

Faculty of Medicine
Department of surgery

Academic Course specifications

Course Title: **surgery**
Fourth year of MBChB program

-Allocated marks: 100 marks

-Course duration: every 4 weeks teaching for 4th year MBChB program
Final clinical exam at 1st and 2nd term.

Final whole written : examination include 1st term theory exam ,
clinical at end of course final exam & , 2nd term include clinical
examination at end of course , written exam and final exam at the end of
4th year..

Course director :

prof. Adel shaker mahmood

Departments offering the course:

Departments of general surgery:

Department of urology

Basic Information

Allocated marks: 100

Course duration: 15weeks(2 courses)

Teaching hours: 90 hours (45 hrs for each course) lectures

240 hours (120 hurs for each course) practical sessions

Professional Information:

Vision: We shall be guiding the region in surgical undergraduate education, , community service and research.

-Mission: Is to graduating knowledgeable skillful and honorable doctors

- To provide the student with the knowledge, and skills which enable him/her to identify, analyze, manage clinical surgical problems in order to provide efficient, cost effective and humane patient care.

- To provide the student with an appropriate background covering the common and/ or important surgical conditions in a systematic way.

To enable students to take a skillful logic and organized patient history

To enable the student to perform a clinical bedside examination in a systematic way

To enable the student to observe and detect the common clinical signs associated with surgical conditions.

- To enable the development and application of appropriate professional attitudes, ethical principles and communication skills.

Intended Learning Outcomes (ILOs):

On successful completion of the course, the student should be able to:

1. Describe the anatomy of surgically important structures, organs and regions.
2. Describe the histology of surgically important tissues.
3. Describe the physiology of surgically important organs and systems.
4. Describe the principles of molecular biology and wound healing.
5. Describe the microbiology and parasitology of surgically important pathogens and their treatment..
6. Describe the epidemiology, etiology, pathophysiology, pathology, complications and prognosis of the various common and important surgical diseases and disorders.
7. Describe the clinical picture, investigations and differential diagnosis of the various common and important surgical diseases and disorders.
8. Describe the pharmacological basis of surgically important medications.
9. Describe the procedures and minimally-invasive techniques used in the treatment of surgical diseases.
10. Describe palliative care for untreatable surgical conditions.
11. Define principles of clinical audit.

Practical and Clinical Skills

On successful completion of the course, the student should be able to:

1. Present a well constructed detailed patient history.
2. Perform full physical examination appropriate to age and gender in acute and chronic clinical conditions
3. Take and record a structured patient-centered history in acute and chronic conditions.

6. Construct appropriate management plan for patients with common and important surgical diseases.

8. Order appropriate investigations.

Procedures and technical skills acquired under appropriate supervision during undergraduate training : By the end of the program, the graduate will acquire the model-based skills (using manikin and simulators) required to:

1. Perform venepuncture and collect blood samples.
2. Insert a cannula into peripheral veins.
3. Practice enteral, parenteral, inhalational and topical methods for drug administration.

4. Administer basic oxygen therapy.

5. Insert a nasogastric tube.

6. Perform bladder catheterization.

9. Interpret basic bedside laboratory tests.

10. Adopt suitable measures for safety and infection control.

Professional Attitude and Behavioral Skills

By the end of the program, the graduates will acquire the skills required to:

1. Adopt an empathic and holistic approach to patients and their problems, taking into consideration beliefs values, goals and concerns.
2. Respect the patient's right to know and share in decision making as well as dignity, privacy, information confidentiality and autonomy.
3. Understand and respect the different cultural beliefs and values regardless of their disabilities in the community they serve.
4. Recognize the important role played by other health care professions in patients' management, respecting their contributions in patient's management regardless of degree or occupation.

Communication Skills:

By the end of the program, the graduate will be able to:

1. Communicate clearly, sensitively and effectively with patients and their relatives and colleagues from a variety of health and social care professions.
2. Communicate effectively with individuals regardless of their social, cultural, ethnic backgrounds, or their disabilities.
3. Cope with situations where communication is difficult including breaking bad news.
4. Show compassion to patients and their relatives in situations of stress and grief.
5. Honor and respect patients and their relatives, superiors, colleagues and any other member of the health profession.

Intellectual Skills

By the end of the program, the graduate will acquire the skills required to:

1. Recognize patients with life/organ-threatening surgical conditions and perform appropriate initial therapy.
2. Determine the different strategies for risk management of disease and injury.
3. Identify surgically important structures and organs.
4. Identify surgical pathology specimens.
5. Integrate basic anatomical, physiological and pathological facts with clinical data.
6. Integrate the results obtained from history, clinical examination and investigational data into meaningful diagnostic formulation.
7. Combine clinical and investigational data with evidence based knowledge and skill of deductive reasoning for clinical problem solving.
8. Identify problems, prioritize them, and generate a list of differential diagnosis for each problem.
9. Select the most appropriate and cost-effective diagnostic and therapeutic procedure for each problem.
10. Use the results of all the tests ordered to modify the problem list and the differential diagnosis accordingly.
11. Identify and outline management of patients with surgical emergencies and common surgical diseases requiring long-term follow-up, rehabilitation and pain relief.
12. Recognize and cope with uncertainty by accepting and reacting to uncertain situations through proper counseling, consultation and referral.

Specific Information:

Teaching and learning methods:

Methods used:

1. Clinical classes
2. Lectures
3. Illustrated lecture
4. skill labs
5. Emergency rounds

List of references:

Essential books (text books):

Bailey and Love's Short Textbook of Surgery,
Norman Browse clinical surgery

Recommended books:

Schwartz Textbook of Surgery
Current Surgical therapy

Internet

Facilities required for teaching and learning:

Facilities used for teaching this course include:

- Lecture halls:
- Small group classes
- Skill lab
- Information technology / AV aids
- Library

- Wards

Courses topics description

subject	responsible department	theory hour/year	practical/ward hour/year	total units
surgery	surgery	90	240	13

subjects	Hours
1 esophagus	3
learning objectives to understand the anatomy and physiology of the oesophagus and their relationship to disease the clinical features, investigations and treatment of benign and malignant disease with particular reference to the common adult disorders	
surgical anatomy, physiology, symptoms, investigations, foreign bodies in the oesophagus	Lecture 1
perforation, mallory–weiss syndrome, corrosive injury, gastro- oesophageal reflux disease, barrett’s oesophagus	Lecture 2
hiatal hernia , neoplasms of the oesophagus, motility disorders and diverticula, achalasia, plummer–vinson syndrome	Lecture 3
2 stomach and duodenum	5
learning objectives <ul style="list-style-type: none"> • to understand the gross and microscopic anatomy and pathophysiology of the stomach in relation to disease • to be able to decide on the most appropriate techniques to use in the investigation of patients with complaints relating to the stomach and duodenum • to understand the critical importance of gastritis and <i>helicobacter</i> 	

<p><i>pylori</i> in upper gastrointestinal disease to be able to investigate and treat peptic ulcer disease and its complications</p> <ul style="list-style-type: none"> • to be able to recognise the presentation of gastric cancer and understand the principles involved in its treatment • to know about the causes of duodenal obstruction and the presentation of duodenal tumours 	
gross anatomy of the stomach and duodenum, microscopic anatomy of the stomach and duodenum, physiology of the stomach and duodenum, investigations of stomach and duodenum, helicobacter pylori	1
gastritis, peptic ulcer	2
the complications of peptic ulceration, perforated peptic ulcer , upper gastrointestinal bleeding	3
gastric outlet obstruction , gastric cancer,	4
gastrointestinal stromal tumours, gastric lymphoma, duodenal tumours, zollinger–ellison syndrome, duodenal obstruction, acute gastric dilatation	5
3 small intestine	3
<p>learning objectives to appreciate:</p> <ul style="list-style-type: none"> • the basic anatomy and physiology of the small intestine • the range of conditions that may affect the small intestine <p>to understand:</p> <ul style="list-style-type: none"> • the aetiology and pathology of common small intestinal conditions • the principles of investigation of small intestinal symptoms • the importance of non-surgical management of small intestinal problems • the principles of small intestinal surgery • that complex intestinal problems are best managed by a multidisciplinary team • the management of acute surgical problems of the intestines 	
anatomy of the small intestine, physiology of the small intestine, inflammatory bowel disease, crohn’s disease (regional enteritis), tuberculosis of the intestine	1

tumours of the small intestine, <i>peutz–jeghers syndrome</i> , <i>adenocarcinoma</i> , <i>carcinoid tumours</i> , <i>lymphoma</i> , <i>gastrointestinal stromal tumours</i> , intestinal diverticulae, <i>meckel’s diverticulum</i> , mesenteric ischaemia	2
stomas, types of ileostomy, indications , complications , enterocutaneous fistula, short bowel syndrome	3
4 large intestine	4
learning objectives to appreciate: <ul style="list-style-type: none"> • the basic anatomy and physiology of the large intestine • the range of conditions that may affect the large intestine to understand: <ul style="list-style-type: none"> • the aetiology and pathology of common large intestinal conditions • the principles of investigation of large intestinal symptoms • the importance of non-surgical management of large intestinal problems • the principles of colonic surgery • that complex intestinal problems are best managed by a multidisciplinary team • the management of acute surgical problems of the intestines 	
anatomy of the large intestine, physiology of the large intestine, tumours of the large intestine benign, malignant,	1
ulcerative colitis, crohn’s disease of the colon, infections of the large intestine	2
colonic diverticula, vascular anomalies of the intestine angiodysplasia, ischaemic colitis,	3
colostomies , approach and management of lower git bleeding	4
5 intestinal obstruction	2
learning objectives to understand:	

<ul style="list-style-type: none"> •• the pathophysiology of dynamic and adynamic intestinal obstruction •• the cardinal features on history and examination •• the causes of small and large bowel obstruction •• the indications for surgery and other treatment options in bowel obstruction 	
classification, pathophysiology, strangulation, closed-loop obstruction, mechanical intestinal obstruction, obstruction by adhesions and bands, acute intussusceptions, volvulus,	1
clinical features of intestinal obstruction dynamic obstruction, clinical features of strangulation, treatment of acute intestinal obstruction ,,,, adynamic obstruction paralytic ileus, pseudo-obstruction	2
6 the liver	4
learning objectives to understand: <ul style="list-style-type: none"> •• the anatomy of the liver •• the signs of acute and chronic liver disease •• the investigation of liver disease •• the management of liver trauma •• the management of liver infections •• the management of colorectal liver metastases •• the management of hepatocellular carcinoma 	
anatomy of the liver ligaments and peritoneal reflections, liver blood supply, structures in the hilum of the liver, division of structures at the hilum, venous drainage of the liver, segmental anatomy of the liver, acute and chronic liver disease liver function and tests, clinical signs of impaired liver function, acute liver failure, chronic liver disease,	1
imaging the liver, liver trauma, portal hypertension	2
ascites, budd–chiari syndrome, primary sclerosing cholangitis, primary biliary cirrhosis, cystic disease of the liver, liver infections ascending cholangitis pyogenic liver abscess	3
amoebic liver abscess, hydatid liver disease, liver tumours , hepatocellular carcinoma	4

7 biliary system and obstruction jaundice	5
<p>learning objectives</p> <ul style="list-style-type: none"> • to understand the anatomy and physiology of the gallbladder and bile ducts • to be familiar with the pathophysiology and management of gallstones • to be aware of unusual disorders of the biliary tree • to be aware of malignant disease of the gallbladder and bile ducts 	
<p>surgical anatomy and physiology, surgical physiology, functions of the gallbladder, radiological investigation of the biliary tract, intraoperative imaging techniques,</p>	1
<p>congenital abnormalities of the gallbladder and bile ducts, congenital dilatation of the intrahepatic ducts (caroli's disease) , choledochal cyst</p>	2
<p>, gallstones diseases, acalculous cholecystitis, the cholecystoses (cholesterosis, polyposis, adenomyomatosis and cholecystitis glandularis proliferans, cholecystectomy complications of cholecystectomy, , post-cholecystectomy choledocholithiasis, choledochotomy,</p>	3
<p>stricture of the bile duct primary sclerosing cholangitis, tumours of the bile duct, cancer of the gallbladder</p>	4
<p>portal hypertension , obstructive jaundice</p>	5
8 the spleen	3
<p>learning objectives</p> <p>to understand:</p> <ul style="list-style-type: none"> • the function of the spleen • the common pathologies involving the spleen • the principles and potential complications of splenectomy • the potential advantages of laparoscopic splenectomy • the benefits of splenic conservation 	

•• the importance of prophylaxis against infection following splenectomy	
embryology, anatomy and physiology, functions of the spleen, investigation of the spleen, congenital abnormalities of the spleen, splenic artery aneurysm, splenic infarction	1
splenic rupture, rupture of a malarial spleen, splenomegaly and hypersplenism,	2
idiopathic thrombocytopenic purpura, haemolytic anaemias, neoplasms, splenectomy indications , complications , types	3
9 appendix	2
learning objectives to understand: <ul style="list-style-type: none"> •• the aetiology and surgical anatomy of acute appendicitis •• the clinical signs and differential diagnoses of appendicitis •• the investigation of suspected appendicitis •• evolving concepts in management of acute appendicitis •• basic surgical techniques, both open and laparoscopic •• the management of postoperative problems •• tumours of the appendix and pseudomyxoma peritonei 	
introduction, anatomy, microscopic anatomy, acute appendicitis aetiology pathology clinical diagnosis, special features, according to position of the appendix, special features, according to age,	1
differential diagnosis, investigation, the alvarado score , treatment, <i>appendicectomy, appendix abscess, pelvic abscess, management of an appendix mass</i> , postoperative complications, neoplasms of the appendix and pseudomyxoma peritonei	2
10 the pancreas	3
learning objectives to understand: <ul style="list-style-type: none"> •• the anatomy and physiology of the pancreas •• investigations of the pancreas •• congenital abnormalities of the pancreas •• assessment and management of pancreatitis •• diagnosis and treatment of pancreatic cancer 	

anatomy and physiology, investigations, estimation of pancreatic enzymes in body fluids, pancreatic function tests, imaging investigations,	1
acute pancreatitis etiology , clinical presentation , investigations , assessment of severity , management , <i>systemic complications, local complications and their management</i> pseudocyst	2
chronic pancreatitis, carcinoma of the pancreas	3
11 rectum	3
<p>learning objectives</p> <p>to understand:</p> <ul style="list-style-type: none"> • the anatomy of the rectum and its relationship to surgical disease and its treatment • the pathology, clinical presentation, investigation, differential diagnosis and treatment of diseases that affect the rectum <p>to appreciate:</p> <ul style="list-style-type: none"> • that carcinoma of the rectum is common and can present with symptoms similar to benign disease. careful evaluation is required • the principles involved in the management of rectal pathologies 	
surgical anatomy, clinical features of rectal disease, symptom and signs , <i>digital examination, proctoscopy, sigmoidoscopy</i> , injuries, foreign bodies in the rectum, prolapse,	1
proctitis, radiation proctitis, proctitis due to specific infections, lymphogranuloma venereum, rectal polyps, benign rectal lesions,	2
rectal carcinoma	3
12 anus and anal canal	3
<p>learning objectives</p> <p>to understand</p> <ul style="list-style-type: none"> • the anatomy of the anus and anal canal and their relationship to surgical disease and its treatment • the pathology, clinical presentation, investigation, differential diagnosis and treatment of diseases that affect the anus and anal canal • that anal disease is common and its treatment tends to be conservative, although surgery may be required • that any damage to the anus, including too aggressive or inappropriate surgery, may render the patient 	

permanently disabled	
surgical anatomy, the epithelium and subepithelial structures, blood supply, venous drainage, lymphatic drainage, the anal glands, examination of the anus, physiological aspects of the anal sphincters and pelvic floor, and special investigations, congenital abnormalities	1
pilonidal sinus, anal incontinence, anal fissure, proctalgia fugax, haemorrhoids	2
pruritus ani, anorectal abscesses, fistula- <i>in-ano</i> , malignant tumours malignant lesions of the anus and anal canal	3
13 abdominal wall hernias & umbilicus	4
learning objectives to know and understand: <ul style="list-style-type: none"> •• basic anatomy of the abdominal wall and its weaknesses •• causes of abdominal hernia •• types of hernia and classifications •• clinical history and examination findings in hernia •• complications of abdominal hernia •• non-surgical and surgical management of hernia – including mesh •• complications of hernia surgery •• other abdominal wall conditions 	
the abdominal wall basic anatomy and function related to pathology, abdominal pressure, abdominal hernia, anatomical causes of abdominal wall herniation, common principles in abdominal hernia, clinical history and diagnosis in hernia cases, examination for hernia, investigations for hernia,	1
management principles, surgical approaches to hernia, mesh in hernia repair, specific hernia types, inguinal hernia,	2
femoral hernia, ventral hernia, umbilical hernia, epigastric hernia, incisional hernia, spigelian hernia, lumbar hernia, parastomal hernia, divercation of recti, rare external hernias	3
umbilical conditions in the adult, chronic fistula, patent urachus, general infection of the abdominal wall, synergistic gangrene, cutaneous fistula, abdominal	4

compartment syndrome, neoplasms of the abdominal wall,	
14 .The peritoneum, omentum, mesentery and retroperitoneal space	3
learning objectives to recognise and understand: •• the causes and complications of localised and generalised peritonitis •• the clinical features of peritonitis and intraperitoneal abscess •• the principles of surgical management in patients with peritonitis and intraperitoneal abscess •• the causes and pathophysiology of ascites •• the pathophysiology and complications of adhesion formation •• the spectrum of mesenteric and retroperitoneal conditions	
anatomy and physiology embryology, adult arrangement and functions, peritonitis, localised peritonitis, diffuse (generalised) peritonitis, diagnostic aids, management	1
special forms of peritonitis, intraperitoneal abscess, ascites, tumours of the peritoneum	2
adhesions, diseases of omentum, the mesentery, inflammation, mesenteric cysts , the retroperitoneal space	3
15 head and neck	2
learning objectives to understand management lump in the neck common neck disorders	
, branchial cyst, branchial fistula, cystic hygroma, thyroglossal duct cysts and fistula,	1
trauma to the neck, inflammatory conditions of the neck, ludwig’s angina, acute and chronic lymphadenitis, primary tumours of the neck, <i>chemodectoma</i> , secondary carcinoma	2
16 salivary gland	2
learning objectives to understand: •• the surgical anatomy of the salivary glands	

<ul style="list-style-type: none"> • the presentation, pathology and investigation of salivary gland disease • the medical and surgical treatment of stones, infections and tumours that affect salivary glands 	
<p>common disorders of minor salivary glands (cysts and tumours), the sublingual glands anatomy, common disorders of the sublingual glands (cysts and tumours), the submandibular glands anatomy, inflammatory disorders of the submandibular gland,</p>	1
<p>tumours of the submandibular gland, the parotid gland anatomy, inflammatory condition, tumours, complications of parotidectomy, degenerative diseases</p>	2
<p>17 thyroid gland</p>	4
<p>learning objectives</p> <ul style="list-style-type: none"> • to understand the development and anatomy of the thyroid gland • to know the physiology and investigation of thyroid function • to be able to select appropriate investigations for thyroid swellings • to know when to operate on a thyroid swelling • to describe thyroidectomy • to know the risks and complications of thyroid surgery 	
<p>embryology, surgical anatomy, physiology of thyroid hormone secretion and thyroid function tests, thyroid imaging</p>	1
<p>thyroid enlargement (classification of goiter), clinically discrete swellings, <i>retrosternal goiter</i>,</p>	2
<p>hyperthyroidism surgery for thyrotoxicosis, postoperative complications,</p>	3
<p>neoplasms of the thyroid, thyroiditis</p>	4
<p>18 parathyroid gland,</p>	1
<p>to understand:</p> <ul style="list-style-type: none"> • the anatomy of the parathyroid glands • the physiology of calcium regulation • the underlying causes of hypercalcaemia and appropriate emergency management • the aetiology, presentation, investigation and 	

<p>management of primary hyperparathyroidism and associated special cases</p> <ul style="list-style-type: none"> • the aetiology, presentation, investigation and management of secondary and tertiary hyperparathyroidism • the aetiology and management of parathyroid carcinoma 	
<p>anatomy of the parathyroid glands, calcium homeostasis and parathyroid hormone regulation, hyperparathyroidism, parathyroid carcinoma, hypoparathyroidism</p>	1
<p>19 the adrenal glands</p>	1
<p>learning objectives to understand:</p> <ul style="list-style-type: none"> • the anatomy and function of the adrenal and other abdominal endocrine glands • the diagnosis and management of these endocrine disorders • the role of surgery in the management of these endocrine disorders 	
<p>anatomy, function of the adrenal glands, incidentaloma, primary hyperaldosteronism – conn’s syndrome, cushing’s syndrome, adrenocortical carcinoma, adrenal insufficiency, phaeochromocytoma and neuroblastoma</p>	1
<p>20 principles of laparoscopic surgery</p>	1
<p>learning objectives to understand:</p> <ul style="list-style-type: none"> • the principles of laparoscopic and robotic surgery • the advantages and disadvantages of such surgery • the safety issues and indications for laparoscopic and robotic surgery • the principles of postoperative care 	
<p>definition, surgical trauma in open and minimally invasive, limitations of minimal access surgery, preparation of the patient, general intraoperative principles, creating a pneumoperitoneum, complications , postoperative care</p>	
<p>21. introduction to trauma</p>	2

<p>learning objectives</p> <ul style="list-style-type: none"> • become familiar with the timeline concept in trauma management • understand how to assess a trauma problem • learn how to respond to a trauma problem • understand how to select early total care and damage control surgical strategies 	
<p>definition of trauma, the magnitude of the problem, the management of trauma, the significance of time in the outcome, assessment and response, the assessment of trauma, <i>mechanisms</i>,</p>	1
<p>the response to trauma, the medical response to injury, local protocols and guidelines, planning an individual operation</p>	2
<p>22 early assessment and management of severe trauma</p>	1
<p>learning objectives</p> <ul style="list-style-type: none"> • how to identify and assess the severely injured patient • early treatment goals for multiply injured patients • understand the role of permissive hypotension, tranexamic acid and massive transfusion protocols • understand the principles of damage control surgery (dcs) versus early total care (etc) 	
<p>identification of severe trauma, role of the trauma team, primary survey, cabcde., secondary survey, damage control surgery versus early total care</p>	1
<p>23 Torso trauma (abdominal injury)</p>	1
<p>learning objectives</p> <ul style="list-style-type: none"> • the indications for and techniques of the trauma laparotomy • the philosophy of damage control surgery • the management of trauma to the pelvis 	
<p>investigation, <i>focused abdominal sonar for trauma and extended fast, diagnostic peritoneal lavage, individual organ injury, damage control, abdominal compartment syndrome</i></p>	1
<p>24 the breast</p>	4
<p>To understand:</p> <ul style="list-style-type: none"> • Appropriate investigation of breast disease • Breast anomalies and the complexity of benign breast 	

Disease •• The modern management of breast cancer	
comparative and surgical anatomy, investigation of breast symptoms, the nipple, benign breast disease, congenital abnormalities, injuries of the breast	1
acute and subacute inflammations of the breast, <i>duct ectasia/periductal mastitis</i>, aberrations of normal development and involution, treatment of mastalgia, breast cysts, galactocele, fibroadenoma, phyllodes tumour, when the diagnosis of carcinoma is in doubt, risk of malignancy developing in association with benign breast pathology, carcinoma of the breast , aetiological factors,	2
pathology, paget’s disease of the nipple, the spread of breast cancer, clinical presentation, staging of breast cancer, prognosis of breast cancer, treatment of cancer of the breast, breast cancer screening , familial breast cancer , male breast.	3
25. Bariatric and metabolic surgery	4
Learning objectives To know and understand: •• What severe and complex obesity is •• Rationale for surgery and the concept of metabolic surgery •• Eligibility and NICE guidelines •• Multidisciplinary assessment •• The common operations and how they work •• How to assess and treat perioperative complications •• Follow-up, nutritional supplements and biochemical monitoring	1
introduction, rationale, metabolic surgery, eligibility, the common operations, complications,	
26. Urinary symptoms and investigations	1
Learning objectives •• To understand the significance of pain relating tom urinary tract pathology •• To understand the difference between renal pain and ureteric colic To understand the definitions of common lower urinary tract symptoms •• To be able to select the appropriate diagnostic tests to establish a diagnosis of urinary tract disease	
pain, lower urinary tract symptoms (luts) haematuria, discolouration of the urine, pneumaturia, symptoms related to the external genitalia, investigation of urinary symptoms, urine-based tests, <i>tumour markers, urological endoscopy</i> , urological	

imaging	
27. Kidneys and ureters	
<p>Learning objectives</p> <p>To recognise and understand:</p> <ul style="list-style-type: none"> •• Important congenital abnormalities of the upper urinary tract •• Important cystic diseases of the kidney •• The management of sepsis in the upper urinary tract •• The pathophysiology of renal stone formation •• The management of urinary tract calculi •• The aetiology, presentation and surgical management of obstruction to the upper urinary tract •• The management of open and closed trauma to the kidney and ureter •• Important renal neoplasms and their presentation •• Surgery of upper urinary tract tumours 	
surgical anatomy, embryology, congenital abnormalities, infections, stones diseases, urinary tract obstruction, renal trauma, injury to the ureter, vascular pathology, tumours of the kidney, upper tract transitional cell carcinoma (uttcc), wilms' tumour (nephroblastoma),	
28. The urinary bladder	
<p>Learning objectives</p> <p>To understand:</p> <ul style="list-style-type: none"> •• The anatomy, vascular supply and innervation of the bladder in relation to function and disease •• The principles of management of bladder trauma, incontinence and fistulae •• The common causes of acute and chronic urinary retention and management •• The different types of bladder cancer and the principles of management 	
surgical anatomy of the bladder, congenital defects of the bladder, bladder trauma, retention of urine, neuropathic bladder, incontinence of urine, bladder stones, foreign bodies in the bladder, diverticula of the bladder, urinary fistulae, lower urinary tract infection and cystitis, schistosomiasis of the bladder , neoplasms of the bladder, urinary diversion.	
29. The prostate and seminal vesicles	
<p>Learning objectives</p> <p>To understand:</p> <ul style="list-style-type: none"> •• The relationship of anatomical structure and biochemical function to the development and treatment of benign and malignant disease of the prostate •• The terminology used to describe lower urinary tract symptoms and to know their causes as well as their treatment options available •• Which investigations are appropriate for carcinoma of the prostate •• Clinical staging of carcinoma of the prostate and how staging contributes to the complex decision 	
embryology, surgical anatomy, physiology, benign prostatic hyperplasia, assessment of the patient with lower urinary tract symptoms, management of men with benign prostatic hyperplasia or bladder outflow obstruction, prostatic	

calculi, carcinoma of the prostate, prostatitis, disorders of seminal vesicles	
30. Urethra and penis	
Learning objectives To recognise and understand: The common congenital abnormalities of the urethra The diagnosis and management of urethral trauma The diagnosis and management of urethral stricture The diagnosis and management of phimosis The principles of management of a man with erectile dysfunction The common diseases of the penis and urethra and the principles of their surgical management	
the male urethra anatomy, congenital abnormalities, injuries to the male urethra, urethral stricture, other conditions of the urethra(fistula , calculi, tumors), the female urethra anatomy, prolapse, stricture fowler’s syndrome, the penis anatomy, diseases of the foreskin, injuries of the penis, erectile dysfunction, priapism, carcinoma of the penis, inflammation of the penis and urethra urethral discharge, sexually transmitted infections.	
31. Testis and scrotum	
Learning objectives •• To recognise testicular maldescent and to appreciate the reasons for intervention •• To recognise and manage testicular torsion •• To be able to recognise and understand the management of the common scrotal swellings (varicocoele, hydrocoele and epididymal cysts) •• To recognise and understand the management of testicular tumours •• To understand the treatment options for infertile men	
embryology and anatomy of the testis, incompletely descended testis, injuries to the testis, absent testis, torsion of the testis, varicocoele, hydrocoele, cysts associated with the epididymis, epididymo-orchitis, tuberculous epididymo-orchitis, orchitis, tumours of the testes, tumours of the epididymis, the scrotum fournier’s gangrene, carcinoma of the scrotum, male factor infertility,	
32. Transplantation	
Learning objectives •• To appreciate the immunological basis of allograft rejection •• To know the principles of immunosuppressive therapy •• To be aware of the side effects of non-specific immunosuppression •• To be familiar with the major issues concerning organ donation •• To appreciate the main indications for organ transplantation To know the surgical principles of organ implantation •• To be able to give an account of the causes of graft dysfunction •• To know the likely outcomes after transplantation •• To be aware of potential future developments in transplantation	

historical perspective, definitions, graft rejection, abo blood group antigens, types of allograft rejection, graft-versus-host disease, hla matching, immunosuppressive therapy,	
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Courses topics in practical sessions

The student should fulfill the followings

History taking and presentation
General examination , head and neck examination
Abdominal examination
Examination of peripheral vascular system
Chest examination
The student should be able to write a well constructed history and systemic examination for the following topics
1 Abdominal pain
2 Abdominal swelling
3 Change in bowel habit / rectal bleeding
4 upper gastrointestinal bleeding
5 Difficulty swallowing / dyspepsia /dysphagia
Signs of peritonitis
6 Jaundice
7 Lumps in groin Gen
8 Lumps in scrotum / scrotal pain
9 Pain in loin
10 Urinary retention or flow obstruction
11 Haematuria (including stones and tumours)
12 Leg ulceration
13 Painful and/or paralysed limb
14 Breast lumps and nipple discharge Gen (Breast)
15 Lumps in the neck
16 Caring for the postoperative patient, including nutrition, enhanced recovery and the critically ill patient; advice re return to activities
17 Thyroid enlargement and hyperthriodism
18. Signs of chronic liver diseases
