

Course Specifications

Faculty : Medicine
Department : General surgery

Course Specifications

Programme(s) on which the course is given : MBBCH
 Department offering the course : General surgery
 Academic year / level : 2015/2016/ 6 th year
 Date of specification approval : Department assembly September 2016

A- Basic information

Title:	Surgery				Code: SUR
Lecture:	216	Tutorial: -	Practical 288	Total: 504	
Title:	General surgery				
Lecture:	96	Tutorial: -	Practical 144	Total: 384	
Title:	Cardio –Thoracic Surgery				
Lecture:	28	Tutorial: -	Practical 24	Total: 52	
Title:	Neurosurgery				
Lecture:	28	Tutorial:	Practical 24	Total: 52	
Title:	Urology				
Lecture:	28	Tutorial:	Practical 48	Total: 76	
Title:	Orthopaedic Surgery				
Lecture:	28	Tutorial:	Practical 48	Total: 76	
Title:	Anesthesia and surgical ICU				
Lecture:	8	Tutorial:	Practical	Total: 8	

B- Professional Information

1 - Overall Aims of Course

- To provide the student with the appropriate knowledge, skills, and attitude which enable him/her to obtain a detailed history from patients with surgical problems, to carry out a proper clinical examination, and to define the appropriate management plan.
- To provide the student with the knowledge and skills needed for initial management of various surgical emergencies, and polytraumatized patient.

2 – Intended Learning Outcomes of Course (ILOs)**A- Knowledge and Understanding:**

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

- A1. Review the surgical anatomy of important regions and organs of the body and their relationship to surgical disease and its treatment.
- A2. Explain epidemiology, risk factors and pathogenesis of common surgical diseases.
- A3. Classify types of surgical infections (acute or chronic) (specific or non-specific) and discuss its prevention and management.
- A4. Identify the principles of management of common pediatric surgical conditions and congenital malformations.
- A5. Discuss basics of organ transplantation
- A6. Mention fluid needs and nutritional requirements of surgical patients.
- A7. Identify the principles of preoperative preparation and postoperative care.
- A8. Identify principles of cancer etiology and discuss cancer prevention and early detection (screening)
- A9. Discuss multidisciplinary management of cancer and basics of palliative care
- A10. Identify the sequence of priorities in the early assessment of the injured patient and learn the principles of triage

- A11. Discuss abdominal trauma, its special investigations and indications for trauma laparotomy
- A12. Identify different types of surgical bleeding and explain how to manage.
- A13. Describe the area and depth of burn and discuss techniques for treating burns & calculating rate and quantity of his fluid needs.
- A14. Recognize various skin grafts & flaps and principles of reconstructive surgery.
- A15. Recognize and classify different causes of acute abdominal pain
- A16. Describe the clinical signs, complications and management of appendicitis
- A17. List causes of small and large bowel obstruction; explain the cardinal features in history and examination
- A18. Recall breast anomalies and describe presentations of different benign breast diseases
- A19. Identify presentation, investigations and modern management of breast cancer
- A20. Identify different causes of neck swelling and describe the characteristic features of each.
- A21. Identify presentations and management of salivary gland diseases (stones, infections and tumors)
- A22. Recall causes of thyroid gland enlargement and discuss proper investigations and treatment of thyrotoxicosis and thyroid failure
- A23. Explain indications and technique of thyroid surgery and discuss the risks and complications of surgery
- A24. Identify the management of thyroid cancer and other malignancies of the neck
- A25. Describe and differentiate types of abdominal wall hernias and identify common surgical approaches to hernias
- A26. Discuss complications and emergency presentations of hernias
- A27. Define deep vein thrombosis, list its risk factors and recognize measures for prevention and treatment.
- A28. List other causes of swollen limb and summarize the clinical features of each
- A29. Describe grades of varicose vein and identify its complications and different lines of treatment
- A30. Classify peripheral limb ischemia (acute and chronic) describe presentations and select investigations and management options of arterial occlusive disease.
- A31. Recognize nature and presentation of aneurysmal disease
- A32. Enlist the surgical instruments and mention their uses, and the different types of catheters, suture materials and meshes
- A33. Recognize the types of surgical incisions and the basic steps of common surgical procedures
- A34. Enlist the etiology of the common urologic emergencies (retention, anuria, and hematuria) and outline the management priorities.
- A35. Describe the major symptoms and the most commonly used investigations for urological disorders including applicable recent modalities.
- A36. Explain the relationship between some general symptoms or illness and urologic diseases and the interaction between uro-genital system and other body systems.
- A37. Identify the common and important bone fractures and soft tissue injuries, describe their complications and management.
- A38. Recognize common diseases, which affect bones and joints,
- A39. Discuss diagnosis and management of chest trauma, thoracic infections and thoracic tumors.
- A40. Identify principles of cardiac surgery & surgical management of cardiac diseases.
- A41. Enumerate common diseases, which affect the brain and nervous system, the common important neurosurgical diseases and emergencies their complications and management.
- A42. Discuss types of head injuries and 2ry brain injury and its avoidance
- A43. Describe the basic steps, and different drugs and techniques needed for the conduction of safe anesthesia.
- A44. Explain the management of unconscious patient, Cardiopulmonary Resuscitation and Management of hypoxic & hypotensive patient.

B- Intellectual skills

By the end of the course, students should be able to:

B1- Synthesize clinical findings from the history and examination and apply clinical reasoning processes to generate differential diagnoses.

B2- Select and prioritize the appropriate investigations needed for every surgical patient

B3- Compare the different management strategies adopted in relation to each condition to formulate adequate management plan

B4- Monitor the effectiveness of therapy and re-evaluate management plan accordingly

C- Professional and practical skills

By the end of the course, students should be able to:

C1- Obtain and accurately record a structured, patient-centred clinical history in an appropriate manner from patients who may be young or old and have acute or chronic surgical conditions

C2- Perform and accurately record a full clinical examination with a focus on the major conditions (and their complications); including assessment the conscious and psychological state of the patient and his/her body habitus, nutritional status and fluid balance.

C3- Perform neck examination including thyroid, salivary glands and cervical lymph nodes

C4. Perform abdominal examination

C5. Perform rectal examination (model)

C6. Apply the principles of primary and secondary survey in the assessment and management of trauma

C7- Insert cannula into peripheral veins in skill lab

C8- Perform suturing of superficial wounds & choose the proper suture material & instrument in skill lab

C9- Practice urethral catheterization for males and females in skill lab

C10- Insert nasogastric tube in skill lab

C11- Adopt (apply) suitable measures for infection control

C12- Interpret basic biochemical tests and radiological investigations that may be performed during diagnosis and follow-up of common surgical conditions.

C13. Recognize the N/E picture of common and important pathological lesions

D- General and transferable skills:

By the end of the course, students should be able to:

D1- Communicate effectively with patients, and their families

D2- Write patients' records and present them in a proper way

D3- Establish professional relation with patients, their families, and the community

D4- Conduct reliable and responsible behaviors

D5- Respect patient will, privacy and dignity

E- Professional attitude:

By the end of the course, students should be able to:

E.1. Adopt an empathic and holistic approach to the patients and their problems.

E.2. Respect patients' rights and involve them and /or their caretakers in management decisions.

E.3. Respect the different cultural beliefs and values in the community they serve.

E.4. Recognize the important role played by other health care professions in patients' management.

E.5. Be aware of the national code of ethics issued by the Egyptian Medical Syndicate.

E.6. Counsel Patients and families suffering from different conditions.

E.7. Ensure confidentiality and privacy of patients' information.

E.8. Treat all patients equally, and avoid stigmatizing any category regardless of beliefs, culture, and behaviors.

F- Communication skills:

By the end of the course, students should be able to:

F.1. Communicate clearly, sensitively and effectively with patients and their relatives, and colleagues from a variety of health and social care professions.

F.2 Show compassion to the patients and their relatives in situations of stress and grief.

F.3. Honor and respect patients and their relatives, superiors, colleagues and any other member of the health profession.

3 – Contents

Serial no.	Topic	Total No. Of hours	Lecture hours	Practical hours
	General surgery		96	144
1	General Principles of surgery <ul style="list-style-type: none"> • Wound healing & management • Acutely injured patient • Acute hemorrhage, blood transfusion & blood substitutes • Hemostasis • Shock • Surgical infections, Cellulitis, Tetanus, Gas gangrene • Surgical nutrition in Surgical patients • Principles of organ Transplantation • Principles of Laparoscopy • Principles of oncology 	10	10	
2	Burn & principles of plastic surgery <ul style="list-style-type: none"> • Types of burns & its complications • Skin graft & flaps • Cleft lip, Cleft palate • Hemangioma & vascular malformation 	10	4	6
3	Skin and soft tissue <ul style="list-style-type: none"> ○ Dermoid cyst, sebaceous cyst, lipoma ○ Skin tumors (BCC & SCC) ○ Melanoma ○ Soft tissue Sarcoma 	10	4	6
4	Vascular surgery <ul style="list-style-type: none"> • Acute & chronic limb ischemia • Arterial aneurysm • Varicose veins & chronic venous insufficiency • DVT, Postphlebotic leg, Leg ulcers • Lymphedema, Differential diagnosis of swollen limbs 	18	8	10
5	Head & neck <ul style="list-style-type: none"> • Thyroid swelling including cancer • Salivary glands, Anatomy, Sialadenitis, Parotid tumors • Differential diagnosis of Jaw swellings • Differential Diagnosis of neck swelling (Medline & Lateral • Cancer tongue and cancer lip • Cleft lip & palate • Cervical rib 	32	12	20
6	Breast <ul style="list-style-type: none"> • Anatomy, embryology and congenital anomalies of the breast. 	18	8	10

Serial no.	Topic	Total No. Of hours	Lecture hours	Practical hours
	<ul style="list-style-type: none"> Benign breast diseases , mastalgia , nipple discharge Breast cancer 			
7	Oesophagus Esophagus: GERD & motility disorder Cancer esophagus & Dysphagia	6	4	2
8	Stomach & duodenum Anatomy & congenital anomalies of the stomach Peptic ulcer disease & complications Cancer stomach	10	6	4
9	Liver & portal vein, spleen Segmental anatomy of the liver Cysts, abscesses & tumors of the liver Portal hypertension Upper gastrointestinal bleeding splenomegaly	10	4	6
10	Biliary system Gall stones, Cholecystitis Obstructive jaundice	12	4	8
11	Pancreas; Acute pancreatitis, Pancreatic tumors	6	4	2
12	Small & large intestine Small Intestinal obstruction Inflammatory bowel disease Diverticular disease of the colon Colonic obstruction & Cancer colon	20	10	10
13	Vermiform appendix D.D of acut abdomen	4	2	2
14	Rectum and anal canal <ul style="list-style-type: none"> Imperforate anus Anatomy, Anal fissure, Hemorrhoids, Rectalprolapse, Cancer rectum Anatomy, Anaorectal suppuration, Anal fistula Bleeding per rectum 	6	4	2
15	Perineum, omentum & mesentery	3	1	2
16	Hernia; <ul style="list-style-type: none"> Anatomy and surgical importance. Inguinal hernia. Femoral ventral hernias, Incisional hernia, recurrent hernia, burst abdomen. 	18	6	12
17	Scrotum <ul style="list-style-type: none"> Varicocele and hydrocele. Diseases of testis and epididymis. D.D of inguino-scrotal swelling 	16	4	12
18	pediatric surgery	1	1	
19	Surgical instruments & tubes	6		6

Serial no.	Topic	Total No. Of hours	Lecture hours	Practical hours
20	X-rays	6		6
21	Jars & surgical pathology	6		6
22	Basic surgical skills (models) <ul style="list-style-type: none"> • Rectal examination • Wound care & stitch • Urethral catheterization • Nasogastric tube • Examination of trauma patient • Vascular access 	12		12
23	<i>Cardiothoracic surgery</i>	52	28	24
	<ul style="list-style-type: none"> • Bronchogenic carcinoma • Mediastinum & Chest Tube • Chest trauma • Suppurative lung diseases • I . H . D • Valvular heart diseases • Cong-H.D • Mediastinum • Diaphragm 			
24	<i>Neurosurgery</i>	52	28	24
	<ul style="list-style-type: none"> • Introduction and CNS examination • Congenital CNS anomalies • Head injuries • Subarachnoid hemorrhage and neurovascular diseases • Brain tumours • Spinal tumours • Spinal fracture • Peripheral nerve injuries 			
25	<i>Urology</i>	76	28	48
	<ul style="list-style-type: none"> • Urological Case taking • Congenital anomalies • Hematuria • Hydronephrosis • Stones • urinary tract trauma • Urinary tract infections • Renal tumors • Bladder cancer • BPH, prostate cancer • Anuria / Retention • Testicular tumors • Erectile dysfunction & Infertility • Renal transplantation 			
26	<i>Orthopedic surgery</i>	76	28	48
	<ul style="list-style-type: none"> • General principles of fractures and dislocations • Congenital orthopedic disorders and birth injuries 			

Serial no.	Topic	Total No. Of hours	Lecture hours	Practical hours
	<ul style="list-style-type: none"> Shoulder and upper limb fractures Pelvis and lower limb fractures Osteomyelitis and arthritis Bone tumors 			
27	Anaesthesia and intensive care	8	8	-
	<ul style="list-style-type: none"> Preoperative assessment and premedication General anaesthesia (inhalational), (intravenous) Complications of GA Regional anaesthesia part Basic life support 			

4 – Teaching and Learning Methods:

- 4.1- Lectures
- 4.2- Clinical rounds
- 4.3- Grand round discussion
- 4.4- Field visits: Field visits to the operative theater
- 4.5- Self learning every student who assigned to certain staff member directed him to prepare a specific subject and then present it in front of his colleagues under supervision of him..
- 4.6- Skills lab.

5 – Student Assessment Methods

Student Assessment Methods

5.1 -	Written exam (essay and MCQ)	to assess	A1-A44/ B1-B4
5.2 -	Structured oral exam	to assess	A1-A44/ c12, C13
5.3 -	Objective structured clinical exam (OSCE)	to assess	A1-A33/ b1-b4/d1-d5/ e1-e8/ f1-f3
5.4	Log-book	to assess	C1-c13

Assessment Schedule

Assessment 1	Semester work	week	12,24,36,48
Assessment 2	Final written exam	week	57
Assessment 3	Final oral exam	week	57
Assessment 4	Final clinical exam	week	57

Weighting of Assessments

Mid-Term Examination	180 mark (20%)
<ul style="list-style-type: none"> General surgery Orthopedic surgery Neurosurgery Urology Cardiothoracic surgery logbook 	80 25 25 25 20 5
Final-Term Examination	450 mark (50%) 320 (70%) essay; 130 (30%) MCQ
Structured oral exam	135 mark (15%)
Objective structured clinical exam (OSCE)	175 mark (15%)
Total	100%

Course - ILOs matrix:

topic	ILOs																					
	Knowledge																					
	a1	a2	a3	a4	a5	a6	a7	a8	a9	a10	A11	A12	A13	A14	A15	A16	A17	A18	A19	A20	A21	A22
General Principles of surgery			√		√	√	√	√	√		√	√										
Burn& principles of plastic surgery						√							√	√								
<i>Skin and soft tissue</i>	√	√						√	√													
<i>Vascular surgery</i>	√	√																				
<i>Head & neck</i>	√	√						√	√												√	√
Breast	√	√						√	√									√	√			
Oesophagus	√	√						√	√													
Stomach & duodenum	√	√						√	√													
Liver & portal vein, spleen	√	√						√	√													
Biliary system	√	√						√	√													
Pancreas;	√	√						√	√													
Small & large intestine	√	√						√	√										√			
Vermiform appendix	√	√						√	√						√	√						
Rectum and anal canal	√	√						√	√													
Perineum, omentum & mesentery	√	√						√	√													
Hernia;	√	√																				
Scrotum	√	√		√																		
pediatric surgery	√	√		√																		
Surgical instruments & tubes																						
X-rays	√	√		√	√	√	√			√	√	√	√	√	√	√	√	√	√	√	√	√
Jars & surgical pathology																						
Basic surgical skills (models)										√	√											
<i>Cardiothoracic surgery</i>	√	√						√	√													
<i>Neurosurgery</i>	√	√						√	√													
<i>Urology</i>	√	√						√	√													
<i>Orthopedic surgery</i>	√	√						√	√													
Anaesthesia and intensive care	√	√																				

topic	ILOs																					
	Knowledge																					
	A23	A24	A25	A26	A27	A28	A29	A30	A31	A32	A33	A34	A35	A36	A37	A38	A39	A40	A41	A42	A43	A44
General Principles of surgery										√	√											
Burn& principles of plastic surgery																						
Skin and soft tissue																						
<i>Vascular surgery</i>					√	√	√	√	√													
<i>Head & neck</i>	√	√																				
Breast																						
Oesophagus																						
Stomach & duodenum																						
Liver & portal vein, spleen																						
Biliary system																						
Pancreas;																						
Small & large intestine																						
Vermiform appendix																						
Rectum and anal canal																						
Perineum, omentum & mesentery																						
Hernia;			√	√																		
Scrotum			√	√																		
pediatric surgery																						
Surgical instruments & tubes										√												
X-rays	√	√	√	√	√	√	√	√	√													
Jars & surgical pathology										√												
Basic surgical skills (models)										√	√											
<i>Cardiothoracic surgery</i>																	√	√				
<i>Neurosurgery</i>																			√	√		
<i>Urology</i>													√	√	√							
<i>Orthopedic surgery</i>															√	√						
Anaesthesia and intensive care																					√	√

topic	ILOs																
	B1	B2	B3	B4	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13
General Principles of surgery	√	√	√	√	√	√				√		√					√
Burn & principles of plastic surgery																	√
<i>Skin and soft tissue</i>	√	√	√	√	√	√											√
<i>Vascular surgery</i>	√	√	√	√	√	√											√
<i>Head & neck</i>	√	√	√	√	√	√	√										√
Breast	√	√	√	√	√	√											√
Oesophagus	√	√	√	√	√	√		√									√
Stomach & duodenum	√	√	√	√	√	√		√									√
Liver & portal vein, spleen	√	√	√	√	√	√		√									√
Biliary system	√	√	√	√	√	√		√									√
Pancreas;	√	√	√	√	√	√		√									√
Small & large intestine	√	√	√	√	√	√		√									√
Vermiform appendix	√	√	√	√				√									√
Rectum and anal canal	√	√	√	√					√								√
Perineum, omentum & mesentery	√	√	√	√				√									√
Hernia;	√	√	√	√	√	√											√
Scrotum	√	√	√	√	√	√											√
pediatric surgery	√	√	√	√	√	√											√
Surgical instruments & tubes																	
X-rays																	
Jars & surgical pathology																	
Basic surgical skills (models)											√	√	√	√	√	√	√
<i>Cardiothoracic surgery</i>	√	√	√	√													
<i>Neurosurgery</i>	√	√	√	√	√	√											√
<i>Urology</i>	√	√	√	√													
<i>Orthopedic surgery</i>	√	√	√	√													
Anaesthesia and intensive care																	

topic	ILOs															
	D1	D2	D3	D4	D5	E1	E2	E3	E4	E5	E6	E7	E8	F1	F2	F3
General Principles of surgery	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Burn& principles of plastic surgery	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
<i>Skin and soft tissue</i>	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
<i>Vascular surgery</i>	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
<i>Head & neck</i>	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Breast	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Oesophagus	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Stomach & duodenum	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Liver & portal vein, spleen	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Biliary system	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Pancreas;	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Small & large intestine	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Vermiform appendix	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Rectum and anal canal	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Perineum, omentum & mesentery	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Hernia;	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Scrotum	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
pediatric surgery	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Surgical instruments & tubes																√
X-rays																√
Jars & surgical pathology																√
Basic surgical skills (models)																√
<i>Cardiothoracic surgery</i>																√
<i>Neurosurgery</i>	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
<i>Urology</i>																√
<i>Orthopedic surgery</i>																√
Anaesthesia and intensive care																√

6 – List of References

6.1- Course Notes

6.2- Essential Books (Text Books)

- 1) Bailey's and Love's *SHORT PRACTICE of SURGERY*
- 2) Essential Surgical Practice.
- 3) CURRENT SURGICAL Diagnosis & Treatment.
- 4) Apley's System of Orthopaedics and Fractures.
- 5) Hand Book of Neurosurgery
- 6) General Urology (Donald Smith)
- 7) Oxford textbook of urology
- 8) Anesthesia & co-existing diseases. and ICU Book 3rd ed.

6.3- Recommended Books

Maingot's Abdominal Operations.
Wilkin's Neurosurgery

6.4- Periodicals, Web Sites, ...etc

- 1) Recent Advances In Surgery
- 2) Surgical Clinics of North America
- 3) www.neurosurgeryonline.com

7 – Facilities Required for Teaching and Learning

a- Overhead Projector

b- Slide Projector

c- Data Show

d- Audiovisual aids

e -Skills lab.

F- Outpatient Clinic

g- Inpatient Ward

h- Operative Theater

Course Coordinator : *Ass. Prof. dr. Ahmed Negm***Head of Department :** *Professor Dr. Nazem Shams*