



الجامعة الهاشمية
The Hashemite University

The Hashemite University
Faculty of Medicine
Department of General and specialized Surgery

Course information

Course title: General Surgery 2 (includes: General Surgery, Urology, Pediatric Surgery, Plastic Surgery, Vascular surgery, Thoracic surgery, Endocrine and Breast Surgery)

Course number: 0111502601

Credit hours: 9 hours

Course date: four times per academic year

Course meeting time: 40 academic days, each day starts at 8:00 AM – 3:00 PM

Course location: (surgical wards, OPC and OR at Prince Hamza Hospital (PHH), Queen Alia Military Hospital, Prince Hashem Military Hospital, Al-Zarqa governmental Hospital, Albasheer Governmental Hospital, Al-mafraq Governmental Hospital)

Pre-requested course: Passing 5th year of medical school successfully.



Course description:

This eight-week surgical rotation is an intense clinical experience that introduces students to the basic principles of surgery and related diseases. Students rotate with surgical teams at various hospitals that are affiliated to the medical school of the university. The rotation includes: six weeks of general surgery and two weeks of surgical subspecialties. The rotation consists of four blocks. Each block is two weeks long. During the rotations, students are encouraged to function as members of surgical teams to reinforce their knowledge and experience in pre-, peri-, and post-operative evaluation and management of surgical diseases. Daily rounds and faculty interactions give students the opportunity to discuss patient problems in detail. Faculty members provide students with regular feedback, advice, and direction. Time is spent in surgical wards, surgical outpatient clinics, emergency room, and the operating room. The curriculum is defined by its general and specific learning objectives.

Learning outcomes:

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

1. Obtain a comprehensive history for surgical diseases.
2. Acquire the basic skills of physical examination.
3. Identify and explain abnormal signs.
4. Formulate a case summary and differential diagnosis.

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5. Suggest relevant investigations.
6. Suggest treatment – more surgical orientation

Instructional methods:

- Seminars: clinical cases, x-rays and equipments.
- Bed-side teaching sessions: Clinical case, x-rays and lab tests.
- Visits to outpatient clinics
- Visits to operating theatres.
- Clinical skill lab
- Tutorials and presentations (Data show, slides)

Text book and material:

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

Grading Policy:

- In-course evaluation (includes assignments, attendance and participation) = 10%
- End rotation clinical exam = 30%
- Final oral exam = 15%
- Final written exam = 45%

Total= 100%

Course Policies:

Late Assignments

Verbal and written warning then reduction of In-course evaluation points

Missed exams

According to university and faculty regulations and policies published in students manual

Absence

- According to university and faculty regulations and policies published in students manual
- Each student should attend 40 academic days of the 8 weeks
- Absence of any part of the academic day (morning report, bedside teaching, OPC, OR, seminars) is considered as full day absence

Cheating

According to university and faculty regulations and policies published in students manual

Classroom Protocol:

- All students are expected to attend the teaching sessions, they should arrive before the activity starts and verbal warnings will be issued to late arrival within the 1st 10 minutes of the class and will be considered absent if more than that.
- All the students are expected to participate freely and when asked to do so
- All the students expected to behave and dress properly in professional manner.



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Important Dates to Remember:

- OSCE exams at the final week of each 8 weeks rotation for the group
- Final written surgery exam at the end of the academic year
- Final oral exam at the end of the academic year
- Holidays and vacations: according to the University calendar published at the university web site (www.hu.edu.jo)

Student rights and responsibilities:

According to regulations and policies of the university and the faculty which is written in the students manual issued to them each academic year

Course Schedule :

The course will take place throughout the academic year, each 8 weeks with different group of students. After studying the material covered in the seminars and bed-side teaching sessions throughout the 8 weeks of this course, the student is expected to achieve the followings:

| No. | Title | Objectives |
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| 1 | Fluids and electrolytes | <ul style="list-style-type: none"> ● Fluid compartments ● Recognize disturbances in water and electrolytes ● Outline methods of management |
| 2 | Blood transfusion | <ul style="list-style-type: none"> ● Outline the importance of major and minor blood groups ● Describe how to obtain and store blood ● List the indications for blood transfusion in surgical practice ● Recognize hazards of blood transfusion and how to avoid them (Infections, reactions). ● Identify the different components of blood and how to order each of them. |
| 3 | Shock | <ul style="list-style-type: none"> ● Define shock; General Discuss pathophysiology of shock ● Recognize types of shock (hypovolemic, cardiogenic, septicemic, neurogenic). ● Identify the importance of physiologic monitoring of the surgical patient (urine output, cardiac output, central venous pressure, Swan-Ganz catheter) ● Discuss the management of different types. |

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| 4 | Burns and skin coverage | <ul style="list-style-type: none"> ● Obtain relevant history for burns (flame, scold, closed space, exposure time, possible associated injuries) ● Determine percentage of burns ● List indications for admission ● Discuss pain management. ● Outline fluid replacement. ● Discuss wound management (open, closed, principles of antiseptic solutions). ● Know the value of skin grafting. |
| 5 | Surgical infections and prophylactic antibiotics | <ul style="list-style-type: none"> ● Discuss pathophysiology of surgical infection. ● Identify of surgical infections ● Outline of principles of antibiotic usage in surgical patients. |
| 6 | Surgical disease of the spleen | <ul style="list-style-type: none"> ● Anatomy and physiology review ● Classification of the splenic diseases – nontraumatic ● Clinical presentation ● Investigation ● Modality of treatment |
| 7 | Hernias | <ul style="list-style-type: none"> ● Anatomy of the abdominal wall ● Definition of hernias and type ● Examination ● Modality of treatment |
| 8 | Multiple injuries: first aid and triage. | <ul style="list-style-type: none"> ● Classify types of trauma ● List types of injuries ● Recognize risk factors and trauma scores ● Identify the value of first aid measures and methods of resuscitation |
| 9 | Head Injuries | <ul style="list-style-type: none"> ● Glasgow coma scale ● Define differentiate between the pathology of primary & secondary head injury. ● Use the different diagnostic tools to evaluate head injury patient. ● Understand & apply the treatment modalities for the different condition of head injury. ● Discuss prognosis of head injury ● List the complication of head injury. |
| 10 | Spinal Injury | <ul style="list-style-type: none"> ● Differentiate between the pathology of primary & secondary spinal injury. |

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| | | <ul style="list-style-type: none"> List diagnostic modalities. Outline the treatment modalities for the different condition of spinal injury. Discuss of spinal injury List the complication of spinal injury. |
| 11 | Abdominal trauma | <ul style="list-style-type: none"> Recognize the mechanism of injury (penetrating, Blunt). Recognize the wide spectrum of possible presentations. Discuss ABC (Airway, Breathing, Circulation) management . Identify the role of US ultrasound, CT scan computed tomography, lavage, and peritoneal manometry in the diagnosis. Discuss specific injury of different intraabdominal organs (spleen, liver, kidney, pancreas intestine). |
| 12 | Chest trauma | <ul style="list-style-type: none"> Understand mechanism of trauma. Recognize the major life threatening injuries (tension pneumothorax, tamponade, major vascular injury, massive lung contusion, major tracheal or bronchial injuries). Recognize how and when to ask for relevant investigations). Know the principles of treating pneumothorax and hemothorax. |
| 13 | Infertility | <ul style="list-style-type: none"> Anatomy of genital organs Definition Etiology Investigation Modality of treatment |
| 14 | Parenteral and enteral feedings: | <ul style="list-style-type: none"> Definition Indication Side effect of parenteral and enteral feeding Follow up investigation during feedings |
| 15 | Neck and vascular trauma | <ul style="list-style-type: none"> Appreciate the symptoms that may indicate a hidden trauma to the neck. Discuss soft tissue trauma to the neck. Discuss briefly injuries to the carotid artery, larynx, trachea and esophagus. Recognize the common methods of stopping arterial bleeding. Review the basic anatomy of the neck. |



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| 16 | Peripheral vascular diseases | <ul style="list-style-type: none"> ● Identify pain due to peripheral ischemia (claudication, rest pain, critical limb). ● Suggest relevant investigations such as Doppler ultrasound and angiography. ● Define common vascular procedures. |
| 17 | Aneurysms and vascular anomalies | <ul style="list-style-type: none"> ● Describe different types of aneurysms and the possible symptomatology for each one (subclavian, aortic, dissecting, popliteal) ● Appreciate the etiology of each ● Differentiate between false and true aneurysm. ● Suggest relevant investigations and treatments. ● List the common vascular anomalies. |
| 18 | Varicose veins and lymphatic diseases. | <ul style="list-style-type: none"> ● Review venous and lymphatic anatomy ● Discuss principles of physical examination. ● Differentiate between primary varicose veins and a post phlebetic limb. ● Suggest modalities of treatment. ● Differentiate between different types of lymphedemes and their clinical implications. |
| 19 | Pneumothorax, empyema & lung cysts | <ul style="list-style-type: none"> ● List the difference types of pneumothorax and empyema. ● List signs of pneumothorax and empyema. ● Discuss the etiology of pneumothorax. ● Outline the treatment for empyema and pneumothorax ● List the cystic lesions of the lung alert. |
| 20 | Gastro intestinal anomalies | <ul style="list-style-type: none"> ● Review the embryogenesis ● Identify presentation and diagnostic methods. ● Outline principles of management |

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| 21 | Diseases of the salivary glands | <ul style="list-style-type: none"> ● Review the anatomy of major salivary glands. ● Patterns of presentation, investigations, and treatment of sialiectasis. ● Describe common infections affecting the major salivary glands (including postoperative parotitis). ● Understand the clinical presentation of benign and malignant salivary gland tumours. ● Classify malignant salivary gland tumours. |
| 22 | Gastric malignancy Esophagous | <ul style="list-style-type: none"> ● Recognize the clinical presentation ● Recognize the predisposing factors ● Identify relevant diagnostic and staging investigations. ● Outline modalities of treatment ● Identify features of gastric cancer among Jordanians. |
| 23 | Gall bladder diseases | <ul style="list-style-type: none"> ● Understand the wide spectrum of different clinical presentation and to diagnose them clinically (Biliary colic, cholecystitis, cholangitis, pancreatitis, jaundice, carcinoma). ● Understand the role of U/S, CT, ERCP, MRCP in the diagnosis and management of gallstone disease. ● Outline the principles of treatment of cholecystitis, cholangitis, and obstructive jaundice. ● Discuss the mechanism of gall stone formation. ● Define the term acalculous cholecystitis. |
| 24 | Ischemic heart disease | <ul style="list-style-type: none"> ● Recognize the clinical presentation ● Predisposing factors ● identify relevant diagnostic investigation ● Cardiac angiogram review ● Modalities of treatment |
| 25 | Mediastinal disorder | <ul style="list-style-type: none"> ● Anatomy ● Classification of diseases of mediastinum ● identify relevant diagnostic investigating ● Chest X-R.Y,MRI, CT-Scan review ● Treatment |

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| 26 | Congenital heart disease | <ul style="list-style-type: none"> • (embryology) of the heart. • Identify the different anomalies • Appreciate that such anomalies may be related to other anomalies • Formulate a list of relevant investigations • Treatment modality |
| 27 | Valvular heart disease | <ul style="list-style-type: none"> • Definition • Type of valvular heart disease • Pathology • Clinical presentation • Modality of treatment |
| 28 | Thoracic aortic surgery | <ul style="list-style-type: none"> • Anatomy of the aorta • Type of aortic aneurysm and dissection • Diagnostic modality • CT – scan review • Indication for surgery |
| 29 | Pancreatitis | <ul style="list-style-type: none"> • Define pancreatitis and describe its pathogenesis. • List the common etiological factors (gallstones, alcohol). • Understand the role of different investigations (lab, U/S, CT, ERCP) in diagnosis and treatment. • List complications of pancreatitis. • Understand the general lines of management. |
| 30 | Pancreatic tumors | <ul style="list-style-type: none"> • Classify pancreatic tumors. • Discuss the clinical presentation • Understand the role of ERCP, CT, MRI, U/S in diagnosis and treatment • Describe staging of the disease • Know the prognosis and principles of treatment |
| 31 | Hepatic tumors and cysts | <ul style="list-style-type: none"> • Discuss hepatocellular carcinoma in brief. • Understand the importance of liver secondaries and how to prove the diagnosis. • Discuss the lifecycle of hydatid cyst. • List the relevant tests to diagnose hydatid cyst (plain X-Ray, U/S, CT, serology). |
| 32 | Colonic tumors | <ul style="list-style-type: none"> • Epidemiology, Discuss, List, Outline management of colon cancer. |

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| 33 | Diverticulosis and mesenteric ischemia | <ul style="list-style-type: none"> • Definition, presentation, investigations and management of patients with diverticulosis and mesenteric ischemia |
| 34 | Anorectal diseases | <ul style="list-style-type: none"> • Types, presentation, investigations and management of the different and pathologies. |
| 35 | Congenital anomalies of the genito-urinary system | <ul style="list-style-type: none"> • Identify the different anomalies (Agenesis, Horseshoe Kidney, PUJ, Reflux, hypospadias) • Appreciate that such anomalies may be related to other anomalies • Formulate a list of relevant investigations • Suggest the treatment modality |
| 36 | Renal stones | <ul style="list-style-type: none"> • Discuss epidemiology & etiology of renal stones. • List complications • Discuss metabolic incidents associated with stones • Outline principles of management <p>Factors that influence treatment</p> |
| 37 | Surgical abdominal incision | <ul style="list-style-type: none"> • Abdominal wall anatomy review • Type of incisions and indication • Tecqnict of laparatomy and closure • Complications |
| 38 | Erectile dys –function | <ul style="list-style-type: none"> • Anatomy of the male genitalia • Etiology of days function • Clinical presentation • Investigation • Surgical and conservative management |
| 39 | Diseases of the prostate | <p>Specific objectives:</p> <ul style="list-style-type: none"> • Outline the main embryological, anatomical, physiological and histopathological features of prostate gland. • List the main congenital prostate anomalies • Discuss in brief the natural history and etiology of both inflammatory and neoplastic prostate diseases • Analyze the main clinical points related to prostatitis (acute and chronic) with reference to chronic pelvic pain syndrome |

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| | | <ul style="list-style-type: none"> ● Provide a general overview of prostate tumors with reference to benign hyperplasia and Adenocarcinoma. ● Discuss of the role of screening methods. |
| 40 | Kidney and bladder tumors | <ul style="list-style-type: none"> ● Appreciate the clinical presentation and the indirect signs ● Understand the methods and importance of staging ● Identify the relevant investigations and confirmative measures ● Appreciate the role of surgery in the treatment ● Appreciate the role of Laparoscopic surgery and other minimally invasive treatments ● Appreciate the role of other treatment modalities. |
| 41 | Testicular tumors and diseases | <ul style="list-style-type: none"> ● Acute scrotum Vs painless swelling of scrotum. ● Staging and clinical implications management. ● Epididymitis, causes and treatment |
| 42 | Surgical aspects of thyroid & parathyroid diseases. | <ul style="list-style-type: none"> ● Formulate a differential diagnosis for a goiter ● list tumors of thyroid gland ● appreciate the role of surgery ● list possible post operative complications ● elicited signs and symptoms related to thyroid disease (thyrotoxicosis, hypothyroidism, eye manifestations, tremors, Reflexes) ● appreciate the relevance of performing TFT, hormone measurements, U/S, FNA, radioactive scans. ● Elicited sign and symptoms of hypercalcemia ● Briefly list etiologies of hypercalcemia and how to differentiate between them ● Differentiate between primary, secondary and tertiary hyperparathyroidism |
| 43 | Pediatric Surgery | <ul style="list-style-type: none"> ● Understand the surgical pathologies specific to the Pediatric age group. ● To understand the clinical presentation (general & specific) ● To know & apply the diagnostic tools with specific features of each type. |

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| | | <ul style="list-style-type: none"> To be able to apply the management protocol & apply the different treatment modalities. |
| 44 | Morbid obesity – surgery | <ul style="list-style-type: none"> Definition of morbid obesity General complication Indication for surgery Type of surgery Post operative complication |
| 45 | Skin tumors | <ul style="list-style-type: none"> Anatomy of the skin Type of tumors Predispose factors Prophylactic measurement from skin tumors Clinical presentation Investigation Treatment |
| 46 | Breast disease | <ul style="list-style-type: none"> Anatomy of the breast Blood supply to the breast Classification of the breast disease's depend on benign and malignant Course clinical presentation Modality of investigation Indication for surgery Type of surgery Postoperative follow up inpatient with breast cancers. |
| 47 | Chemotherapy | <ul style="list-style-type: none"> Definition Type of chemotherapy General consideration about the common used chemotherapy and mode action Follow of patients can chemotherapy Complication during and post chemotherapy course |
| 48 | Cleft lip and palate | <ul style="list-style-type: none"> Embryology of the lips and palate Identify presentation and diagnostic methods Preoperative care Outline principles of management |
| 59 | Dysphagia | <ul style="list-style-type: none"> Definition Anatomy of the esophagus Physiology of the esophagus clinical presentation investigation |



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- modality of treatment.

Prince Hamza Hospital

General Surgery

| | 6 th yr |
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| Sunday | Rounds |
| Monday | Rounds |
| Tuesday | Rounds |
| Wednesday | Seminar |
| Thursday | Rounds |

Urology and Pediatric surgery

| | 6 th yr |
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| Sunday | Pediatric surgery |
| Monday | Urology |
| Tuesday | Pediatric surgery |
| Wednesday | Seminar |
| Thursday | Urology |

Seminars for 6th year medical students

| Seminar Title | Tutor |
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| Fluid and electrolytes for surgical patients | Dr. Mohammad Al-Hurani |
| Shock | |
| Surgical infections and choice of antibiotics | |





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| Surgical wounds and wound healing | Dr. Hamzah Al-Balas |
| Systemic response to injury, hemostasis, surgical bleeding and blood transfusion | |
| Management of Burn | |
| Emergency conditions in Pediatric Surgery | Dr. Khaled Al-Omar |
| Congenital anomalies of the gastrointestinal system and the liver | |
| Common endocrine pathologies | Dr. Sohail Bakkar |
| Approach to head and neck masses and swellings | |
| Melanoma and cutaneous tumors | Dr. Mahmoud Al-Balas |
| Approach to common breast complaints | |
| Approach to trauma patients | Dr. Hamzah Al-Balas |



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| Trauma management classified by organs / systems | |
| Approach to Jaundice | Dr. Haitham Qandeel |
| Benign Anorectal Conditions | |
| Surgical management of obesity | |
| Colorectal polyps and carcinoma | Dr. Raed Tayyem |
| Approach to Gastrointestinal Bleeding (Upper & Lower) | |
| Approach to dysphagia | |
| Approach to abdominal mass | Dr. Kamal Bani-Hani |
| Approach to gastric outlet obstruction | |
| Principles of management of intestinal obstruction | |
| Diabetes and surgery | Dr. Moutaz Qasaimeh |

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| Anticoagulation | |
| Approch to chronic ulcers (Arterial, Venous. Diabetic, Traumatic) | |

- All seminars will be on Wednesday at 9 am at the Hashemite Universtiy
- All students must consult the tutors during preparation of seminars