a breast mass and a patient with nipple discharge.</li> <li><input type="checkbox"/> Describe the natural history of benign breast disorders.</li> <li><input type="checkbox"/> Describe the treatment for a fibroadenoma and fibrocystic diseases.</li> </ul>
9	Malignant breast disorders	<ul style="list-style-type: none"> <li><input type="checkbox"/> List risk factors for breast cancer.</li> <li><input type="checkbox"/> Describe the natural history of malignant breast neoplasms.</li> <li><input type="checkbox"/> List and discuss the types of breast cancer and their clinical staging.</li> <li><input type="checkbox"/> Define the anatomic limits of surgical treatments of breast cancer.</li> <li><input type="checkbox"/> List and discuss the treatment options for regional and systemic breast cancer (surgical, nonsurgical, and combined)</li> <li><input type="checkbox"/> Describe the rationale for adjuvant, neo-adjuvant chemotherapy, radiation, and hormonal therapy in the treatment of breast cancer.</li> <li><input type="checkbox"/> List the current survival and recurrence rates of treated breast cancer, according to clinical stage.</li> <li><input type="checkbox"/> Define a treatment plan for local recurrence and metastatic breast.</li> </ul>
10	Esophageal disorders	<ul style="list-style-type: none"> <li><input type="checkbox"/> Describe esophageal hiatal hernia with regard to anatomic type (sliding and para-esophageal) and need for treatment.</li> <li><input type="checkbox"/> Describe the anatomic and physiologic factors predisposing to reflux esophagitis.</li> <li><input type="checkbox"/> Describe the symptoms of reflux esophagitis and discuss the diagnostic procedures used for confirmation.</li> <li><input type="checkbox"/> List the indications for operative management of esophageal reflux and discuss the physiologic basis for the anti-reflux procedure used.</li> </ul>





		<ul style="list-style-type: none"> <li><input type="checkbox"/> Describe the pathophysiology and clinical symptoms associated with achalasia of the esophagus.</li> <li><input type="checkbox"/> List the common esophageal diverticula, their location, symptomatology, and pathogenesis.</li> <li><input type="checkbox"/> With particular reference to etiologic factors, differentiate pulsion and traction diverticula of the esophagus.</li> <li><input type="checkbox"/> Describe and recognize the radiologic findings that characterize motility disorders</li> </ul>
		<p>of the esophagus, including achalasia and manometric evaluation of the lower esophageal sphincter.</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> List the symptoms suggestive of an esophageal malignancy.</li> <li><input type="checkbox"/> Outline a plan for diagnostic evaluation of a patient with a suspected esophageal tumor.</li> <li><input type="checkbox"/> Describe the natural history of a malignant lesion of the esophagus and list treatment options, indicating the order of preference.</li> <li><input type="checkbox"/> List the common types of benign esophageal neoplasms and briefly describe how they are differentiated from malignant lesions.</li> <li><input type="checkbox"/> Describe the etiology and presentation of traumatic perforation of the esophagus and the physical findings that occur early and late after such an injury.</li> </ul>
11	<ol style="list-style-type: none"> <li>1. Complication of Peptic ulcer disease.</li> <li>2. Gastric malignancies</li> </ol>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Compare and contrast the common symptoms and pathogenesis of gastric and duodenal ulcer disease, including patterns of acid secretion.</li> <li><input type="checkbox"/> Discuss the significance of the anatomic location of either a gastric or duodenal ulcer.</li> <li><input type="checkbox"/> Discuss the diagnostic value of upper gastrointestinal roentgenograms, endoscopy with biopsy, gastric analysis, serum gastrin levels, and the secretin stimulation test in patients with suspected peptic ulcer disease.</li> <li><input type="checkbox"/> Describe in detail the nonoperative management of patients with peptic ulcer disease.</li> <li><input type="checkbox"/> Discuss the complications of peptic ulcer disease, including clinical presentation, diagnostic workup, and appropriate surgical treatment.</li> <li><input type="checkbox"/> List the clinical and laboratory features that differentiate the Zollinger-Ellison syndrome (Gastrinoma) from duodenal ulcer disease.</li> <li><input type="checkbox"/> Compare the risk of carcinoma in patients with gastric ulcer disease with the risk in those with duodenal ulcer disease.</li> </ul>

		<ul style="list-style-type: none"> <li><input type="checkbox"/> Describe and discuss the principles of operative treatment of duodenal and gastric ulcer disease as well as their complications.</li>   <li>Identify pre-malignant conditions, epidemiologic factors, and clinical features in</li> <li><input type="checkbox"/> patients with gastric adenocarcinoma.</li>   <li><input type="checkbox"/> Describe the common types of neoplasm that occur in the stomach, and discuss appropriate diagnostic procedures, therapeutic modalities, and prognosis for each.</li>   <li><input type="checkbox"/> List the general principles of curative and palliative surgical procedures for patients with gastric neoplasm.</li> </ul>
12	Vermiform appendix	<ul style="list-style-type: none"> <li><input type="checkbox"/> List the signs and symptoms of acute appendicitis.</li>   <li><input type="checkbox"/> Formulate a differential diagnosis.</li>   <li><input type="checkbox"/> Outline a diagnostic work up for patients with suspected acute appendicitis.</li>   <li><input type="checkbox"/> List common complications of a ruptured appendix.</li>   <li><input type="checkbox"/> Describe the incidence and management of appendiceal carcinoid.</li>   <li><input type="checkbox"/> Describe the clinical presentation of Meckel's diverticulum and treatment.</li> </ul>
13	Colonic and rectal tumors	<ul style="list-style-type: none"> <li><input type="checkbox"/> Identify the common symptoms and signs of the carcinoma of the colon and rectum.</li>   <li><input type="checkbox"/> Discuss the appropriate laboratory, endoscopic, and x-ray studies for the diagnosis of carcinoma of the colon and rectum.</li>   <li><input type="checkbox"/> Outline the treatment options including radio-chemotherapy.</li>   <li><input type="checkbox"/> Describe the postoperative follow up including discussion of the role of the carcinoembryonic antigen CEA in detecting recurrence.</li>   <li><input type="checkbox"/> Using TNM and Dukes classification, discuss the staging and 5-year survival rate.</li> </ul>
14	Diverticulosis and mesenteric ischemia	<ul style="list-style-type: none"> <li><input type="checkbox"/> Describe the clinical findings of diverticular disease, differentiating the symptoms and signs of diverticulitis and diverticulosis.</li>   <li><input type="checkbox"/> Discuss complications of diverticular disease and their appropriate treatment.</li>   <li><input type="checkbox"/> Describe clinical findings and presentation as well as treatment of mesenteric ischemia.</li>   <li><input type="checkbox"/> Discuss massive lower GI bleeding including differential diagnosis, initial management, appropriate diagnostic tests and treatment.</li> </ul>

15	Inflammatory bowel disease	<ul style="list-style-type: none"> <li><input type="checkbox"/> Differentiate ulcerative colitis UC and Crohn's disease CD of the colon in terms of history, pathology, x-ray findings, treatment and risk of cancer.</li> <li><input type="checkbox"/> Discuss the role of surgery in the treatment of UC and CD complications.</li> <li><input type="checkbox"/> Discuss the nonoperative therapy of CD and UC.</li> </ul>
16	Intestinal obstruction	<ul style="list-style-type: none"> <li><input type="checkbox"/> List signs, symptoms, and diagnostic aids for evaluating presumed large bowel obstruction.</li> <li><input type="checkbox"/> Discuss causes of colonic obstruction in the adult patient.</li> <li><input type="checkbox"/> Outline a plan for diagnostic studies, preoperative management, and treatment of volvulus, of intussusception, of impaction, and of obstructing colon cancer.</li> <li><input type="checkbox"/> Given a patient with mechanical large- or small- bowel obstruction, discuss the potential complications if the treatment is inadequate.</li> </ul>
17	Acute perianal conditions	<ul style="list-style-type: none"> <li><input type="checkbox"/> Discuss the anatomy of hemorrhoids, including the four grades encountered clinically; differentiate internal and external hemorrhoids.</li> <li><input type="checkbox"/> Discuss the etiologic factors and predisposing conditions in the development of hemorrhoidal disease.</li> <li><input type="checkbox"/> Describe the symptoms and signs of hemorrhoids; external and internal.</li> <li><input type="checkbox"/> Outline the principles of management of patients with symptomatic external and internal hemorrhoids, including the roles of nonoperative and operative management.</li> <li><input type="checkbox"/> Discuss the role of anal crypts in perianal infections. Describe the various types of perianal infections.</li> <li><input type="checkbox"/> Outline the symptoms and physical findings of patients with perianal infection.</li> <li><input type="checkbox"/> Outline the principles of management of patients with perianal infections, including the role of antibiotics, incision and drainage, and primary fistulectomy.</li> <li><input type="checkbox"/> Define fissure-in-ano.</li> <li><input type="checkbox"/> Describe the symptoms and physical findings of patients with fissure-in-ano.</li> <li><input type="checkbox"/> Outline the principles of management of patients with fissure-in-ano.</li> </ul>
18	Complications of gallstones and jaundice	<ul style="list-style-type: none"> <li><input type="checkbox"/> List the common types of gallstones and describe the pathophysiology leading to their formation.</li> </ul>



		<ul style="list-style-type: none"> <li><input type="checkbox"/> List several diseases that predispose to gallstones.</li> <li><input type="checkbox"/> Describe the signs and symptoms in a patient with biliary colic. Contrast these symptoms with those of acute cholecystitis.</li> <li><input type="checkbox"/> List the tests used in the diagnosis of calculus biliary tract disease and describe the indications for, limitations, and potential complications of each.</li> <li><input type="checkbox"/> Describe the natural history of asymptomatic gallstones.</li> <li><input type="checkbox"/> List the possible complications of biliary calculi and describe the history, physical examination, and laboratory findings for each.</li> <li><input type="checkbox"/> Outline the medical and surgical management of a patient with acute cholecystitis.</li> <li><input type="checkbox"/> Describe the signs, symptoms, and management of choledocholithiasis.</li> <li><input type="checkbox"/> Outline a diagnostic and management plan for a patient with acute right upper quadrant pain.</li> <li><input type="checkbox"/> Describe the diagnostic evaluation and management of a patient with obstructive jaundice and with cholangitis.</li> <li><input type="checkbox"/> Define the following: Murphy's sign, Courvoisier's sign, T tube, including purpose and circumstances of use, gallstone ileus.</li> <li><input type="checkbox"/> Contrast carcinomas of the gallbladder, bile duct, and ampulla of Vater with regards to survival and presenting symptoms.</li> </ul>
19	<ol style="list-style-type: none"> <li>1. Acute and chronic pancreatitis</li> <li>2. Pancreatic tumors</li> </ol>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Classify pancreatitis on the basis of the severity of injury to the organ.</li> <li><input type="checkbox"/> List etiologies of pancreatitis.</li> <li><input type="checkbox"/> Describe the clinical presentation of a patient with acute pancreatitis, including indications for surgical intervention.</li> <li><input type="checkbox"/> Discuss potential early complications of acute pancreatitis.</li> <li><input type="checkbox"/> Discuss potential adverse outcomes of chronic pancreatitis as well as surgical diagnostic approach, treatment options, and management.</li> <li><input type="checkbox"/> Discuss the criteria used to predict the prognosis for acute pancreatitis.</li> <li><input type="checkbox"/> Discuss the mechanism of pseudocyst formation with respect to the role of the duct</li> </ul>
		<p>Symptoms, physical signs and prognosis.</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Describe the diagnostic approach to a patient with a suspected pseudocyst, including indications for and sequence of tests.</li> </ul>

		<ul style="list-style-type: none"> <li><input type="checkbox"/> Discuss the natural history of an untreated pancreatic pseudocyst as well as the medical and surgical treatment.</li> <li><input type="checkbox"/> List four pancreatic neoplasms and describe the pathology of each with reference to cell type and function.</li> <li><input type="checkbox"/> Describe the symptoms, physical signs, laboratory findings, and diagnostic workup of a pancreatic mass on the basis of the location of the tumor in the pancreas.</li> <li><input type="checkbox"/> Describe the surgical treatment of pancreatic neoplasms.</li> <li><input type="checkbox"/> Discuss the long-term prognosis for pancreatic cancers on the basis of pathology and cell type.</li> </ul>
20	Liver, Hydatid cyst, Spleen	<ul style="list-style-type: none"> <li><input type="checkbox"/> Discuss the lifecycle of hydatid cyst (hepatic and pulmonary)</li> <li><input type="checkbox"/> List the relevant tests to diagnose hydatid cyst (plain X-Ray, U/S, CT, and serology).</li> <li><input type="checkbox"/> Outline the methods of treatment.</li>   <li><input type="checkbox"/> Pathophysiology of Portal hypertension.</li> <li><input type="checkbox"/> Surgical splenic problems, and indications for splenectomy.</li> <li><input type="checkbox"/> Review common liver tumors.</li> </ul>
21	Aneurysms and vascular anomalies	<ul style="list-style-type: none"> <li><input type="checkbox"/> Describe the common sites and relative incidence of arterial aneurysms. List the symptoms, signs, and differential diagnosis, and diagnostic and management plans for a patient with a rupturing abdominal aortic aneurysm.</li> <li><input type="checkbox"/> Discuss the indications, contraindications, and risk factors for surgery in chronic asymptomatic abdominal aneurysms.</li> <li><input type="checkbox"/> Define and discuss the prevention of the common complications following aneurysm surgery.</li> <li><input type="checkbox"/> Compare thoracic, abdominal, femoral and popliteal aneurysms with respect to presentation, complications (i.e., frequency of dissection, rupture, thrombosis, and embolization), and treatment.</li> </ul>
22	Peripheral vascular occlusive disease	<ul style="list-style-type: none"> <li><input type="checkbox"/> Describe the pathophysiology of intermittent claudication; differentiate this symptom from leg pain due to other causes.</li> </ul>

		<ul style="list-style-type: none"> <li><input type="checkbox"/> Describe the diagnostic approach and medical management of arterial occlusive disease; include a discussion of the role of noninvasive procedures.</li> <li><input type="checkbox"/> List criteria to help differentiate venous, arterial, diabetic, and infectious leg ulcers.</li> <li><input type="checkbox"/> Describe the operative treatment choices available for chronic occlusive disease of the distal aorta and iliac arteries, superficial femoral / popliteal arteries, and tibial and peroneal arteries.</li> <li><input type="checkbox"/> List indications for amputation and discuss clinical and laboratory methods for selection of the amputation site.</li> <li><input type="checkbox"/> Describe the clinical manifestations, diagnostic workup, and surgical indications for chronic renal artery occlusive disease.</li> <li><input type="checkbox"/> Describe the natural history and causes of acute arterial occlusion. Differentiate embolic occlusion from thrombotic occlusion.</li> <li><input type="checkbox"/> Discuss signs and symptoms of acute arterial occlusion and outline its management (e.g., indications for medical versus surgical treatment)</li> </ul>
23	Venous and lymphatic disorders	<ul style="list-style-type: none"> <li><input type="checkbox"/> Identify the usual initial anatomic location of deep vein thrombosis and discuss the clinical factors that lead to an increased incidence of venous thrombosis.</li> <li><input type="checkbox"/> Identify noninvasive and invasive testing procedures for diagnosing venous valvular incompetence and deep vein thrombosis.</li> <li><input type="checkbox"/> Outline the differential diagnosis of acute edema associated with leg pain.</li> <li><input type="checkbox"/> Describe five modalities for preventing the development of venous thrombosis in surgical patients.</li> <li><input type="checkbox"/> Describe the methods of anticoagulant and thrombolytic administration, evaluation of adequacy of therapy, and contraindication to therapy.</li> <li><input type="checkbox"/> Describe the clinical syndrome of pulmonary embolism. Identify the order of priorities in diagnosing and caring for an acutely ill patient with life-threatening pulmonary embolus.</li> <li><input type="checkbox"/> List the indications for surgical intervention in venous thrombosis and pulmonary embolus.</li> <li><input type="checkbox"/> Outline the diagnostic, operative, and nonoperative management of venous ulcers and varicose veins.</li> </ul>
		<ul style="list-style-type: none"> <li><input type="checkbox"/> Define lymphedema praecox, lymphedema tarda, primary lymphedema, and secondary lymphedema.</li> <li><input type="checkbox"/> Explain the pathophysiology of lymphedema and discuss its treatment.</li> </ul>



24	Thyroid gland and thyroglossal disorders	<ul style="list-style-type: none"> <li><input type="checkbox"/> Describe the symptoms of a patient with hyperthyroidism; discuss the differential diagnosis and treatment options.</li> <li><input type="checkbox"/> Understand the major risk factors for carcinoma of the thyroid gland and the prognostic variables that dictate therapy.</li> <li><input type="checkbox"/> List the different types of carcinoma of the thyroid gland and their cell type of origin; discuss the appropriate therapeutic strategy for each.</li> <li><input type="checkbox"/> Discuss the evaluation and differential diagnosis of a patient with a thyroid nodule.</li> </ul>
25	Adrenal and parathyroid surgical disorders	<ul style="list-style-type: none"> <li><input type="checkbox"/> Discuss the evaluation and differential diagnosis of a patient with hypercalcemia. Discuss the surgical therapy of primary hyper-parathyroidism.</li> <li><input type="checkbox"/></li> <li><input type="checkbox"/> Discuss the presentation and appropriate therapy for patients with parathyroid carcinoma, and contrast this with other causes of primary hyperparathyroidism.</li> <li><input type="checkbox"/> Review the pathophysiology of secondary and tertiary hyperparathyroidism, and discuss the surgical therapies.</li> <li><input type="checkbox"/> Describe the multiple endocrine neoplasia syndromes and their surgical treatment.</li> <li><input type="checkbox"/> List and discuss three major adrenal dysfunctions, their clinical presentation, etiology, diagnostic procedures, and treatment options.</li> <li><input type="checkbox"/> Describe the clinical features of Cushing's syndrome and tell how causal lesions in the pituitary, adrenal cortex, and extra-adrenal sites may be distinguished from a diagnostic standpoint.</li> <li><input type="checkbox"/> Discuss medical and surgical management of Cushing's syndrome in patients with adrenal adenoma and with pituitary adenoma causing adrenal hyperplasia.</li> <li><input type="checkbox"/> Describe the pathology, clinical features, and laboratory findings of a patient with hyperaldosteronism.</li> <li><input type="checkbox"/> Discuss the diagnostic workup of a patient with suspected hyperaldosteronism and the preferred operative treatment.</li> <li><input type="checkbox"/> Discuss pheochromocytoma, including its associated signs and symptoms, an appropriate diagnostic workup, and its treatment.</li> <li><input type="checkbox"/> Describe the features of the multiple endocrine adenopathy syndrome associated with pheochromocytoma.</li> <li><input type="checkbox"/> Discuss the possible causes of virilization in a patient, including the clinical presentation and diagnostic workup.</li> </ul>
26	Diseases of the salivary glands	<ul style="list-style-type: none"> <li><input type="checkbox"/> Review the anatomy of major salivary glands.</li> </ul>

		<input type="checkbox"/> Discuss patterns of presentation, investigations, and treatment of siallectasis. <input type="checkbox"/> Describe common infections affecting the major salivary glands (including postoperative parotitis). <input type="checkbox"/> Understand the clinical presentation of benign and malignant salivary gland tumors. <input type="checkbox"/> Classify malignant salivary gland tumors.
27	Obesity & Bariatrics surgery	<input type="checkbox"/> Obesity. <input type="checkbox"/> Principles of Bariatric procedures. <input type="checkbox"/> Complications of Bariatric surgery
28	Abdominal wall hernias	<input type="checkbox"/> Discuss anatomy and pathophysiology of hernias. <input type="checkbox"/> Discuss different types of hernias. <input type="checkbox"/> Complications. <input type="checkbox"/> Treatment options.
29	Primary and secondary lung neoplasms	<input type="checkbox"/> Understand the major trends in lung cancer epidemiology in the past 50 years Know the role of smoking in lung cancer and other less common environmental <input type="checkbox"/> exposures. <input type="checkbox"/> Describe the pathogenesis of lung cancer based on several current models of oncogenesis. <input type="checkbox"/> Know the essential differences between the two major classifications of bronchogenic carcinoma. <input type="checkbox"/> Develop an algorithm for management of the symptomatic versus asymptomatic thoracic patient. <input type="checkbox"/> Know the features of the TNM staging for non-small cell lung cancer. <input type="checkbox"/> Develop an outline for management of non-small cell lung cancer and small cell lung cancer. <input type="checkbox"/> Describe the presentation, evaluation, and management of secondary lung neoplasms. <input type="checkbox"/> Be familiar with the spectrum of benign lung tumors.
30	Mediastinal disorders	<input type="checkbox"/> Describe the key organs in each mediastinal compartment and the potential pathology that can arise.





		<ul style="list-style-type: none"> <li><input type="checkbox"/> Know the general incidence of the most common mediastinal masses.</li> <li><input type="checkbox"/> Develop an understanding of the options to evaluate mediastinal masses and the advantages and disadvantages of both.</li> <li><input type="checkbox"/> Know the differential for lesions that can be confused for primary mediastinal masses.</li> <li><input type="checkbox"/> Name the most common tumors in each compartment</li> <li><input type="checkbox"/> Know the differential diagnosis for a germ cell tumor</li> <li><input type="checkbox"/> Know the potential diagnostic markers for paraneoplastic, endocrine and germ cell tumors</li> </ul>
31	Surgical pleural disorders	<ul style="list-style-type: none"> <li><input type="checkbox"/> Understand the pathophysiology of pneumothorax and its management.</li> <li><input type="checkbox"/> Know the differential diagnosis for fluid in the pleural space.</li> <li><input type="checkbox"/> Understand how patients develop a hemothorax and chylothorax and the appropriate treatment options.</li> <li><input type="checkbox"/> Outline the stages of development of an empyema.</li> <li><input type="checkbox"/> Describe the typical characteristics of pleural tumors.</li> </ul>
32	Pediatric surgery	<ul style="list-style-type: none"> <li><input type="checkbox"/> Determine maintenance fluid requirements and normal urinary output for infants and children.</li> <li><input type="checkbox"/> Determine the blood volume and describe methods of replacement of blood loss in infants and children.</li> </ul>
		<ul style="list-style-type: none"> <li><input type="checkbox"/> Describe the typical presentation and findings on physical examination of hypertrophic pyloric stenosis.</li> <li><input type="checkbox"/> Define gastro-esophageal reflux disease and describe its typical presentation and methods of evaluation.</li> <li><input type="checkbox"/> Describe the typical presentation of neonatal bowel obstruction and methods of evaluation. Be able to describe the differential diagnosis of neonatal bowel obstruction.</li> <li><input type="checkbox"/> Explain the typical clinical presentation of intussusception, including the principles of resuscitation, use of hydrostatic reduction, and indications for and principles of operative treatment.</li> <li><input type="checkbox"/> Explain the anatomical defect in Hirschsprung's disease and relate this to the functional bowel obstruction.</li> </ul>



		<ul style="list-style-type: none"> <li><input type="checkbox"/> Describe the differential diagnosis for constipation and methods of treatment.</li> <li><input type="checkbox"/> Describe the medical management of vomiting in infants and children.</li> <li><input type="checkbox"/> Describe the differential diagnosis of vomiting and the importance of bilious vomiting in children.</li> <li><input type="checkbox"/> Describe congenital diaphragmatic hernia and eventration of the diaphragm including diagnosis and treatment.</li> <li><input type="checkbox"/> Define the most common types of esophageal atresia and describe the typical clinical presentation of an infant with esophageal atresia, the radiologic method of determining presence or absence of a distal tracheoesophageal fistula.</li> <li><input type="checkbox"/> Describe the embryologic problem resulting in malrotation, the mechanism of duodenal obstruction, and small bowel volvulus.</li> <li><input type="checkbox"/> State the principle of medical management of necrotizing enterocolitis and explain the indications for surgical intervention.</li> <li><input type="checkbox"/> Describe a Meckel's diverticulum and list the most common complications.</li> <li><input type="checkbox"/> Define and distinguish gastroschisis and omphalocele, and their treatment.</li> </ul>
--	--	---

**COURSE LEARNING RESOURCES**

1. Lectures AND Seminars
2. Bedside Teaching and Case presentations
3. E-Learning

**ONLINE RESOURCES**

**ASSESSMANT TOOLS**

(Write assessment tools that will be used to test students ability to understand the course material and gain the skills and competencies stated in learning outcomes)

ASSESSMENT TOOLS	%
Participation and Attendance	15



OSCE exam	35
Final Exam (MCQs)	50
<b>TOTAL MARKS</b>	<b>100</b>

**THIRD: COURSE RULES**

**ATTENDANCE RULES**

Attendance and participation are extremely important, and the usual University rules will apply. Attendance will be recorded for each class. Absence of 10% will result in a first written warning. Absence of 15% of the course will result in a second warning. Absence of 15% or more will result in forfeiting the course and the student will not be permitted to attend the final examination. Should a student encounter any special circumstances (i.e. medical or personal), he/she is encouraged to discuss this with the instructor and written proof will be required to delete any absences from his/her attendance records.

**GRADING SYSTEM**

Example:

GRADING SYSTEM	
Points	Grade
	A
	A-
	B+
	B
	B-
	C+
	C
	C-
	D+
	D
	D-
	F

**REMARKS**

\*Percentages are according to the number of students who passed the exam.

**REMARKS**

Assessment	Each student will be evaluated according to:
------------	--



- |  |   |  |
|--|---|--|
|  | <ol style="list-style-type: none"><li>1-daily attendance and Log book.</li><li>2-preparation for the lectures and seminars</li><li>3-home-works and /or quizzes</li><li>4-daily performance in the clinic including: professionalism, knowledge, attitude, and clinical skills.</li><li>5-full assessment of written cases from the clinic</li><li>6- End of rotation exam</li><li>. 7-FINAL EXAM</li></ol> |  |
|--|---|--|

**COURSE COORDINATOR**

DR. Omar Mansour

[omar.mansour@bau.edu.jo](mailto:omar.mansour@bau.edu.jo)