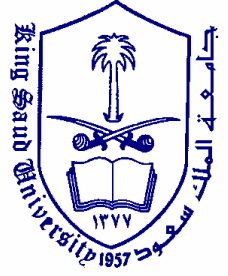


**DEPARTMENT OF SURGERY
KING SAUD UNIVERSITY
COLLEGE OF MEDICINE
RIYADH, K.S.A**



SURGICAL CURRICULUM

*1428-1429
(2007-2008)*

SURGERY COURSE 451

(ANNUAL SYSTEM)

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**DEPARTMENT OF SURGERY
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1. Welcome again to the Department of Surgery

Dear Student,

It is our pleasure on behalf of the Department of Surgery to welcome you at the start of your course and wish you the best of luck with your studies. You have been through the previous surgical course 351 and you already know how to take a good history from a patient with surgical problem and how to do a proper physical examination for different systems of the body. It is our duty to see that the time is well spent and the course objectives are fully satisfied.

An important cornerstone in medicine is taking history and clinical examination of the patients to demonstrate the normal and abnormal signs. In spite of the advancement of medical investigations there will be no substitute to proper history taking and conducting clinical examination. So this issue will be revised and discussed again in this course.

However, in addition to history taking & physical examination, you will be able to discuss the appropriate investigations for common surgical problems and to reach a possible diagnosis or a sound differential diagnosis and to suggest a reasonable approach to treat and solve the surgical problems of the patient at the end of this course.

We wish you best luck and we hope to spend a fruitful time during this course.

**DEPARTMENT OF SURGERY
KING SAUD UNIVERSITY
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GENERAL SURGERY PRACTICE COURSE

Course : 451-SURG (Males and Females).

Title : General Surgery Practice.

Credit Hours : 11.

Contact Clock Hours: Theoretical (Tutorials) & Practical (Clinical sessions).

2. OBJECTIVES OF THE COURSE:

At the end of the course:

- a. The student will be able to diagnose ie proper history taking, and systemic physical examination of the common surgical problems.
- b. He will be able to suggest and discuss an appropriate investigations and sound approach to the problem of the patients and suggestion of possible treatment.
- c. The students should be able to take care of general surgical problems.
- d. It is the core of the objective To ensure graduating a safe medical doctor.

3. CONTENTS of the Course:

General Guide line:

- The course contains a theoretical and clinical parts to fulfill the objectives of the course.
- The course will be clinically oriented in its both parts.
- The course is composed of 11 credit hours in the medical school curriculum.

Main Contents:

- This course covers all the surgical diseases that a general practitioner would be called to diagnose and take care and is composed of clinical sessions in the hospitals supplemented by tutorial sessions which are also modified to the problem oriented type.
- The students are posted full time in the hospital to participate in the routine work of the surgical unit, which involves attending the surgical ward work, the operating theatres, surgical outpatient clinics skill lab sessions and emergency cases in the Accident & Emergency Department.

4. COURSE OUTLINE:

A. CLINICAL:

- i. The clinical sessions are the main part of the course, where students will learn the principles of history taking, clinical examination and problem solving approach for the common surgical diseases.

- ii. 10-12 weeks full time posting in the Department of Surgery, 5-6 weeks in General Surgery and 5-6 weeks in subspecialties. The training programme involves:
 1. Bedside teaching.
 2. Attending operative sessions.
 3. Attending outpatient clinics.
 4. Special procedure sessions and routine surgical ward work.
 5. Skill lab sessions
 6. Emergency clinical sessions in the ER.

- iii. All of the different clinical allocations will serve the main objectives of the course. The clinical part includes rotation in the following subspecialties,
 1. One complete week in Urology.
 2. One complete combined week in Pediatric and Thoracic.
 3. One complete combined week in Vascular and Cardiac .
 4. One complete week in Anesthesia and CPR.
 5. One complete combined week in Neurosurgery and Plastic Surgery
 6. Five complete weeks in General Surgery & ER.

The following table shows the distribution of clinical groups of students in surgical units. Each group is formed of 8-11 students:

<u>G.S</u>	<u>Subspecialty</u>
A1	D
A2	E
B1	F
B2	G
C	H

This is in the first five weeks, the second five weeks will be the following:

<u>G.S</u>	<u>Subspecialty</u>
D	A1
E	A2
F	B1
G	B2
H	C

iii. Skill Lab:

The skill lab has been introduced recently each male group will pass by the skill lab (see table attached).

SAT		1:00-03:00	F
SUN		09:00-11:00	A1
MON		09:00-11:00	A2
TUE		1:00-03:00	G
WED		09:00-11:00	E
SAT		1:00-03:00	D
SUN		09:00-11:00	B1
MON		09:00-11:00	B2
TUE		1:00-03:00	C
WED		09:00-11:00	H

The students will learn the following skills:

- a. Injection Arm.
- b. Suture Tutor.
- c. PR. Exam.
- d. Breast Exam.
- e. Male/Female Catheterization Trainer.
- f. Infusion / Injection Arm Trainer.

B. TUTORIALS:

Tutorial sessions (1 hour) daily, 5 days a week for 10 weeks from (3:00-4:00pm).

- The tutorials have been modified to be problem based rather than topic based.
- The objectives of each tutorial will be clearly identified (see attached appendix).
- The following is the new list of the tutorials for the year 1428-1429.

General Surgery:

- Surgical Infections (Presentation & Management)
- Hematemesis (Upper GI Bleeding)
- Management of patient with Breast lump and nipple discharge
- Bleeding Per Rectum (Lower GI Bleeding)
- Epigastric Pain and Mass
- Lateral Neck Mass & other soft Tissue Lesions
- Right upper Quadrant Abdominal Pain & Mass
- Hernias
- Nutritional Support
- Jaundice
- Central Abdominal Pain Mass & Distention
- Trauma
- Adrenal & Other Endocrine Lesions
- Preoperative Assessment & Management

- Obesity
- Anal Pain & Discharge
- Change of Bowel Habit
- Right Lower Quadrant Abdominal Pain & Mass
- Post Operative Assessment , Management and Complications
- Left Upper Quadrant Abdominal Pain & Mass
- Left Lower Quadrant Abdominal Pain & Mass

Anesthesia

- Anesthesia: Fluid Therapy, electrolytes and acid base disorders
- Anesthesia: Pain Management
- Blood Transfusion & Substitutes and Reactions
- ICU monitoring and management of critically ill patients

Thoracic

- Management of patients with lung lesions
- Presentation & Management of Patients with Dysphagia

Vascular

- Presentation & Management of Swollen leg including Varicose Veins
- Presentation & Management of Ischemic leg & ulceration

Urology

- Presentation & Management of Common Problems In Pediatric Urology

- Presentation & Management of Patients with Renal Colic
- Lower Urinary Tract Symptoms (LUTS)
- Scrotal Swellings
- Presentation & Management of patients with Hematuria & Renal Masses.

Plastic

- Presentation & Management of Common Problems in Plastic Surgery
- Presentation & Management of Burn Patients
- Presentation & Management of Skin lesions

Neurosurgery

- Presentation & Management of spinal cord lesions
- Presentation & Management of Patients with Head Injury
- Presentation & Management of Intracranial tumours & Infections

Emergency

- Surgical Emergencies

Cardiac

- Assessment & Management of patients with Coronary Artery Diseases

Pediatric

- Neonatal Intestinal Obstruction and Respiratory Distress

5. Regulations:

a) Role of the staff members:

1. Residents and Registrars:

Although teaching skills is part of the training for the residents, the 451 course teaching need experienced teachers to know the needed information for the student level, accordingly, residents and registrars are not going to be involved in the teaching of 451 surgical course and session can't be handed over to them.

2. Senior Registrars:

- ü They will be involved in the clinical teaching according to the need per specialty.
- ü They will help in invigilation of the theoretical examinations.
- ü They will not be involved in the clinical examinations.
- ü They will not be asked to give theoretical lectures.

3. Non – teaching staff consultants:

- ü They will be always involved in the clinical teaching.
- ü They will be asked to conduct one clinical session per week.
- ü They might be asked to help in the clinical examinations according to the need.
- ü They will help in invigilation of the theoretical examinations.

4. Clinical Tutors (Clinical Teaching Staff):

They will be spared for 351 surgical course students as possible unless really needed to cover a shortage in this course 451.

5. Teaching Staff:

- ü They will conduct one clinical session per week.
- ü They will give an average of 1-3 tutorials.
- ü They will conduct the clinical examination.
- ü They will prepare the multiple choice questions and one OSCE station related to his tutorial.
- ü They will invigilate in the theory examination.

6. Undergraduate Course Committee:

- ü Upgrading the course.
- ü Identifying points of difficulties and solve them.
- ü Course Committee members are:
 - (Chairman).
 - (Course Organizer 451)
 - (Course Organizer 351)
 - (Course Organizer 311)
 - (5 members)

7. 451 Course Organizer:

- ü Responsible for the course organization. The day to day teaching will be the responsibility of teaching staff according to the schedule.
- ü Prepare and organize the exams both MCQ's and OSCE.
- ü Write an Annual Report to the Head of The Department about the progress of the course throughout the year.

b) Attendance Rules:

Attendance will be checked by the tutor in each clinical or tutorial session and approved by his signature. If any students signature is found to be in the attendance sheet although hi is not physically attending the session (specially tutorials) the student will be subjected to a penalty (please see regulations in this matter).

Students should not miss more than 10% of clinical sessions and not more than 15% of tutorials. More than that, the student will not be allowed to sit for the final exam and has to repeat the course. The student will be warned at the end of the 1st semester if his absence is approaching the above mentioned limits.

c) Uniform and Dress:

- Male students:
 - i. Blue Scrub Suit (operative theatre uniform)
 - ii. White lab coat.
 - iii. ID badge.

- Female students:

As recommended by the Vice – Dean for Academic Affairs (please see attached recommendation), any student who does not fulfill this will receive a warning letter. If repeated, she will be subjected to a penalty.

6. Assessment:

- i. Each tutor will submit 5 multiple choice Questions single best answer type and one OSCE stations related to his tutorial each year. Exam questions are selected from this pool. There will be two continuous assessment written exam and final clinical exam (OSCE).

Each continuous assessment exam will be formed of 100 Single Answer Questions.

The final clinical exam will be an OSCE Exam where different stations will be conducted at the end of the cycle. Different objectively made stations to test different clinical skills will be constructed.

ii. Distribution of marks:

The final evaluation marks comprise of the following parts:

✓	Final Clinical Exam (OSCE)	:	60% Marks.
✓	1 st Continuous Assessment Written Exam	:	20% Marks.
✓	2 nd Continuous Assessment Written Exam	:	20% Marks.
	Grand Total	:	100% Marks.

iii. Absentees Rule:

Students should not miss more than 10% of clinical sessions and not more than 15% of tutorials. More than that, the student will not be allowed to sit for the final exam and has to repeat the course. The student will be warned at the end of the 1st semester if his absence is approaching the above mentioned limits.

7. Text Books & References:

a. Text Books

- 1) Essential of General Surgery by Peter Lawrence
- 2) Essential of Surgical Specialties by Peter Lawrence

b. OTHER REFERENCES FOR EXTRA READING:

- 1) Bailey & Love's Short Practice of Surgery by: H. Bailey & R.J. McNeil
- 2) Scott: An Aid to Clinical Surgery by: HAF Dudley and BP Waxman
- 3) Essential Surgery 1990 by: H. George Burkit and B. O'Donnel
- 4) Principle and Practice Surgert by Forrest, Carter, Macleod
- 5) Essential Urology, Latest Ed., N. Bullock, G. Sibley & R. Whitaber
- 6) The essential of Pediatric Surgery, Latest Ed. By: Harold Nixon & B. O'Donnel
- 7) Anaesthesia for Medical Students, Latest Ed. By: Gordon Osrlere & RB Smith
- 8) The practical management of head injury, Latest Ed. By J. Potter

8. **Appendices:**

- Appendix I : Objectives of the tutorials.
- Appendix II : Attendance Regulations.
- Appendix III: Uniform and Dress
- Appendix IV: Female Dress Memo

Objectives of The Tutorials

GENERAL SURGERY

Surgical Infections (Presentation & Management)

Objectives

- a. To identify and discuss different type of surgical infections and organisms causing them.
- b. Sound knowledge of different aspects and surgical infections eg: wound infection intra abdominal abscess, prophylactic antibiotics anti septics, hospital acquired infections ,,etc...
- c. Discuss the basic investigations and sound approach to manage a patients with surgical infection.

Trauma

Objectives

- a. Describe the fundamental principles of initial assessment and management.
- b. Identify the correct sequence of priorities used in assessing the multiply injured patient.
- c. Describe guidelines and techniques used in the initial resuscitation and definitive-care phases when treating the multiply injured patient.
- d. Identify how the patient's medical history and the mechanism of injury contribute to the identification of injuries.
- e. Identify the concepts related to teamwork in caring for the injured patient.

Adrenal & Other Endocrine Lesions

Objectives

- a. Anatomy of adrenal.
- b. Broad idea about physiology of the adrenal.
- c. Pheochromocytoma, Conn's Cushing's ailments
- d. Adrenal insufficiency.

Thyroid & Parathyroid

Objectives

- a. Anatomy, physiology , etiology.
- b. Hyperthyroidism, Hypothyroidism.
- c. Grave's .
- d. Thyroid Cancers
- e. Parathyroid adenoma

Obesity

Objectives

- a. Define and understand the meaning of obesity
- b. Know and understand epidemiologic, etiological factors, and health effects associated with obesity
- c. Know how to take adequate history and perform relevant physical examination of an obese patient
- d. Order and understand relevant investigations needed for an obese patient
- e. Describe and discuss the various treatment options for obesity

Haematemesis (Upper GI Bleeding)

Objectives

- a. To identify and discuss the common causes of upper GI bleeding.
- b. Present and interpret a good history taking from patients with common causes of upper GI Bleeding eg peptic ulcer and oesophageal varices.
- c. Discuss different causes of portal hypertension.
- d. Outline methods of treatment of different causes of upper GI Bleeding.

Management of patient with Breast lump and nipple discharge

Objectives

- a. Identify and discuss the differential diagnosis of breast lump.
- b. Present and interpret a good history and conduct a sound physical examination for a patient with breast lump.
- c. Discuss the possible causes of nipple discharge according to the colour and nature of the discharge.
- d. Present a sound approach investigate a patient with breast lump and nipple discharge to mainly breast biopsy imaging and suggest a possible approaches for treatment.

Epigastric Pain and Mass

Objectives

- a. Identify and discuss the common causes of epigastric pain.
- b. Present and interpret a good history from a patient with epigastric pain and identify the possible cause from site, character and radiation of the pain.
- c. Conduct a sound abdominal examination.
- d. To suggest a sound approach to investigate such patient and suggest sound approach for treatment.

Lateral Neck Mass & other soft Tissue Lesions

Objectives

- a. Brief anatomy of neck & its relationship to clinical practice.
- b. Etiology of acute / chronic neck mass
- c. Evaluations/ management of neck mass

Hernias

Objective

- a. The student will be able to present a good history from patient with external hernia.
- b. Identify and discuss different type of hernia.
- c. To conduct a sound systematic examination of different types of hernia.
- d. To suggest a sound approach to treat patients with different types of hernia.

Jaundice

Objective

- a. Pathophysiology of jaundice.
- b. Differences between obstructive and non-obstructive jaundice (by history, examination, investigation).
- c. Differential diagnosis of surgical causes of jaundice (evaluation and management) .

- d. Identify and manage complications of obstructive jaundice, mainly coagulopathy and cholangitis..

Nutritional Support

Objectives

- a. Role of nutrients.
- b. Effect of malnutrition in surgical patients.
- c. Indications of nutritional supports.
- d. Methods of providing nutrition's in surgical patients.

Post Operative Assessment , Management and Complications

Objectives

- a. Accept that complications are best anticipated and avoided.
- b. Recognize the incidence of co-morbidity.
- c. Understand the importance of matching the procedure to the associated risks.
- d. Appreciate the importance of recognizing complications early and teaching them vigorously.

Bleeding By Rectum (Lower GI Bleeding)

Objectives

- a. Stabilization of the patient.
- b. Assessment of the magnitude of hemorrhage
- c. If passing bright red blood but not in shock bleeding probably from small bowel or colon
- d. Chronic rectal bleeding typically with cancer, polyps, piles.

Left Upper Quadrant Abdominal Pain & Mass

Objectives

- a. The first objective is how the students should approach the a patient with left upper quadrant mass and pain from the history and clinical exam which should the student to think about the different cause if this problem (like splenomegaly, splenic infarction, splenic disease, acute pancreatis .
- b. The students should know the investigations (chemistary) radiological investigations nuclear medication as well wish them reach the diagnosis.
- c. The lecture discuss the management of each case per se the surgical treatment. (indication of splenectomy in different hematological diseases , abscess)
- d. The student should know the complication of splenectomy & how to treat.

ANESTHESIA

Anesthesia: Fluid Therapy & electrolyte and acid base disorders

Objectives

- a. Discuss indications of fluid therapy.
- b. Goals of fluid therapy
- c. Classification of fluids
- d. Advantages and disadvantages of crystalliod and colloids
- e. Role of colloids in fluid therapy
- f. Sequelae of electrolytes and acid base imbalances.
- g. Treatment of major acid base deficits.

Blood Transfusion & Substitutes and Reactions

Objectives

- a. Indication of blood transfusion
- b. Definition of massive transfusion
- c. Different strategies of blood transfusion
- d. Blood substitutes transfusion
- e. Complications of blood and substitutes transfusion

ICU monitoring and management of critically ill patients

Objectives

- a. Definition of critically ill patient.
- b. Monitoring including arterial and central venous lines insertion
- c. Fluid therapy in critical ill patient
- d. Treatment of sepsis in critically ill
- e. Pharmacotherapy in critically including inotropic support
- f. Ventilatory support of critically ill including different ventilation modes

THORACIC

Management of patients of lung lesions

Objectives

- a. Identify and recognize the differential diagnosis of lung mass.
- b. Differentiate between the benign lesions for malignant lesions.
- c. Differentiate between small cell lung cancer and non small cell lung cancer (NSCLC) and there managements.
- d. Able to stage (N.S.C.L.C).
- e. Able to know the presentation of patients with lung cancer.

Presentation & Management of Patients with Dysphagia

Objectives

- a. Definition of pathophysiology of swallowing .
- b. Management of carcinoma esophagus.
- c. Presentation of motility disorders of the esophagus in particular achalasia.
- d. Demonstration of diaphragmatic hernia and its associated symptoms.
- e. Developing a clinical approach to patients presenting with dysphagia.

Chest Injuries

Objectives

- a. To identify the different types of chest injuries (rib fractures, hemothorax, pneumothorax, lung contusion, etc.,,,).
- b. To know the pathophysiology of the chest injuries and its implication on the patient condition and the need for the urgent management prior to the development of the fatal complications (e.g. lung contusion and the hypoxia).
- c. To know the specific indication for the urgent intervention (like tension pneumothorax) and the management of chest injuries in general.
- d. Sound knowledge of the mechanism of the injury (eg. Blunt or penetrating) and to know the life threatening conditions identified in the primary survey and the potentially lethal chest injuries identified in the secondary survey.

VASCULAR

Presentation & Management of Swollen leg including Varicose Veins

Objectives

- a. Identify and discuss the common causes of leg swellings.
- b. Discuss the pathogenesis of leg oedema.
- c. Present and interpret a good history and examination for patients with varicose vein, deep venous thrombosis, lymphoedema.
- d. Discuss the different methods in investigation and management of varicose vein, DVT, lymphoedema.

Presentation & Management of Ischemic leg & ulceration

Objectives

Presentation and Management of Ischemic leg and Ulceration

- a. To identify the presentation, signs and symptoms of acute limb ischemia.
- b. To discuss and understand the differential diagnosis and way to exclude any diagnosis.
- c. To discuss and understand investigation and management (medical and surgical).
- d. To discuss and understand major complications and specifically “compartment syndrome.”

Leg Ulcers:

- a. To discuss and understand differential diagnosis of leg ulcer.
- b. Sound knowledge in major causes like:
 - Neuropathic
 - Venous
 - Arterial
 - Inflammatory
 - Malignant
- c. To discuss and understand the general principle of management

UROLOGY

Presentation & Management of Common Problems In

Pediatric Urology

Objectives

- a.** Initial approach for patients with antenatal Hydronephrosis and basics for specific managements.
- b.** Introduction to neurovesical dysfunction and the management neuropathic bladder and the approach to the wet child.
- c.** Initial approach for patients with internal congenital urogenital anomalies

Presentation & Management of Patients with Renal Colic

Objectives

- a.** Identify the symptoms of renal colic.
- b.** Identify the risk factors of developing stone disease
- c.** Identify the potential risks and complications of stone disease.
- d.** Discuss the management strategies as well as the available medilites for treatment.

Lower Urinary Tract Symptoms (LUTS)

Objectives:

- a. Discuss the various LUTS both the obstructive and the initiative symptoms.
- b. List potential differential diagnosis.
- c. Outline possible line of work up
- d. Describe the treatment of options for BPH and other causes of bladder outlet obstruction.

Presentation & Management of patients with Hematuria & Renal Masses.

Objectives

- a. Differential diagnosis of gross hematuria.
- b. Work up of patients with hematuria.
- c. Differential diagnosis of renal mass.
- d. Management of renal all carcinoma management of urethral carcinoma
- e. Identify the risk factors of developing stone disease
- f. Identify the potential risks and complications of stone disease.
- g. Discuss the management strategies as well as the available medolites for treatment.

Scrotal Swellings

Objectives

- a. Surgical anatomy of the scrotal compartment.
- b. Causes of scrotal swellings in adults and children.

- c. Identification of scrotal swellings as a manifestation of an intraabdominal or a systemic pathology.
- d. Tricks and points of emphasis in clinical examination of scrotal swellings.
- e. A practical flowcharted approach to management of scrotal swellings from history, examination and investigations.

PLASTIC

Presentation & Management of Common Problems in Plastic Surgery

Objectives

- a. To manage a proper examination of the hand and discover the congenital anomalies.

Presentation & Management of Burn Patients

Objectives

- a. Diagnose and manage an acute burn patients and it's complications.

Presentation & Management of Skin lesions

Objectives

- a. To diagnose the common benign precancerous & cancerous lesions.

NEUROSURGERY

Presentation & Management of spinal cord lesions

Objectives

- a.** How to detect clinical signs of spinal cord compression.
- b.** Interpret & Correlate radiological in the clinical findings.
- c.** Awareness of various types of investigations in spinal cord compression.
- d.** Urgency of treatment of spinal cord compression.

Presentation & Management of Patients with Head Injury

Objectives

- a.** Types & Classification of Head Injury.
- b.** Indications for admission of patients to the hospital.
- c.** Early detection of brain herniation signs

d. Priorities of Management in head injuries.

CARDIAC

Assessment & Management of patients with Coronary Artery Diseases

Objectives

- a. Learn the varied presentations of coronary artery disease.
- b. Re-discover the value of a good history and physical examination.
- c. Outline the ways to assess these patients.
- d. Be familiar with the investigations and the ways to tackle the risk factors.
- e. Appreciate the various therapeutic options in the management of these patients

PEDIATRIC

Neonatal Intestinal Obstruction

Objectives

- a. To discuss the basic investigation needed to diagnose the neonatal intestinal

obstruction.

- b.** To discuss signs and symptoms of neonatal intestinal obstruction.
- c.** To outline and discuss the common causes of neonatal intestinal obstruction.
- d.** To outline the methods of treatment.

Respiratory Distress

Objectives

- a.** To discuss the initial approach and resuscitation of respiratory distress in neonate
- b.** To outline and discuss the common surgical causes of respiratory distress in neonate.
- c.** To demonstrate a sound clinical approach to identify the possible cause of respiratory distress in neonate.
- d.** To discuss the investigations for respiratory distress in neonate.
- e.** To outline the specific treatment of common surgical causes.