



**ALTAMASH INSTITUTE OF DENTAL MEDICINE
(JINNAH SINDH MEDICAL UNIVERSITY)**

**BDS Third Year
General Surgery
Study Guide**

Introduction:

This course provides students with basic knowledge about the common surgical conditions that affect the community. Clinically essential topics like wound healing and repair, managing shock, common surgical infections and skills of suturing are emphasized. This course also provides an overview to the students of the myriad surgery-related conditions that patients present with.

The discipline of Dentistry involves certain surgical procedures like tooth extractions. It is essential for the dental students to know how a number of surgical conditions present in the clinic and in tertiary care hospitals so that the students are able to identify and discuss management plans for them.

Outcome:

By the end of the course on General Surgery, 3rd year BDS students will be able to justify the management of common surgical conditions

Teaching and learning:

General Surgery classes will be held at Altamash General Hospital every Wednesday and Saturday.

- Flipped Classroom (FC)
- Interactive lectures (IL)
- OPD Demonstration (OPD Demo)
- Tutorials
 - a. Cased Based Learning (CBL)
 - b. Small Group Discussion (SGD)

Assessment tools:

1. Multiple Choice Questions: (MCQs)
 - One Correct Type
 - One Best Type
2. Observed Structured Clinical Examination (OSCE)



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s.n o.	Topic	Course Objectives: By the end of the course, 3rd year students will be able to:	Teaching method	Assessment Tool
1.	Physiological Response to Surgical Trauma and Homeostasis	<ul style="list-style-type: none"> • Discuss homeostasis and the associated physiochemical and biochemical changes. • List mediators of metabolic response to injury • Discuss the avoidable factors that compound the metabolic response to injury. • Describe the physiological and biochemical changes in the body resulting from surgical trauma. 	IL CBL	MCQs
2.	Wound and its Repair	<ul style="list-style-type: none"> • Discuss the types of wounds. • Discuss the phases of and factors affecting wound healing • Discuss healing by primary and secondary intention • List various disorders of healing • Discuss hypertrophic scars and keloids 	IL CBL	MCQs
3.	Pathophysiology and Management of Shock	<ul style="list-style-type: none"> • Discuss the pathophysiology, classical features and management of various types of shock 	CBL IL	MCQs
4.	Blood Transfusion	<ul style="list-style-type: none"> • Discuss various blood and blood products, its 	IL CBL	MCQs



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		<p>preparation and the procedure for transfusion</p> <ul style="list-style-type: none"> Describe the indications and universal guidelines for blood transfusion. Discuss the management of transfusion reactions. 		
5.	Common Surgical Infections	<ul style="list-style-type: none"> Classify common surgical infections Discuss the factors that determine the chances of wound infection and complicated wounds. Discuss the management of common surgical infections. 	FC	MCQs
6.	Special Surgical Infections	<ul style="list-style-type: none"> Discuss the etiology, pathophysiology, clinical presentation and management of gas gangrene and tetanus 	IL CBL	MCQs
7.	Basic Surgical Skills	<ul style="list-style-type: none"> Describe common skin and subcutaneous tissues incisions. Discuss the surgical armamentarium and their sterilization and/or disinfection Discuss the techniques of wound closure Identify the surgical armamentarium 	CBL IL	MCQs



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		<ul style="list-style-type: none"> • Discuss uses of the surgical armamentarium 		
8.	Diagnostic Modalities of Surgical Importance (Hematological and Radiological)	<ul style="list-style-type: none"> • List the common diagnostic modalities encountered in surgical practice. • Select surgical case specific hematological and radiological modalities • Justify the choice of surgical case specific hematological and radiological modalities. • Discuss the management of complications pertinent to invasive investigative modalities 	CBL IL	MCQs
9.	Operating Room Protocols	<ul style="list-style-type: none"> • Discuss the various methods of disinfecting and/or sterilizing operating rooms and their importance • Discuss the basic principles of sterile and aseptic techniques used in the operating room. • List the steps of scrubbing, gowning and gloving correctly 	IL CBL	MCQs
10.	Pre-Operative Care	<ul style="list-style-type: none"> • Describe in detail the pre-operative preparation of patient for surgery based on history, clinical examination 	IL SGD	MCQs



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		<p>and diagnostic findings as well as routine and specific pre-operative orders</p> <ul style="list-style-type: none"> • Discuss the risk factors affecting the patient's fitness for surgery • Explain the prevention of postoperative complications. • Discuss the pre-operative management of high-risk surgical patients • Describe the steps of obtaining an informed consent 		
11.	Anesthesia and Pain Relief	<ul style="list-style-type: none"> • Discuss pain and its pathways • Classify local anesthesia • Discuss the local, regional and general anesthesia techniques, and the actions and associated complications of anaesthetic drugs • Describe the stages of general anesthesia and the monitoring of patients during anesthesia. 	IL CBL	MCQs
12.	Post-Operative Care	<ul style="list-style-type: none"> • Discuss the management of patient in recovery room and in surgical ward. • Describe the procedural steps of following postoperative orders regarding intravenous 	IL SGD	MCQs



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		<p>fluids, antibiotics and analgesics</p> <ul style="list-style-type: none"> • Discuss the post-operative management of ‘high-risk patients’ presenting with diabetes, hypertension, renal and ischemic heart diseases, and asthma and other respiratory conditions. • Describe the postoperative surgical complications, their clinical features, prophylactic measures and treatment. • Describe the system of daily entries in patients’ records and discharges 		
13.	Nutrition of Surgical Patients	<ul style="list-style-type: none"> • Discuss the causes and consequences of malnutrition in the surgical patient. • Discuss indications of nutritional therapy (enteral and parenteral) and methods of nutritional support. • Describe the types of feeding solutions and their relevant monitoring therapies • List the complications and contra-indication of enteral and parenteral nutritional therapy 	CBL IL	MCQs



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		<ul style="list-style-type: none"> Assess the nutritional deficiencies of surgical patients in the given case scenarios Calculate the calories requirement of surgical patients in the given case scenarios 		
14.	Fluids and Electrolytes in a Surgical Patient	<ul style="list-style-type: none"> Discuss the daily requirements of fluids and electrolytes in an adult Describe the management of a surgical patient with impaired fluid and/or electrolytes 	CBL IL	MCQs
15.	Early Assessment and Initial Management of Trauma	<ul style="list-style-type: none"> Discuss principles of primary survey and resuscitation according to Advanced Trauma Life Support (ATLS) Protocols 	CBL IL	MCQs
16.	Further Management of Trauma Patient	<ul style="list-style-type: none"> Discuss the importance of AMPLE history taking in a patient with trauma and of secondary survey according to ATLS principles. 	CBL IL	MCQs
17.	Head Injuries	<ul style="list-style-type: none"> Discuss the pathogenesis of different head injuries. Describe the process of assessment and categorization 	CBL IL	MCQs



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		<p>of a patient with head injuries according to the Glasgow Coma Scale (GCS).</p> <ul style="list-style-type: none"> • Discuss the investigations pertinent to diagnosis and management of head injuries and their interpretations • Explain the principles of management of head injuries • Interpret radiographs of patients presenting with head injury 		
18.	Maxillofacial Trauma	<ul style="list-style-type: none"> • Describe the management of maxillofacial injuries. 	IL CBL	MCQs
19.	Spinal Trauma	<ul style="list-style-type: none"> • Describe the management of spinal injuries with especial reference to cervical spine 	FC	MCQs
20.	Burns	<ul style="list-style-type: none"> • Discuss the types of burns and their mechanisms of injury • Assess the surface area of burns according to the rule of 9 on pictures • Describe the methods of calculating the fluid requirement. • Describe the short- and long-term surgical management of burns. 	CBL IL	MCQs
21.	Principles and	<ul style="list-style-type: none"> • Define lump, ulcer, abscess, 	CBL IL	MCQs



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	Management of Skin and Soft Tissues	<p>fistula and sinus.</p> <ul style="list-style-type: none"> • Discuss the various types, sign and symptoms and pathophysiology of common problems of skin and soft tissues. • Discuss the standard procedure of diagnosing soft tissue lesions based on history and clinical examination • List the investigations pertinent to common soft tissue lesions. • Justify the management of common problems of skin and soft tissues 		
22.	Common Benign and Malignant Soft Tissue Lesions	<ul style="list-style-type: none"> • Discuss the pathophysiology, causes, clinical presentation, differential diagnosis and management of the following: <ul style="list-style-type: none"> ○ benign skin lesions (nevus, hemangioma, pressure sores) ○ malignant skin lesions (malignant melanoma, basal cell carcinoma, squamous cell carcinoma) 	CBL IL	MCQs
23.	Cleft Lip and Palate	<ul style="list-style-type: none"> • Discuss the normal embryological development 	CBL IL	MCQs



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		<p>of cleft lip and palate.</p> <ul style="list-style-type: none"> • Discuss the types, etiology and associated features of developmental abnormalities of lip and palate. • Discuss the management of cleft lip and palate and their associated problems 		
24.	Diseases of the Salivary Glands	<ul style="list-style-type: none"> • Describe pathophysiology and clinical features of various salivary gland diseases • Discuss the management of common salivary gland disorders 	CBL IL	MCQs
25.	Neck Lumps	<ul style="list-style-type: none"> • Classify neck swellings according to the surface anatomy of the neck triangles • Discuss the pathophysiology, clinical features, associated investigations and differential diagnosis of the following neck swellings: <ul style="list-style-type: none"> ○ congenital and acquired ○ inflammatory and non-inflammatory ○ midline and lateral • Justify the management of neck swellings based on their locations and 	CBL IL	MCQs



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		pathophysiology		
26.	Thyroid and Parathyroid Glands	<ul style="list-style-type: none"> • Discuss the pathology, clinical features and management of the following conditions: <ul style="list-style-type: none"> ○ hyperthyroidism ○ hypothyroidism ○ thyroiditis ○ thyroid neoplasms ○ disorders of parathyroid glands • Discuss the indications, preparation and complications of thyroid surgery 	CBL IL	MCQs
27.	Venous Disorders	<ul style="list-style-type: none"> • Discuss the causes, clinical features and management of DVT and thrombophlebitis 	CBL IL	MCQs
28.	Arterial Disorders	<ul style="list-style-type: none"> • Discuss the pathophysiology of aneurysm and gangrene 	CBL IL	MCQs
	CLINICAL SKILLS		Teaching method	Assessment Tool
	By the end of the year students will be able to:			
1.	History and Examination	<ul style="list-style-type: none"> • Obtain history of patients presenting with swellings, thyroid disorders and ulcers following the standard protocols • Perform examination different groups of superficial cervical lymph nodes 	OPD demo SGD	OSCE



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		<ul style="list-style-type: none"> • Perform general physical examination on patients presenting to the OPD • Examine patients presenting with swellings, thyroid disorders and ulcers following the standard protocols • Palpate superficial arterial pulses following the standard protocol 		
2.	Breaking Bad News	<ul style="list-style-type: none"> • Break bad news to patients and/or their attendees, according to the ethical guidelines 	OPD Demo CBL	OSCE
3.	Protective Equipment and Suturing	<ul style="list-style-type: none"> • Don & Doff personal protective equipment following the correct protocol • Demonstrate various types of surgical suturing and knotting techniques on synthetic models 	CBL OPD Demo	OSCE

Reading Sources:

Books:

Bailey & Love's Short Practice of Surgery, Latest Edition

Internet resources: With easy excess to digital library students will use internet resources with added time flexibility to enrich and update their knowledge and its application.

Library: It provides wealth of resources, space to study alone or in a group. It also provide world of books to discover and borrow.



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Assessment Criteria:

10% marks from internal assessment will be added to the final marks, inclusive of:

- Mid-term examination
- Mock examination
- Assignments and Class presentations
- Clinical Logbooks

Annual Examination:

University Annual examination carries 90% marks and Theory exam will be based on MCQs and Clinical / Professional /communication skills will be assessed by OSCE..

Course Evaluation:

- Pass/fail ratio of continuous and summative assessments will be evaluated
- 75% attendance is mandatory to be eligible for annual professional examination
- Feedback will be taken
 - Regarding course from students and faculty
 - Student feedback regarding faculty
 - Faculty feedback of students

Teaching Faculty:

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