STUDY GUIDE
2023-2024
DEPARTMENT OF SURGERY

Modes of teaching include:

- Lectures (in college lecture halls)
- Small group discussions classroom and OPDs in the hospital)
- Bedside teaching
- Observation of live surgery in the Operation theatres
- Demonstrations of surgeries through video playback

Assessment methods used during the curricular years include:

- Short Answer Questions
- Multiple Choice Questions
- Long case
- OSPE

SYLLABUS FINAL YEAR MBBS SURGERY

Distribution of Subjects:

Paper I: General Surgery, Surgical Anatomy, Principles of Anaesthesia, Principles of Radiology, Principles of Oncology.

Paper II: Systematic and Operative Surgery: Musculoskeletal system, GIT, Renal system, Male and female reproductive system, Head and Neck, Thorax, Breast, Nervous system, Cardiovascular System, Orthopaedics and Traumatology.

DEPARTMENT OF SURGERY
BAKHTAWAR AMIN MEDICAL & DENTAL COLLEGE
MULTAN

Unit I

HOD:	Professor Dr. Amjad Amin (FRCS)
Professor:	Dr Ishtiaq Ahmad (FRCS)
Associate Professor:	Dr. Shabbir Ahmed (FCPS)
Assistant Professor:	
Senior Registrars:	Dr Bushra Ghulam (FCPS)

Unit II

Professor:	Dr.Zulfiqar Ali Shahid (FCPS)
Associate Professor:	Dr. Tariq Jamil Ch (M.S)
Assistant Professor:	
Senior Registrars:	Dr Sumta Khan (FCPS)

TEACHING GENERAL SURGERY 3rd YEAR MBBS

Sr. No	Module	Subject Module	No of lectures	Delivered by
1.	**General surgery** **Metabolic stress response to Trauma**	**Learning objectives** **To understand:** • Classical concepts of homeostasis • Mediators of the metabolic response to injury • Physiological and biochemical changes that occur during injury and recovery • Changes in body composition that accompany surgical injury • Avoidable factors that compound the metabolic response to injury • Concepts behind optimal perioperative care		UNIT I
2.	**Shock, Blood transfusion & Haemorrhage**	**Learning objectives** **To understand:** • The pathophysiology of shock and ischaemia–reperfusion injury • The different patterns of shock and the principles and priorities of resuscitation • Appropriate monitoring and end points of resuscitation • Use of blood and blood products, the benefits and risks of blood transfusion		UNIT I
3.	**General surgery** **Wounds, healing and tissue repair**	**Learning objectives** **To understand:** • Normal healing and how it can be adversely affected • How to manage wounds of different types, of different structures and at different sites • Aspects of disordered healing that lead to chronic		UNIT II

		wounds • The variety of scars and their treatment • How to differentiate between acute and chronic wounds		

PROFESSOR DR MUHAMMAD AMJAD AMIN
HOD SURGERY
BAM&DC MULTAN

TEACHING SURGERY & ALLIED 4th YEAR MBBS

(General surgery, Principles of Anaesthesiolgy, Principles of Oncology & Principles of Radiology)

Sr. No	Module	Subject Module	No of lectures	Delivered by
1.	**Surgical infection**	**Learning objectives** **To understand:** • The characteristics of the common surgical pathogens and their sensitivities • The factors that determine whether a wound will become infected • The classification of sources of infection and their severity • The clinical presentation of surgical infections • The indications for and choice of prophylactic antibiotics • The spectrum of commonly used antibiotics in surgery and the principles of therapy **To learn:** • Koch's postulates • The management of abscesses **To appreciate:** • The importance of aseptic and antiseptic techniques and delayed primary or secondary closure in contaminated wounds **To be aware of:** • The causes of reduced resistance to infection (host response) **To know:** • The definitions of infection, particularly at surgical sites • What basic precautions to take to avoid surgically relevant hospital acquired infections		UNIT I

2	**Tropical infections and infestations**	**Learning objectives** **To be able to list:** • The common surgical infections and infestations that occur in the tropics **To appreciate:** • That many patients do not seek medical help until late in the course of the disease because of socioeconomic reasons **To be able to describe:** • The emergency presentations of the various conditions, as patients may not seek treatment until they are very ill **To be able to:** • Diagnose and treat these conditions, particularly as Emergencies. The ease of global travel has connected areas where tropical infections are common to areas where they are not. Patients with such an infection who are recently returned from the tropics will mostly present as emergencies **To realise:** • That the ideal management involves a multidisciplinary approach between the surgeon, physician, radiologist, Pathologist and microbiologist. In case of doubt, in a difficult situation, there should be no hesitation in seeking help from a specialist centre		UNIT I
3	**Principles of laparoscopic surgery**	**Learning objectives** **To understand:** • The principles of laparoscopic and robotic surgery • The advantages and disadvantages of such surgery • The safety issues and indications for laparoscopic and robotic surgery • The principles of postoperative care		UNIT I
	Peri operative care	**Learning objectives** **To be able to organise the**		Anaesthesia deptt

	I. Preoperative care including the high risk surgical patient	**preoperative care and the operating list To understand preoperative preparation for surgery:** • Surgical, medical and anaesthetic aspects of assessment • How to optimise the patient's condition • How to identify and optimise the patient at higher risk • Importance of critical care in management • How to take consent • How to organise an operating list		
	II. Post operative care	**Learning objectives** **To understand:** • What is required to deliver immediate postoperative care • What are the common postoperative problems seen in the immediate postoperative period • How to predict and prevent common postoperative complications • How to recognise and treat common postoperative complications • The principles of enhanced recovery • A system for discharging patients		Anaesthesia deptt
	III. Anaesthesia and pain relief	**Learning objectives** **To gain an understanding of:** • Techniques of anaesthesia and airway maintenance • Methods of providing pain relief • Local and regional anaesthesia techniques • The management of chronic pain and pain from malignant disease		Anaesthesia deptt
	IV. Nutrition and fluid therapy	**Learning objectives** **To understand:** • The causes and consequences of malnutrition in the surgical patient • Fluid and electrolyte requirements in the pre- and postoperative patient • The nutritional requirements of surgical patients and the		Anaesthesia deptt

		nutritional consequences of intestinal resection • The different methods of providing nutritional support and their complications		
5	**Diagnostic imaging**	**Learning objectives** **To understand:** • The advantages of good working relationships and close collaboration with the imaging department in planning appropriate investigations • The basic principles of radiation protection and know the law in relation to the use of ionizing radiation • The principles of different imaging techniques and their advantages and disadvantages in different clinical scenarios • The role of imaging in directing treatment in various surgical scenarios		Radiology deptt
6	**Principles of Oncology**	**Learning objectives** **To understand:** • The biological nature of cancer • That treatment is only one component in the overall management of cancer • The principles of cancer prevention and early detection • The principles underlying non-surgical treatments for cancer **To appreciate:** • The principles of cancer aetiology and the major known causative factors • The likely shape of future developments in cancer management • The multidisciplinary management of cancer • The distinction between palliative care and end-of-life care • The principles of palliative care		Prof Dr Ijaz Masoosd

PROFESSOR DR MUHAMMAD AMJAD AMIN
HOD SURGERY
BAM&DC MULTAN

TEACHING SURGERY & ALLIED FINAL YEAR MBBS

(Systemic surgery, Urology, Trauma, Thoracic surgery, Plastic surgery Neurosurgery, Paediatric surgery and Orthopaedic surgery)

Sr.No	Module	Subject Module	No of lectures	Delivered by
1	**Disorders of the Salivary Glands**	**Learning objectives** **To understand:** • The surgical anatomy of the salivary glands • The presentation, pathology and investigation of salivary gland disease • The medical and surgical treatment of stones, infections and tumours that affect salivary glands		UNIT I
2	**The Thyroid gland**	**Learning objectives** • To understand the development and anatomy of the thyroid gland • To know the physiology and investigation of thyroid function • To be able to select appropriate investigations for thyroid swellings • To know when to operate on a thyroid swelling • To describe thyroidectomy • To know the risks and complications of thyroid surgery		UNIT II

3	**The parathyroid glands**	**Learning objectives** **To understand:** • The anatomy of the parathyroid glands • The physiology of calcium regulation • The underlying causes of hypercalcaemia and appropriate emergency management • The aetiology, presentation, investigation and management of primary hyperparathyroidism and associated special cases • The aetiology, presentation, investigation and management of secondary and tertiary hyperparathyroidism • The aetiology and management of parathyroid carcinoma		UNIT II
4	**The adrenal glands and other abnormal glands**	**Learning objectives** **To understand:** • The anatomy and function of the adrenal and other abdominal endocrine glands • The diagnosis and management of these endocrine disorders • The role of surgery in the management of these endocrine disorders		UNIT II
5	**The Breast**	**Learning objectives** **To understand:** • Appropriate investigation of breast disease • Breast anomalies and the complexity of benign breast disease • The modern management of breast cancer		UNIT I

6	**Gastrointestinal tract** **The Esophagus**	**Learning objectives** **To understand:** • The anatomy and physiology of the oesophagus and their relationship to disease • The clinical features, investigations and treatment of benign and malignant disease with particular reference to the common adult disorders		UNIT I
7	**Stomach & Duodenum**	**Learning objectives** • To understand the gross and microscopic anatomy and pathophysiology of the stomach in relation to disease • To be able to decide on the most appropriate techniques to use in the investigation of patients with complaints relating to the stomach and duodenum • To understand the critical importance of gastritis and *Helicobacter pylori* in upper gastrointestinal disease • To be able to investigate and treat peptic ulcer disease and its complications • To be able to recognize the presentation of gastric cancer and understand the principles involved in its treatment • To know about the causes of duodenal obstruction and the presentation of duodenal tumours		UNIT I
8	**The Liver**	**Learning objectives** **To understand:** • The anatomy of the liver • The signs of acute and chronic liver disease • The investigation of liver disease		UNIT I

		• The management of liver trauma • The management of liver infections • The management of colorectal liver metastases • The management of hepatocellular carcinoma		
9	**The Spleen**	**Learning objectives** **To understand:** • The function of the spleen • The common pathologies involving the spleen • The principles and potential complications of splenectomy • The potential advantages of laparoscopic splenectomy • The benefits of splenic conservation • The importance of prophylaxis against infection following splenectomy		UNIT I
10	**The Gall bladder & Bile ducts**	**Learning objectives** • To understand the anatomy and physiology of the gallbladder and bile ducts • To be familiar with the pathophysiology and management of gallstones • To be aware of unusual disorders of the biliary tree • To be aware of malignant disease of the gallbladder and bile ducts		UNIT I

11	**The Pancreas**	**Learning objectives** **To understand:** • The anatomy and physiology of the pancreas • Investigations of the pancreas • Congenital abnormalities of the pancreas • Assessment and management of pancreatitis • Diagnosis and treatment of pancreatic cancer		UNIT I
12	**The Small intestine**	**Learning objectives** **To appreciate:** • The basic anatomy and physiology of the small intestine • The range of conditions that may affect the small intestine **To understand:** • The etiology and pathology of common small intestinal conditions • The principles of investigation of small intestinal symptoms • The importance of non-surgical management of small intestinal problems • The principles of small intestinal surgery • That complex intestinal problems are best managed by a multidisciplinary team • The management of acute surgical problems of the intestines		UNIT I
13	**The large intestine**	**Learning objectives** **To appreciate:** • The basic anatomy and physiology of the large intestine • The range of conditions that may affect the large intestine **To understand:**		UNIT I

		• The etiology and pathology of common large intestinal conditions • The principles of investigation of large intestinal symptoms • The importance of non-surgical management of large intestinal problems • The principles of colonic surgery • That complex intestinal problems are best managed by a multidisciplinary team • The management of acute surgical problems of the intestines		
14	**Intestinal Obstruction**	**Learning objectives** **To understand:** • The pathophysiology of dynamic and Adynamic intestinal obstruction • The cardinal features on history and examination • The causes of small and large bowel obstruction • The indications for surgery and other treatment options in bowel obstruction		UNIT I
15	**The Vermiform Appendix**	**Learning objectives** **To understand:** • The etiology and surgical anatomy of acute appendicitis • The clinical signs and differential diagnoses of appendicitis • The investigation of suspected appendicitis • Evolving concepts in management of acute appendicitis • Basic surgical techniques, both open and laparoscopic • The management of postoperative problems • Tumours of the appendix and		UNIT I

		pseudomyxoma peritonei		
16	**The Rectum**	**Learning objectives** **To understand:** • The anatomy of the rectum and its relationship to surgical disease and its treatment • The pathology, clinical presentation, investigation, differential diagnosis and treatment of diseases that affect the rectum **To appreciate:** • That carcinoma of the rectum is common and can Present with symptoms similar to benign disease. Careful evaluation is required • The principles involved in the management of rectal pathologies		UNIT I
17	**The Anus & Anal canal**	**Learning objectives** **To understand** • The anatomy of the anus and anal canal and their relationship to surgical disease and its treatment • The pathology, clinical presentation, investigation, differential diagnosis and treatment of diseases that affect the anus and anal canal • That anal disease is common and its treatment tends to be conservative, although surgery may be required • That any damage to the anus, including too aggressive or inappropriate surgery, may render the patient permanently disabled		UNIT I
18	**Hernias, Umbilicus & Abdominal wall**	**Learning objectives** **To know and understand:** • Basic anatomy of the abdominal wall and its weaknesses		UNIT II

		• Causes of abdominal hernia • Types of hernia and classifications • Clinical history and examination findings in hernia • Complications of abdominal hernia • Non-surgical and surgical management of hernia – including mesh • Complications of hernia surgery • Other abdominal wall conditions		
19	**The Peritoneum, Omentum, Mesentery & Retroperitonium**	**Learning objectives** **To recognize and understand:** • The causes and complications of localize and generalised peritonitis • The clinical features of peritonitis and intraperitoneal abscess • The principles of surgical management in patients with peritonitis and intraperitoneal abscess • The causes and pathophysiology of ascites • The pathophysiology and complications of adhesion formation • The spectrum of mesenteric and retroperitoneal conditions		UNIT II
20	**Vascular system** **Arterial disorders**	**Learning objectives** **To understand:** • The nature and associated features of occlusive peripheral arterial disease • The investigation and treatment options for occlusive peripheral arterial disease • The principles of management of the severely ischaemic limb • The nature and presentation of peripheral aneurismal disease, particularly of the abdominal aorta • The investigation and treatment options for peripheral aneurismal		UNIT I

		disease • The arteritides and vasospastic disorders		
21	**Venous disorders**	**Learning objectives** **To understand:** • Venous anatomy and the physiology of venous return • The pathophysiology of venous hypertension • The clinical significance and management of superficial venous reflux • The management of venous ulceration • Venous thromboembolism		UNIT I
22	**Lymphatic disorders**	**Learning objectives** **To understand:** • The main functions of the lymphatic system • The development of the lymphatic system • The various causes of limb swelling • The etiology, clinical features, investigations and treatment of lymphoedema		UNIT I
23	**Urology** **Urinary symptoms and investigations**	**Learning objectives** • To understand the significance of pain relating to urinary tract pathology • To understand the difference between renal pain and ureteric colic • To understand the definitions of common lower urinary tract symptoms • To be able to select the appropriate diagnostic tests to establish a diagnosis of urinary tract disease		Urology deptt

24	**The kidneys and Ureters**	**Learning objectives** **To recognize and understand:** • Important congenital abnormalities of the upper urinary tract • Important cystic diseases of the kidney • The management of sepsis in the upper urinary tract • The pathophysiology of renal stone formation • The management of urinary tract calculi • The etiology, presentation and surgical management of obstruction to the upper urinary tract • The management of open and closed trauma to the kidney and ureter • Important renal neoplasm's and their presentation • Surgery of upper urinary tract tumours		Urology deptt
25	**The Urinary bladder**	**Learning objectives** **To understand:** • The anatomy, vascular supply and innervations of the bladder in relation to function and disease • The principles of management of bladder trauma, incontinence and fistulae • The common causes of acute and chronic urinary retention and management • The different types of bladder cancer and the principles of management		Urology deptt
26	**The prostate and seminal vesicles**	**Learning objectives** **To understand:** • The relationship of anatomical structure and biochemical function to the		Urology deptt

		development and treatment of benign and malignant disease of the prostate • The terminology used to describe lower urinary tract symptoms and to know their causes as well as the treatment options available • Which investigations are appropriate for carcinoma of the prostate • Clinical staging of carcinoma of the prostate and how staging contributes to the complex decision		
27	**Urethra and penis**	**Learning objectives** **To recognize and understand:** • The common congenital abnormalities of the urethra • The diagnosis and management of urethral trauma • The diagnosis and management of urethral stricture • The diagnosis and management of Phimosis • The principles of management of a man with erectile dysfunction • The common diseases of the penis and urethra and the principles of their surgical management		Urology deptt
28	**Testis and Scrotum**	**Learning objectives** • To recognize testicular maldescent and to appreciate the reasons for intervention • To recognize and manage testicular torsion • To be able to recognize and understand the management of the common scrotal swellings (varicocoele, hydrocoele and epididymal cysts) • To recognize and understand the management of testicular tumours		Urology deptt

		• To understand the treatment options for infertile men		
29	**Trauma** **Early assessment and Management of Trauma ATLS**	**Learning objectives** • How to identify and assess the severely injured patient • Early treatment goals for multiply injured patients • Understand the role of permissive hypotension, tranexamic acid and massive transfusion protocols • Understand the principles of damage control surgery (DCS) versus early total care (ETC)		Thoracic surgery
30	**Maxillofacial trauma**	**Learning objectives** **To be able to:** • Identify and understand the significance of potentially life-threatening injuries to the face, head and neck **To have:** • A systematic methodology for examining facial injuries **To know:** • The classification of facial fractures **To understand:** • The diagnosis and management of fractures of the middle third of the facial skeleton and the mandible • The principles of the diagnosis and management of facial soft tissue injuries **To appreciate:** • The management of dental injuries		Maxillofacial surgery
31	**Torso trauma**	**Learning objectives** **To understand:**		Thoracic surgery +

		• That the management of trauma is based on physiology as well as anatomy (as in general surgery) • The gross and surgical anatomy of the chest and abdomen • The pathophysiology of torso injury • The strength and weaknesses of clinical assessment in the injured patient • The use of special investigations and their limitations • The operative approaches to the thoracic cavity • The special features of an emergency room thoracotomy for haemorrhage control • The indications for and techniques of the trauma laparotomy • The philosophy of damage control surgery • The management of trauma to the pelvis		UNIT I
32	**The Thorax**	**Learning objectives** **To understand:** • The anatomy and physiology of the thorax • Investigation of chest pathology • The role of surgery in pleural disease • The assessment of patients requiring lung surgery • Surgical oncology as applied to chest surgery		Thoracic surgery
33	**Skin and subcutaneous tissue**	**Learning objectives** **To understand:** • The structure and functional properties of skin		Plastic surgery

	(Plastic surgery)	• The classification of vascular skin lesions • The cutaneous manifestations of generalized disease as related to surgery • The classification of benign skin tumours • The management of malignant skin tumours		
34	**Burns**	**Learning objectives** **To assess:** • The area and depth of burns **To understand:** • Methods for calculating the rate and quantity of fluids to be given • Techniques for treating burns and the patient • The pathophysiology of electrical and chemical burns		Plastic surgery
35	**Plastic and reconstructive surgery**	**Learning objectives** **To understand:** • The spectrum of plastic surgical techniques used to restore bodily form and function • The relevant anatomy and physiology of tissues used in reconstruction • The various skin grafts and how to use them appropriately • The principles and use of flaps • How to use plastic surgery to manage difficult and complex tissue loss		Plastic surgery
36	**Principles of Paediatric surgery**	**Learning objectives** **At the end of this chapter, you will be able to:** • Describe clinically important differences between adults and children • Explain the principles of trauma		Paediatric surgery

		management in children • Safely prescribe perioperative fluids in children • Avoid the pitfalls that often delay the diagnosis of common emergency conditions • Outline some congenital malformations managed by neonatal surgeons that may present later to general surgeons • Recognize common safeguarding issues in children and know how to proceed if abuse is suspected		
37	**Neurosurgery** **Traumatic brain injury**	**Learning objectives** **To understand:** • The physiology of cerebral blood flow and the pathophysiology of raised intracranial pressure • The classification and assessment of head injury • Management and sequelae of minor and mild traumatic brain injury • Medical and surgical management of moderate and severe traumatic brain injury		Neurosurgery deptt
38	**Neck and Spine**	**Learning objectives** **To be familiar with:** • The accurate assessment of spinal trauma • The basic management of spinal trauma and the major pitfalls • The pathophysiology and types of spinal cord injury • The prognosis of spinal cord injury, factors affecting functional outcome and common associated Complications		Neurosurgery deptt
39	**Orthopaedic surgery**	**Learning objectives** **To gain an understanding of:**		Orthopaedic surgery deptt

	Extremity trauma	• How to identify whether an injury exists • The important injuries not to miss • The principles of the description and classification of fractures • The range of available treatments • How to select an appropriate treatment		
40	**Elective Orthopaedics History taking and clinical examination in musculoskeletal disease**	**Learning objectives** **To understand how to:** • Take a comprehensive musculoskeletal history • Perform a structured and systematic musculoskeletal examination • Use and interpret special tests • Use findings to understand the impact on a patient's pain and function		Orthopaedic surgery deptt
41	**The Spine**	**Learning objectives** **To learn:** • The salient features relating to the history and examination of the spine • The investigations commonly used in the field of spinal disorders • The treatment principles for common conditions affecting the spine • The global issues in spinal surgery		Orthopaedic surgery deptt
42	**Upper limb**	**Learning objectives** **To understand:** • Anatomy and physiology relevant to upper limb pathology **To be able to explain:** • The diagnosis and treatment of common upper limb Conditions		Orthopaedic surgery deptt
43	**Hip and knee**	**Learning objectives** **To understand:** • The anatomy and biomechanics of		Orthopaedic surgery deptt

		the hip and knee and their clinical implications • The clinical presentation, etiology and management of common hip and knee pathologies • The principles of joint replacement including important complications • The advances in surgical practice in this field		
44	**Foot and ankle**	**Learning objectives** **To understand:** • The basic anatomy and biomechanics of the foot and ankle • The common problems affecting the foot and ankle in each age group • The principles behind the treatment of each condition, be it conservative or surgical • The significance of progressive neurological diseases		Orthopaedic surgery deptt
45	**Musculoskeletal tumours**	**Learning objectives** • List the symptoms and signs associated with a musculoskeletal tumour • Understand why a patient with a suspected musculoskeletal tumour should be referred to a specialist centre for staging, biopsy and multidisciplinary management • Understand why staging should be completed before biopsy • Explain why a diagnosis is required before treatment • Understand the principles of biopsy • Describe the principles of surgical		Orthopaedic surgery deptt

		treatment of musculoskeletal tumours • List the aims of surgical treatment for metastatic bone disease • Understand how to manage patients with an impending or completed pathological fracture • Evaluate the risk of pathological fracture.		
46	**Infection of the bone and joint**	**Learning objectives** **To understand:** • Characteristic features in the history and examination of infection of bone and joint • Diagnostic principles in bone and joint infection • Treatment of infection of native bone and joint • Treatment of implant-associated orthopedic infection		Orthopaedic surgery deptt

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