



Quality Assurance Unit



**Tanta University
Faculty of Medicine**

Department of General & Special Surgery

Course Specifications

General & Special Surgery sixth Year

2015-2016

General & Special Surgery sixth Year Course specifications

University: Tanta

Faculty: Medicine

Department: Surgery

1. Administrative Information

- **Course title: General and special surgery**
- **Code: TMED 06: 01**
- **Department offering the course: General Surgery Department, Orthopedic Surgery Department, Cardiothoracic Surgery Department, NeuroSurgery Department, UroSurgery Department and Anesthesia and Intensive care Department .**
- **Program (s) on which this course is given: M.B.B.Ch**
- **Academic year/ Level : Sixth year of M.B.B.Ch**
- **Date of approval by Department council:...../.../.....**
- **Date of approval by faculty council:/.... /.....**
- **Taught hours: 576hours**

Lectures: 236 hours

Tutorials, Clinical & Skill lab.: 340 hours

○ 216 hr. according to faculty bylaw

20 extra-hours by general surgery

• General Surgery	168 hr
• Orthopedic surgery	28 hr
• UroSurgery	28 hr
• Neurosurgery	6 hr
• Cardiothoracic surgery	6 hr
• Anesthesia, ICU	-

• General Surgery	252 hr
• Orthopedic surgery	32 hr
• UroSurgery	24 hr
• Neurosurgery	10 hr
• Cardiothoracic surgery	6 hr
• Anesthesia, ICU	16 hr

• General Surgery:	6 days/week for 12 weeks
	2 days/week for 12 weeks
• Neurosurgery:	1 day/week for 4 weeks
• Cardiothoracic surg.:	1 day/week for 4 weeks
• Anesthesia, ICU:	1 day/week for 4 weeks
• Orthopedic Surgery:	1½ days/week for 12 weeks
• Uro-surgery:	1½ days/week for 12 weeks

2. Overall Aims of Course

The aim of the course is to:

- Provide the student with the principles of medical ethics, evidence based surgical practice and life long learning.
- Provide the student with the appropriate knowledge, and skills, 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.

- Provide the student with the knowledge and skills needed for initial management of various surgical emergencies, and polytraumatized patient.
- Provide the student with an appropriate background covering various general surgical, vascular, urologic, orthopedic, cardiothoracic, and neurosurgical problems at various age groups.
- Provide the student with the required knowledge and skills to detect cancer at an early stage and to show the plan of management for various stages of the disease

3 Intended Learning Outcomes (ILOs):

a) Knowledge and understanding

By the end of this course, the student will be able to:

- a1. Describe the surgical anatomy and embryology of important regions and organs of the body (including urogenital, nervous, cardio-thoracic and musculoskeletal system).
- a2. Define the etiology and pathology of surgical diseases with special emphasis on traumatic and environmental causes.
- a3. Identify the principles of clinical epidemiology, demography, biological variability and genetics and their role in causation of surgical disorders.
- a4. Describe the clinical symptoms and signs of most important general surgical, urological, orthopedic and cardiothoracic disorders.
- a5. Define the appropriate diagnostic tools and therapeutic lines (medical/surgical) for the surgical disorders (including urological, nervous, cardio-thoracic and orthopedic disorders) with emphasis on their prioritization in management plans.
- a6. Recognize the common and important surgical emergencies (traumatic & non-traumatic) and life threatening surgical illnesses and identify principles of their management with pre and post operative care.
- a7. Describe the types of surgical and urologic incisions and the basic steps of common general & pediatric surgical procedures
- a8. Identify the surgical instruments and their uses.
- a9. Recognize the ethical principles that govern decision-making in surgical practice.
- a10. Define principles of infection control and basics of patients' safety and safety procedures during surgical practice.
- a11. Identify the importance of risk factors, methods of screening and early detection for prevention of surgical diseases and early detection of cancer.
- a12. Describe the etiology and pathology of the common urological emergencies and disorders and the lines of management and explain the relationship between some general symptoms or illness and urological diseases and the interaction between urogenital system and other body systems.
- a13. Recognize different and new modalities in management of urogenital disorders as well as causes and management of renal insufficiency and renal failure.
- a14. Recognize the common diseases, which affect bones and joints, the common & important bone fractures and soft tissue injuries and their complications and

management including first aid measures.

a15 . Identify theoretical & clinical knowledge, diagnosis & management of thoracic trauma, infections and tumors.

a16 . Identify principles of cardiac surgery & surgical management of cardiac diseases.

a17 . Describe the common diseases which affect the brain and nervous system (including head, spine, peripheral nerve injuries as well as congenital disorders) and identify the common & important neurosurgical diseases and emergencies, their complications and management.

a18 . Identify the basic steps needed for preoperative assessment and induction of safe anesthesia.

a19 . Define the idea of general and local anesthesia

a20 . Recognize the physiologic effects of pain and the principles of its management.

a21 . Describe the management of unconscious patient, hypoxic or hypotensive patient including cardiopulmonary resuscitation and fluid therapy.

b) Intellectual Skills

By the end of the course, the student will be able to:

b1. Interpret the basic anatomic, pathologic and physiologic facts and integrate them with patients' symptoms and physical findings into meaningful diagnostic formulations of surgical diseases

b2. Analyze patient symptoms, physical findings to generate a list of differential diagnosis for each problem.

b3. Classify the most appropriate and cost-effective diagnostic investigations for surgical conditions to reach the proper final diagnosis.

b4. Interpret information objectively, express systemic thinking and personal judgment as well as retrieve data from literature for clinical problem solving based on evidence (EBM).

b5. Analyze and integrate the results of history taking, physical examinations and investigations in order to identify, prioritize and assess management strategies for various surgical diseases, emergencies as well as life threatening conditions.

b6. Interpret decisions according to medico-legal aspects and different situations of uncertainty in surgical practice and cope with by proper counseling, consultation and referral.

b7. Classify risk factors for surgical diseases and injuries to determine strategies for appropriate response.

b8. Analyze the principles of sterilization and infection control regulations based on hospital and community levels.

c) Professional and Practical Skills

By the end of the course, the student will be able to:

c1 . Demonstrate basics skills of practical surgical anatomy and pathology.

c2 . Perform and document history taking and physical examination of surgical, urologic, orthopedic or neuro-surgical patients and construct patient's symptoms and signs in meaningful diagnostic terms.

- c3. Perform clear and concise medical records and present patient's data in an organized and informative manner using other sources of information like medical records, patient's family/ friends.
- c4. Choose the proper investigations related to the patient condition including different laboratory and radiological modalities to reach the diagnosis
- c5. Formulate management of patients with common surgical conditions including chronic conditions requiring long-term follow-up, rehabilitation and pain relief.
- c6. Apply first aid measures for management of traumatized patients.
- c7. Perform routine bedside procedures.
- c8. Apply the principles of sterile techniques and infection control guidelines.
- c9. Perform basic life support procedures such cardio-pulmonary resuscitation, air way management and insertion of IV line.
- c10. Perform nasogastric tube insertion and bladder cathetrization
- c11. Perform basic therapeutic techniques such as intramuscular, subcutaneous, intravenous injection as well as suturing of superficial wounds.

d) General and Transferable Skills, Professional attitude and communication skills

By the end of the course, the student will be able to:

- d1. Treat patient as a person, delivering care in an honest, considerate and compassionate manner, and respecting his confidentiality, cultural beliefs, financial conditions, and his rights to be involved in management plans.
- d2. Conduct sincere and effective patient interviews (regardless their social or cultural backgrounds), properly explain their condition and plan of management, obtain consents and convey bad news in a professional way.
- d3. Maintain a professional image [in manner, dressing, speech and relationships], and practice in a responsible attitude.
- d4. Give accurate summaries of patient's illness and present information in organized, clear manner.
- d5. Construct appropriate management strategies for patients with common surgical diseases considering patients or families counseling, cost effectiveness and evidence based medicine (EBM) in management decisions.
- d6. Participate effectively and cooperatively in a team for effective patient management.
- d7. Recognize his own limitations and know when and how to ask for senior consultation or to refer patient to appropriate health facility at appropriate stage.
- d8. Evaluate himself and his work to specify his educational needs and adopt continuous medical education and lifelong learning to update his knowledge.
- d9. Communicate, consult, honor and respect the role of other health-care providers and discuss professional errors in an honest way.
- d10. Ensure patients safety and infection control measures, report any conditions that might jeopardize patient safety and try to solve them.

4-Topics (Contents of the course)

Topic	No. of hrs.		
	Total	Lectures	Clinical/Small groups/Skill lap
General Surgery			
General Surgical principles	38	28	10
GIT & abdominal surgery	158	62	96
Head and neck Surgery, Breast & Endocrine Surgery	112	28	84
Plastic Surgery	36	16	20
Pediatric Surgery	38	17	21
Vascular Surgery	38	17	21
Total	420	168	252
Orthopedic Surgery			
General Principles, Bone softening diseases	2	2	-
Upper Limb common fractures	8	4	4
Lower Limb common fractures	9	4	5
Hip injuries & clinical examination of hip	4	2	2
Knee injuries & clinical examination of knee	6 ½	2	4 ½
Fracture pelvis	4 ½	2	2 ½
Spine trauma	4	2	2
Dislocations	4	2	2
Deformities	4 ½	2	2 ½
Bone & joint infections	6 ½	2	4 ½
Bone tumors	2	2	-
Nerve injuries	5	2	3
Total	60	28	32
Uro-Surgery			
Congenital and pediatric anomalies	13	7	6
Urinary tract infections	6	3	3
Stone disease	7	4	3
Urogenital neoplasm	7	4	3
Voiding disorders	7	4	3
Parasitic infection	6	3	3
Erectile dysfunction, Infertility	6	3	3
Total	52	28	24
Cardiothoracic Surgery			
Principle of Thoracic Surgery	6	3	3
Principles of Cardiac Surgery	6	3	3
Total	12	6	6

Topic	No. of hrs.		
	Total	Lectures	Clinical/Small groups/Skill lap
Neurosurgery			
Congenital & Degenerative disorders	4	1	3
Head & Spinal Trauma	4	2	2
Peripheral nerve injury	4	1	3
CNS Tumors & Infections	4	2	2
Total	16	6	10
Anesthesia			
Preoperative assessment	2	-	2
I.V & Inhalational anesthesia	4	-	4
Muscle relaxant & Endotracheal intubation	4	-	4
Local, Spinal & Epidural anesthesia	2	-	2
Fluid therapy & Blood transfusion	2	-	2
Cardiac arrest & Postoperative pain	2	-	2
Total	16	-	16

Contents of the course

(General Surgery):

1. General Surgical Principles includes:

- Wounds and its management.
- Surgical infections and their management
- Management of the severely injured and critically ill patient including metabolic response to trauma.
- Preoperative assessment and postoperative complications of the surgical patient.
- Hemorrhage, hemorrhagic disorders and blood transfusion.
- Fluids, electrolytes and acid-base balance
- Shock
- Burns
- Nutrition in surgery
- Tumor biology and management
- Organ transplantation
- Medical problems in the surgical patient including metabolic disorders.

2. Plastic Surgery:

- Introduction
- Face, lips and palate
- Surgery of nerves
- Disorders of muscles, tendons and fascia
- Hand infection and Hand injuries.
- Burn management

3. Vascular surgery:

- Arterial injuries
- Acute ischemia
- Occlusive arterial disease includes aneurysms
- Venous system , AV fistula
- Lymphatic system and lymph nodes
- Vascular malformations and hemangioma

4. Head and neck surgery:

- Mouth, cheek and tongue
- Teeth gums and jaws
- Salivary glands and neck
- Pharynx and larynx.

5. Endocrine surgery:

Thyroid: Parathyroid and Adrenal.

6. Breast surgery

7. GIT and abdominal surgery:

- Abdominal trauma
- Abdominal wall hernias
- Endoscopic and laparoscopic surgery
- Acute abdomen
- Esophagus
- Stomach and duodenum
- Liver
- Portal hypertension
- Biliary system
- Pancreas
- Spleen
- Small intestine
- Large intestine and anal canal
- Appendix
- peritoneum, mesentery and omentum

8. Pediatric surgery:

- Pediatric Pre & Postop. care
- Cervical LN in Children
- Ped. Inguinal H, Hydrocele
- Undescended Testis, Acute scrotum
- Hypospadias
- Abdominal wall defects
- Ano-rectal malformations
- CDH, TOF, & RD
- Ped. Upper & Lower GI Bl.

- Evaluation of Ped. Vomiting
- Pediatric Int. Obstruction
- Surgical jaundice in children
- Chr. Constipation in Children
- Common ped. tumors

9. Urology

- Congenital anomalies
- Urinary tract infections
- Stone disease
- Urogenital neoplasms
- Voiding disorders
- Parasitic infection
- Erectile dysfunction
- Endourology
- Infertility

10. Orthopedic surgery

General

- Infection
- Developmental disorders
- Metabolic disorder of bone
- Bone tumors
- Deformities
- Arthritis

Hip

- Perth's disease
- Slipped UFE
- CDH

Knee

- Chondromalacia Patellae
- Recurrent patellar dislocation

Ankle & Foot

- Flat foot
- TEV

Shoulder

- Recurrent dislocation
- Pericapsulitis
- Supraspinatus tendinitis

Elbow

- Cubitus varus & valgus
- Compression neuropathy around elbow
- Tennis Elbow

Wrist & Hand

- Rheumatoid hand
- Tenosynovitis, trigger finger, ganglion
- CTS

Spine

- Scoliosis, Kyphosis, lordosis
- Tumours: primary, & secondary
- Infection

TRAUMA SURGERY

- General principle of bone fractures
- Neurovascular injuries and acute ischaemia
- Open fractures
- Complication of fractures (systemic & Regional)
- Shoulder, arm & elbow Injuries
- Forearm & wrist injuries
- Hand injuries
- Pelvic injuries
- Fractures around hip joint
- Femoral fractures
- Knee injuries
- leg injuries
- Ankle & foot fractures
- Spinal fractures
- Tendon injuries
- Fracture in children
- Basic principle of internal fixation

11- Neurosurgery

Surgery of nerves

- Injuries of peripheral nerves
- Autonomic nervous system
- Nerve tumours

Scalp, skull and brain

- Congenital anomalies of the skull
- Fracture of the skull
- Intracranial injuries
- Hydrocephalus
- Brain abscess
- Intracranial tumors

12-Anaesthesia

- Preoperative assessment & Premedication
- I.V anesthesia
- Inhalational anesthesia
- Muscle relaxant

- Endotracheal intubation
- Local anesthetic-spinal&epidural anesthesia
- Fluid therapy
- Shock
- Blood transfusion
- Cardiac arrest
- Postoperative pain relief

List 1: Clinical cases

- History taking and clinical examination.
- Clinical diagnosis of swellings and tumors.
- Common conditions like: cellulites, abscess, lipomas etc.
- Ulcers, sinuses, fistulas.
- Lesions of the head, scalp, face, lips, tongue, palate, cheek, jaw and floor of the mouth.
- Parotid swellings.
- Swellings at the side, in the midline, and in the submandibular triangle of the neck.
- Thyroid lesions including physiological, nodular, toxic, malignant, and other lesions.
- Breast lesions including lumps, pain and nipple discharges.
- Axillary swellings.
- Clinical diagnosis of acute abdomen.
- Abdominal swellings including organomegaly and swellings in different quadrants.
- Abdominal pain and dyspepsia
- Dysphagia.
- Hematemesis.
- Jaundice of surgical importance.
- Hepatomegaly
- Splenomegaly.
- History taking in anal and rectal diseases.
- Clinical diagnosis of hernia cases: Inguinal, femoral and umbilical.
- Scrotal and inguino-scrotal swellings.
- History taking and examination of a urological case.
- Peripheral ischemia.
- Gangrene.
- Varicose veins.
- Peripheral nerve injuries.
- Edema of the limbs.
- A swelling in the ends and shaft of long bones.
- A swelling in the popliteal fossa.
- Joint diseases.
- Diseases of the spine.

List 2a: List of jars

1 - Intestines

- Colon polyps.
- Carcinoma of the lower rectum
- Carcinoma of the caecum
- Acute appendicitis.
- Typhoid ulcer of the colon

2 - Hepatobiliary

- Chronic calculous cholecystitis.
- Multiple liver metastases.
- Chronic calculous cholecystitis with a solitary cholesterol stone.

3 - Urology

- Hydronephrosis due to pelvi-ureteric junction (PUJ) obstruction.
- Hydroureter and hydronephrosis.
- Renal cell carcinoma (hypernephroma).
- Renal tuberculosis
- Cancer of the urinary bladder with back pressure effects (bilateral hydroureter).
- Renal cell carcinoma
- Polycystic kidney.
- Carcinoma of the urinary bladder.
- Seminoma of the testis.
- Testicular tumor, most probably a seminoma.
- Hydronephrosis.

4 - Spleen

- Injured enlarged spleen.
- Splenomegaly

5 - Breast

- Breast Mass.

6 - Head & Neck

- Solitary thyroid nodule.
- Multinodular goiter.
- Epithelioma of the scalp

List 2b: List of Surgical Anatomy Topics

- The scalp
- The thyroid
- The parotid gland
- The breast
- Axillary and brachial arteries.
- Radial, median and ulnar nerves.
- Abdominal wall.
- The inguinal canal.

- The stomach.
- The rectum and anal canal.
- The liver.
- The spleen.
- The kidneys.
- The ureters.
- Femoral and popliteal arteries.
- Long and short saphenous veins.
- Sciatic, medial and lateral popliteal nerves.
- Muscles: sternomastoid, deltoid, pectoralis major, latissimusdorsi, rectusabdominis, quadriceps, psoas major.

List 2c: List of operative procedures

- Principles of coverage of a skin defect.
- Management of compound depressed fracture of the skull.
- Indications and principles of surgical interference in head injuries.
- Thyroidectomy.
- Principles of management of hyperthyroidism.
- Principles of management of carcinoma of the thyroid gland.
- Management of cold abscess of the neck.
- Hand infections.
- Management of fracture clavicle.
- Management of a sucking wound of the chest.
- Management of hemothorax.
- Management of pneumothorax.
- Acute lactational mastitis and breast abscess.
- Principles of management of carcinoma of the breast.
- Hernia operations.
- Management of inguinal hernia (technique).
- Management of strangulated inguinal hernia.
- Surgical management of Hydrocele.
- Varicocelectomy.
- Appendectomy.
- Management of a stab wound in the right hypochondrium.
- Management of rupture spleen.
- Principles of management of adhesive intestinal obstruction.
- Management of bleeding esophageal varices.
- Management of bleeding peptic ulcer.
- Management of perforated duodenal ulcer.
- Management of infantile ileocecal intussusception.
- Principles of management of hemorrhoids.
- Management of acute anal fissure.

- Management of a stone in the left kidney.
- Exposure of the ureter.
- Management of stone ureter.
- Acute urinary retention: causes and treatment.
- Male circumcision.
- Management of fracture shaft femur.
- Management of fracture neck femur.
- Principles of management of arterial injuries.
- Above the knee amputation.

List 3: Bedside skills

- IV, IM and SC injections. Insertion of IV cannula. Insertion of urinary catheter. PR/PV examination. Insertion of a nasogastric tube. Simple skin suturing

The name of course	General Surgery
Code of course	06: 01

University: Tanta
Faculty: Medicine
Department: General Surgery

Category	Topic	Wk	Knowledge & Understanding	Intellectual Skills	Professional Skills	General transferable skills Professional attitude and communication skills
General Surgical Principles (6days/wk)	1. Wounds & Wound Healing	1st	a2,6,7,10	b7,8	c3-9,11	d10
	2. Hge. & Shock		a6	b5	c6-11	d5,6
	3. Hemostasis		a6	b5,8	c6-11	d5,6
	4. Blood Transfusion		a6	b5	c6-11	d5,6,10
	5. Fluid & Electrolytes	2nd	a6	b5	c6-11	d5,6
	6. Acid Base Balance		a6	b5	c6-11	d5,6
	7. Organ transplantation		a9,10	b6	c3	d4-10
	8. Trauma		a6	b5,6	c3-11	d2,4-7
	9. Surgical Infections	3rd	a3-5,10,11	b1-8	c2-5,8	d5,10
	10. Surgical oncology		a2-5,11	b1-5	c1-8	d1,2,4-9
	11. Surgical Nutrition		a5,6	b5,7	c3,7,8,10	d5,6
	12. Evidence Based Medicine			b4		d5,8
Head & Neck + Endocrine & Breast (6days/wk)	1. Salivary Glands	4th	a1-5,7	b1-5	c1-5	d1-5
	2. Thyroid Gld.		a1-5,7	b1-5,7	c1-5	d1-6
	3. Parathyroids	5th	a1-5,7	b1-5	c1-5	d1-5
	4. The Neck		a1-5,7	b1-8	c1-5	d1-5
	5. Adrenal Gland	6th	a2-5,11	b1-5	c1-8	d1,2,4-9
	6. Breast		a1-5,7,11	b1-8	c1-5	d1-6

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Category	Topic	Wk	Knowledge & Understanding	Intellectual Skills	Professional Skills	General transferable skills Professional attitude and communication skills
GIT and abdominal Surgery (6days/wk)	1) Esophagus	7 th	a1-5,7	b1-5,7	c1	d1,5-7
	2) Stomach & Duodenum		a1-7	b1-5,7	c1-5,7,8,10	d1,5-7
	3) Liver	8 th	a1-7,9,11	b1-7	c1-5	d1-9
	4) Portal Hypertension		a1-8	b1-7	c1-5	d1-9
	5) GB & Biliary System	9 th	a1-5,7	b1-5,7	c1-5	d4-7
	6) Pancreas		a1-7	b1-5,7	c1-5	d4-7
	7) Spleen	10 th	a1-7	b1-5,7	c1-5	d1-7,10
	8) Peritoneum & Retroperitoneum		a1-7	b1-5,7	c7-9	d4-7
	9) Mesentery		a1-7	b1-5,7	c1-5,10	d4-7
	10) Small Intestine	11 th	a1-7,10	b1-5,7	c1-5,7-10	d2,5,6
	11) Appendix		a1-7,10	b1-5,7	c1-5,7-10	d2,5,6
	12) Colon		a1-7,10	b1-5,7	c1-5,7-10	d2,5-7
	13) Rectum & Anal canal	12 th	a1-7	b1-5,7	c1-5,7-10	d2,4-7
	14) Upper GI Bleeding		a2-6	b1-5,7	c1-5,7-10	d2,4-7
	15) Lower GI Bleeding		a2-6	b1-5,7	c1-5,7-10	d2,4-7
	16) Abdominal wall & Hernia		a1-7,11	b1-5,7	c1-5	d1-5
Plastic Surgery (2days/wk)	1) Principles of Plastic Surgery	1 st	a7	b4-6	c8,11	d5,7
	2) Burn		a2,5,6,10	b4-8	c5-11	d1-7,10
	3) Face, lips & Palate	2 nd	a1-5,7	b1-3,5	c1-5	d1-6
	4) Mouth, Tongue & Jaws		a1-5,7	b1-3,5	c1-5	d1-6
	5) Skin & Subcut. Tissue	3 rd	a1-5	b1-3,5	c1-5	d1-5
	6) Chr. Leg Ulcers	4 th	a1,2,4,5	b1-5,7,8	c1-5	d1-5
	7) Ms, Tendons, Fascia & Hand		a1-7	b1-3,5,7	c1	d6,7

Category	Topic	Wk	Knowledge & Understanding	Intellectual Skills	Professional Skills	General transferable skills Professional attitude and communication skills
Pediatric Surgery (2days/wk)	1. Pediatric Pre & Postop. care	5 th	a6	b5,8		d6
	2. Cervical LN in Children		a1-5	b1-5	c1-5	d1-5
	3. Ped. Inguinal H, Hydrocele		a1-7	b1-5	c1-5	d1-5
	4. Undescend Testis, A scrotum		a1-7	b1-5	c1-5	d1-5,7
	5. Hypospadias	6 th	a1-7	b1-5	c1-5	d1-5,7
	6. Abdominal wall defects		a1-7	b1-5,7	c1-5	d1-7
	7. Ano-rectal malformations		a1-7	b1-5,7	c1-5	d1-7
	8. CDH, TOF, & RD		a1-7	b1-5,7	c1-5	d5-7
	9. Ped. Upper & Lower GI Bl.	7 th	a2-6	b1-6	c1-6	d4-7
	10. Ped. Vomiting		a3-6	b1-5,7		d4-7
	11. Pediatric Int. Obstruction		a2-6	b1-5,7	c1-5,7-10	d4-7
	12. Surg. Jaundice in Children	8 th	a2,5	b1-5	c1-5	d5,6
	13. Chr. Constipation in Child.		a2,5,6	b1-5,7	c1-4	d5-7
	14. Common pediatric tumors		a1-5	b1-5	c1-5	d1-5
Vascular Surgery (2days/wk)	1. Acute Ischemia	9 th	a1,2,4-8	b1-7	c1-5	d2,4,5,7
	2. Chr. Ischemia		a1-5	b1-7	c1-5	d1-7
	3. Gangrene, Diabetic foot		a1-3	b1-8	c1-5,7,8	d1-7,10
	4. Principles of Amputation	10 th	a7-10	b4-6,8	c5	d2,5
	5. Arterial Aneurysm		a1-5	b1-7	c1-5	d5,7
	6. Vascular Injuries		a1-8	b1-7	c1-4,6-9	d2,4,5,7
	7. TOS		a1-5	b1-5	c1-5	d5
	8. AV fistula	11 th	a3,4,7	b5-7	c1	
	9. Hemangiomas & VMs		a2-5	b1-5,7	c1-4	d1-5
	10. Varicose veins	12 th	a1-5,7,8	b1-7	c1-5	d1-5
	11. DVT		a2-5	b1-7	c1-5	d1-5
	12. Lymphatic system		a1-5	b1-8	c1-5	

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Category	Topic	Wk	Knowledge & Understanding	Intellectual Skills	Professional Skills	General transferable skills Professional attitude and communication skills
Orthopedic Surgery (1½ d./wk) For 12 wks	1. Principles of orthopedic surg.		a6,14	b4-6	c8,11	d5,7
	2. Fractures and dislocations		a6,14	b5,6	c3-11	d2,4-7
	3. Bone tumors and infection		a2-5,10,11,14	b1-8	c1-8	d1,2,4-10
	4. Bone deformities , softening		a14	b5,6	c3-11	d2,4-7
	5. Nerve injuries		a6,17	b1-5	c1-8	d1,2,4-9
Urology Surgery (1½ d./wk) For 12 wks	1) Congenital, Ped. disorders		a1-7, 12, 13	b1-5	c1-5	d1-5,7
	2) Infections, Neoplasm		a2-5,10,11-13	b1-8	c1-8	d1,2,4-10
	3) Stones, voiding disorders		a12-13	b1-5,7	c1-5	d1-5
	4) Erectile , fertility disorders		a12-13	b1-5,7	c1-5	d1-5
Cardio-thoracic Surgery (1d./wk) for 4 wks	1) Principles of thoracic surg.		a15	b1-5,7	c1-5	d1-5
	2) Principles of cardiac surg.		a16	b1-5,7	c1-5	d1-5
Neuro-Surgery (1d./wk) for 4 wks	1) Congenital,degenerative dis.		a1-7, 17	b1-5	c1-5	d1-5,7
	2) Head, spine trauma		a6,17	b1-5	c1-8	d1,2,4-9
	3) Peripheral nerve injury		a6,17	b1-5	c1-8	d1,2,4-9
	4) CNS tumors and infection		a2-5,10,11,17	b1-8	c1-8	d1,2,4-10
Anesthesia (1d./wk) for 4 wks	1. Preoperative assessment		a18,19	b2,5	c6-11	d5,6
	2. Principles of general anesth.		a18,19	b5	c6-11	d5,6,10
	3. Principles of regional anesth.		a19	b5	c6-11	d5,6,10
	4. Fluid, blood transfusion		a6,21	b5	c6-11	d5,6,10
	5. Cardiac arrest		a6,21	b5	c6-11	d5,6,10
	6. Pain management		a20	b1-3,5	c6-11	d5,6,10

5-Teaching and learning Methods

	Theoretical lectures.	Clinical rounds	Self Learning
Topics covered	All theoretical contents of the course	-Clinical cases, -Jars,X-rays, Surgical tools -Anatomy and operative procedures (List1, 2). -Bedside techniques (List3).	Advances in surgical diagnosis and management techniques
Method of teaching	Lectures	-Tutorial -Surgical Rounds -Attendance in the ER, OR and outpatient clinic -Skill lab.Attendance	Directing the students to search the medical literature using library and websites and present it.
Place	Main auditorium	-Teaching rooms -Surgical wards -Outpatient clinic -E.R -O.R -Skill lap.	-At home -Library -Teaching rooms
Time of the day	Surgery A (General Surg.) From 8:30am for 1-1½ hrs. Surgery B (Special Surg.) From 11:30am for 1-1½ hrs.	Surgery A (General Surg.) From 11 am for 1½ -3 hrs. Surgery B (Special Surg.) From 9 am for 1½ -3 hrs.	Once weekly

• **Taught hours:**

Lecture: 168 hrs Tutorials, Clinical and Skill lap.: 252 hrs Total: 420 hrs

- **Teaching in lectures includes:**

- Theoretical lectures in main auditorium supplied with righting board, over-head projection, desktop and data-show apparatus.
- Non-scheduled shock exams are held at lectures to assess students' attendance, knowledge and understanding.

- **Teaching in surgical wards includes:**

- Clinical demonstration and bedside teaching.
- Staff rounds with active participation of students for clinical, ethical and communicational skills.
- Observation of bedside procedures.
- Each student must present the history of five surgical cases and have them documented in a log book

- **Teaching in small group rounds includes**

- Learning of basic anatomic and pathologic facts (Jars) related to surgical conditions
- Learning of basic diagnostic tools and surgical procedures
- MCQ sessions, problem solving sessions.
- Presentations done by students; each student should present a 15 min presentation of one surgical subject and have them documented in a log book
- Interactive revision sessions

- **Teaching in ER & OR includes**

- Learning of basic surgical skills and principle steps of common surgical procedures
- Principles of sterile techniques and infection control guidelines
- Each student must attend two weeks (Four hours a day) in the emergency room and write a report on 15 cases in a log book
- Each student must attend at least five surgical operations (3minors and 2 major) and have them documented in the logbook.

- Teaching in ER & OR includes

- Performing basic life support procedures (CPR, Airway management, IV line insertion)
- Bladder catheterization, endo-tracheal intubation and Ryle insertion
- Basics therapeutic lines (IM,IV or SC injections) as well as suturing principle

Teaching method	Learning of:	To serve ILO #
Lectures	Knowledge & Understanding & Intellectual skills	a1-21 b1-8
Tutorials	Knowledge & Understanding & Intellectual skills	a1,2,5,7,8 b2-4
Ward rounds (Clinical)	Professional & practical skills Attitude & communication skills	c1-5,7,8 d1-5,10
ER , OR rounds	Professional & practical skills Attitude & communication skills	c2-8 d1-10
Skill Lap. rounds	Professional & practical skills	c7-11

Schedule and place of lectures and small round sessions:

General and special surgery group will be taught simultaneously in two groups (three months each). **Surgery group A** will include general surgery topics (General principles, Head, Neck, Endocrine, Breast surgery). **Surgery Group B** will include (Vascular, Plastic, Pediatric, Orthopedic, Urology, Cardiothoracic, Neurosurgery and anesthesiology)

1. General Surgery

a. Surgery A (12 weeks for each rotation)

- i. Lectures are given on Saturdays, Sundays, Mondays, Tuesdays, Wednesdays, and Thursdays of every week in every rotation (for 12 weeks). They are given in Tanta Educational Hospital Auditorium from 8.30 for 1- 1½ hours .The hall is provided with writing boards, overhead projection, desktops and data show apparatus.
- ii. Small groups (general surgery) are given from 11 AM for 1½ -3 hours in:
 - 2teaching rooms are present in Tanta Educational Hospital supplied by standard equipments.
 - The general surgery department(patients halls), where the students get clinical contacts with the patients (Ward rounds)
 - Skill Lap. , ER and OR rotations.

b. Surgery B (12 weeks for each rotation)

Course is given on Sundays and Tuesdays every week in every rotation as follow.

- Plastic Surgery : 4 weeks
- Pediatric Surgery: 4 weeks

- Vascular Surgery: 4 weeks
 - i. Lectures are given in Tanta Educational Hospital Auditorium from 11.30 for 1-1½ hours. The hall is provided with writing boards, overhead projection, desktops and data show apparatus.
 - ii. Small groups (Special surgery) are given from 9 AM for 1½ -3 hours in:
 - 2 teaching rooms are present in Tanta Educational Hospital supplied by standard equipments.

2. Urology

• Lecture: Lectures hall; in Tanta Educational Hospital (Capacity 150 students), equipped with video projector, overhead projector and connected by audiovisual facilities to the operating theaters in the urology dep.

One large lecture hall in the outpatient clinic supplied with data show (capacity of 250 students). Lectures will be given for 1 ½ -2 hours daily (from 12PM), 1 ½ days weekly for 12 weeks

- Small group classes: 2 in the outpatient clinic. 2 computer labs are available in urology department and the other in the outpatient clinic.
- Rounds will be given (each is 1-1 ½ hour) 1 ½ days weekly for 12 weeks

3. Orthopedic

• Lectures: Four Lectures will be given for 1 ½ -2 hours daily, 1 ½ days weekly for 12 weeks. Lectures will be held in the lecture halls inside the 3rd floor of the outpatient clinics building. Sixth year Students are divided to two groups in the academic year and then each group will be divided into further two groups learned at the same time in two halls. Lectures are traditional, using the recent learning facilities such as Data-show.

• Clinical rounds: 2 hours daily (8:30-10:30 AM), 1 ½ days weekly for 12 weeks. Students will be divided into 4 sub-groups; each group of student is about 70 students. Two subgroups in tutorial learning at outpatient clinic halls. The other two group clinical rounds at outpatient clinic and inpatient wards.

4. Cardiothoracic, Neurosurgery and Anesthesia

• Four big teaching rooms are present in the outpatient clinic supplied by slandered equipments

• Cardiothoracic

- Lectures: 1.5 hour for each; 1day weekly for 4 weeks
- Rounds: 1.5 hours for each; 1day weekly for 4 weeks

• Neuro-Surgery

- Lectures: 1.5 hour for each; 1day weekly for 4 weeks
- Rounds: 2.5 hours for each; 1day weekly for 4 weeks

• Anesthesia

Rounds: 4 hours for each; 1day weekly for 4 weeks

6-Student Assessment:

a) Methods used

1. Midterm and continuous assessment
 - a. End round clinical exams
 - b. Midterm written exams (MCQ)
 - c. Non-scheduled Shock (MCQ)
 - d. Tools exam
 - e. Log book
2. Final assessment
 - a. Final written exam
 - b. Final oral exam
 - c. Final clinical exam
 - d. Final tools exam

b) Assessment schedule

1. Assessment 1 (end group A) after 12 weeks
2. Assessment 2 (end group B) after 12 weeks
3. Assessment 3 (tools examination) after 24 week (Group A & B)
4. Assessment 4 (Mid-term written)
5. Assessment 5 (final exam)

c) Weighing of assessments

Exam	Marks	% of Total
Mid-term examination and continuous assessment	180	20%
• Mid-term written exam	90	10%
• End rounds clinical exams	65	7.22%
• Non-scheduled shock exam	10	1.11%
• Log book	5	0.55%
• Tools	10	1.11%
Final term examination	720	80%
• Written examination	450	50%
• Oral examination	100	11.11%
• Clinical examination	140	15.55%
• Tools	30	3.33%
Total	900	100%

Minimum acceptable attendance is 75%; students who fail to attend that percentage of activities will not be allowed to take the end of term examination. They may be allowed to take it during a subsequent term if they satisfy the required attendance. Students need to attend at least 60% in order to sit for the final examination.

d) Grading System:

Grading system		Subtotal (marks)	Total (marks)
<u>Midterm and Continuous Assessment</u>			180
General Surgery	• End of Group A clinical exam	13	
		12	
	• End of Group B OSCE exam	4: Plastic Surgery 4: Pediatric Surgery 4: Vascular Surgery	
	• Log book	5	
	• Shock exam.	10	
	• Tools	10	
Special Surgery	• Orthopedic	15	
	• Urology	15	
	• Anesthesiology	10	
Mid-term written exam (MCQ)		90 35: General Surgery (<i>Surgery A</i>) 5: Plastic Surgery 5: Pediatric Surgery 5: Vascular Surgery 15: Orthopedic 15: Urology 10: Anesthesiology	
<u>Final examination</u>			720
• Written paper 1		150 105: GIT and abdominal Surgery 45: Pediatric Surgery	
• Written paper 2		150 45: General Principles 60: Head, Neck, Breast, Endocrine 45: Vascular Surgery	
• Written paper 3		150 30: Plastic Surgery 40: Orthopedic 40: Urology 20: Neurosurgery 20: Cardiothoracic surg.	
Clinical			
• 5 OSCE stations		140	
Oral			
• 4 OSPE stations (Jars, X-ray, Anatomy, Operative)		100	
• Tools		30	
<u>Total</u>			

e) Attendance criteria:

1. Practical rounds

- The minimum acceptable attendance in the surgical rounds is 75%. Students who fail to attend that percentage of activities will not be allowed to take the end of term examination and the marks allocated for this exam would be recorded as a proportion from the final written score.
- The student is not allowed entry to special surgery exam if his absence exceeds 9 days.
- Students need to attend at least 60% of the rounds to be able to sit for the final exams.
- The student is expected to present at least one seminar and five clinical cases. This attendance should be documented in the student's log-book and countersigned by the tutor giving the class.
- He is required to attend 15 emergency cases, attend 5 staff rounds and 5 surgical operations during his/her 6th year rotation. This attendance should be documented in the student's logbook and countersigned by at least an assistant lecturer.

2. Clinical presentation Skills

3. Staff rounds treatment strategies, general skills and attitude

Tool		Assessment of:	To serve ILO #
Written examination		Knowledge ,understanding and intellectual skills	a1-7,11-17,21 b1-5, 7
Clinical examination (long and short case).		Practical , communication skill Professional attitude	a9 & b6 c1-5 & d1-10
Oral Examination (Jars, Anatomy, X-ray, Instruments)		Knowledge, understanding, intellectual and professional skills	a1-4,7,8,10 b1,3,4,8 & c1,4,5
Log Book	ER& OR attendance	Data acquisition and skills related to treatment strategies	a4-10,18-21 & b5,6,8 c2-5 & d1-10
	Skill Lap.	Professional & practical skills	c6-11 d6,7,9,10
	Seminars (Self-learning)	General, transferable and communication skills	d3,4,6,8
End round special surgery exams (Oral)		Knowledge, understanding, intellectual and professional skills	a12-14,18-21 b1-5

*** Examination description:**

I. Written exam: 3 written examination paper on 3 days, each paper's duration is 3 hours

- First paper (150 marks)
- Second paper (150 marks)
- Third paper (150 marks).

II. Mid-term written exam (MCQ):

III. End of Group A Clinical exam (Case presentation); 13 marks:

The student is allowed 10 minutes with every patient during whom he/she is expected to take a history and perform a general and local examination. Then the student will present the case to the examiner who may ask the student to demonstrate specific parts of the examination, interpretation of findings, differential diagnoses, management plan and any related surgical knowledge, professional attitude and communication skills

IV. End of Group B Clinical exam (OSCE); 3 stations -12 marks:

- Plastic Surgery : 1 station, 4 marks
- Pediatric Surgery: 1 station, 4 marks
- Vascular Surgery: 1 station, 4 marks

The student is allowed 3 minutes for each station during whom he/she is ask to perform certain clinical skills (take a history, perform a general or local examination) and to demonstrate specific parts of the examination, interpretation of findings, differential diagnoses, management plan as well as professional attitude and communication skills

V. Final exam Clinical exam (OSCE); 5 stations -140 marks:

The student is allowed 7 minutes for each station during whom he/she is ask to perform certain clinical skills (take a history, perform a general or local examination) and to demonstrate specific parts of the examination, interpretation of findings, differential diagnoses, management plan as well as professional attitude and communication skills

VI. Oral exam (OSPE); 4 stations - 100 marks:

1. The student is allowed to pick one or more **operative topic** and then he is asked by the examiner to present his knowledge in this topic. Then the student is given **surgical instrument(s)** and asked to identify it and discuss its use.
2. The student is given a **pathology specimenjar(s)** and is asked to identify the specimen and asked about the theoretical knowledge related to it.
3. The student is asked to identify and interpret a **radiological tooleg**: X-ray film(s) and related theoretical knowledge.
4. Spot diagnosis of **anatomic part** and discuss its **surgical importance**.

VII. Log book(clinical cases, emergency cases, staff rounds, and OR attendance).

VIII. Tools exam:

- 5 different slide presentation showing anatomic picture, radiologic picture, surgical instruments and operative step. The student is asked to identify and interpret the presented pictures.

The minimum passing score is 540, provided at least 135 are obtained in the written examination.

7- List of References

7.1 Course notes

7.2 Text book

7.3 Recommended books

- Browse's Introduction to the Symptoms & Signs of Surgical Disease. Browse NL, Black J and Burnand KG (Editors). 4th edition. 2011
- Bailey & Love's Short Practice of Surgery. Williams NS, Bulstrode JK and O'Connell PR (Editors). 23rd edition. 2000
- Kasr El-Aini Introduction to Surgery. Galal S, Mohsen A and Korashi E (Editors). 7th edition. 2011
- Oxford Handbook of Clinical Surgery. McLatchie G, Borley N and Chikwe J (Editors). 3rd edition. 2007

7.4 Periodicals and web sites

- <https://www.facebook.com/groups/104360669735517/>

8-Facilities for learning and teaching resources

1. Lecture halls equipped with audiovisual aids
2. Skill Lab
3. Video conference facility
4. Hospital facilities for bed side clinical teaching
5. Operating room for demonstration
6. Endoscopic facilities
7. Wireless internet facilities

We verify that the above Course and the analysis of students and external evaluator opinions are accurate.

Course coordinators and head of department

Name: Prof. Mohammed Attia Signature

Name: Prof. Mohamed El Hneidy Signature

Name: Prof. Hamdy Sedky Signature

Name: Prof. Ashraf El Attar Signature

Name: Dr. Sherif Saber Signature

Head of quality assurance unit:

Name: Signature

Matrix of the course ILOs with the Program ILOs															
Course ILOs	Program ILOs					Knowledge & Understanding	Intellectual Skills	Professional & Practical Skills	General, Transferable, Professional attitude and Communication Skills						
	a.1.	a1	a2												
knowledge & understanding	a.2.	a3	a4	a5											
	a.3.	a13	a19												
	a.4.	a4													
	a.5.	a6	a7												
	a.6.	a8	a9												
	a.7.	a9													
	a.8.	a9													
	a.9.	a16													
	a.10	a14	a17												
	a.11	a10	a11												
	a.12	a3	a9												
	a.13	a9													
	a.14	a9													
	a.15	a5	a6												
	a.16	a9													
	a.17	a5	a6	a7	a8	a9									
	a.18	a8													
	a.19	a9													
	a.20	a9													
	a.21	a8	a9												
	Intellectual skills	b.1.					b1	b5							
b.2.						b5									
b.3.						b2									
b.4.						b4	b9	b11							
b.5.						b3	b6	b7							
b.6.						b10	b13								
b.7.						b8									
b.8.						b12									
Professional & practical skills	c.1.							c1							
	c.2.							c2	c3	c4					
	c.3.							c5							
	c.4.							c6							
	c.5.							c6	c7						
	c.6.							c8							
	c.7.							c15							
	c.8.							c23							
	c.9.							c10	c13	c17	c19				
	c.10.							c20	c21						
	c.11.							c11	c12						

Matrix of the course ILOs with the Program ILOs																							
Course ILOs \ Program ILOs		Knowledge & Understanding					Intellectual Skills					Professional & Practical Skills					General, Transferable, Professional attitude and Communication Skills						
General, transferable, Professional Attitude and communication skills	d.1.																	d1	d2	d3	d5	d18	d19
	d.2.																	d8	d9	d10			
	d.3.																	d17					
	d.4.																	d14					
	d.5.																	d2	d22	d24			
	d.6.																	d15	d20				
	d.7.																	d7	d15				
	d.8.																	d12	d13	d29			
	d.9.																	d4	d7				
	d.10																	d23	d26	d27			