



# STUDY GUIDE

2ND YEAR M.B;B.S

2026

---

DEPARTMENT OF ANATOMY  
KING EDWARD MEDICAL UNIVERSITY  
LAHORE



## TABLE OF CONTENTS

<b>Sr. No.</b>	<b>CONTENT</b>	<b>Page #</b>
1.	Introduction of Department	3
2.	Vision and Mission of the department	3
3	Message of HOD	4
4.	Faculty of Anatomy Department	5
5.	Timetable	6
6.	Academic calendar Teaching and Learning Strategies	7
7.	Course Timeline	8
8.	Course Content	9
9.	Assessment Planner	10
10.	Syllabus with Learning outcomes	11- 22
11.	Practical	23, 24
12	Lectures	25-30
13	Internal Assessment	31

# DEPARTMENT OF ANATOMY

## HISTORY & INTRODUCTION

The Department of Anatomy at King Edward Medical University stands as one of the oldest and most prestigious pillars of medical education in South Asia. Established in 1860 and housed in the iconic Faridkot Block, it has shaped generations of physicians by laying the scientific foundation of medicine through the study of the human body. Renowned for its rich heritage, spacious dissection hall, advanced histology laboratories, and a dedicated faculty, the department blends classical anatomical teaching with modern scientific inquiry. Its state-of-the-art Anatomy Museum, featuring an exceptional collection of specimens and educational models, offers an inspiring gateway into the world of human structure. The department remains committed to excellence in teaching, training, and scholarly inquiry for both undergraduates and postgraduates.

## VISION

To be a center of excellence in anatomical sciences and medical research, delivering high-quality medical education and fostering innovation in alignment with the standards of the Pakistan Medical and Dental Council, while contributing to the development of competent healthcare professionals.

## MISSION

To provide integrated, competency-based, clinically relevant, and research-oriented anatomical education through modern teaching methodologies; to foster critical thinking and professionalism; and to prepare competent healthcare professionals who serve society with excellence, ethics, and innovation.

## MESSAGE OF HEAD OF DEPARTMENT

**Dear Students,**

Welcome to the 2<sup>nd</sup> year of your medical education. This study guide has been developed to support and streamline your learning process. It is intended to provide clear guidance regarding the course objectives, organization of content and the expected learning outcomes. The curriculum is designed to foster not only sound anatomical knowledge but also the development of essential clinical correlations, practical skills, and professional attitudes required of a competent medical graduate.

This year reflects our commitment to academic excellence, professional integrity and holistic medical development. I encourage you to engage actively, think critically, and take ownership of your learning. The foundation you build now will shape your future as competent, compassionate, and responsible physicians.

Anatomy remains the structural foundation of your basic sciences training, forming the conceptual framework upon which all future clinical learning is built. A sound understanding of human structure macroscopic, microscopic, developmental and radiological is essential for safe practice, accurate diagnosis, and professional competence. Our department is dedicated to ensuring that your anatomical education is rigorous, clinically contextualized, and aligned with contemporary standards.

Remember that your success will be built on a foundation of consistent effort, a questioning mind, and a commitment to academic integrity. We remain committed to supporting your growth in both knowledge and character.

We hope that your academic journey in the Department of Anatomy will be intellectually rewarding, professionally enriching, and will equip you with the essential competencies required for your future clinical practice.

**Prof. Dr. Tehreem Fatima**

Chairperson, Anatomy & Histology Department

Dean, Faculty of Basic Sciences

King Edward Medical University, Lahore

## FACULTY OF DEPARTMENT OF ANATOMY & HISTOLOGY

Sr No.	FACULTY	DESIGNATION	QUALIFICATION
1.	Prof. Tehreem Fatima	Professor & Chairperson Department of Anatomy & Histology Dean, Basic Sciences – KEMU	MBBS M.Phil. Anatomy MCPS – HPE
2.	Prof. Samar Ashraf	Professor of Anatomy	MBBS, M.Phil. Anatomy, CHPE
3.	Dr. Sarah Khan	Associate Professor	MBBS, M.Phil. Anatomy PhD Scholar CHPE
4.	Dr. M. Qasim Muneer	Associate Professor	MBBS, M.Phil. Anatomy, ICMT MSc. Epidemiology & Biostatistics
5.	Dr. Tooba Inam	Assistant Professor	MBBS, M.Phil. Anatomy CHPE
6.	Dr. Amna Zia	Assistant Professor	MBBS, M.Phil. Anatomy CHPE
7.	Dr. Anum Hafeez Dogar	Assistant Professor	MBBS, M.Phil. Anatomy CHPE
8.	Dr. Uzma Batool	Assistant Professor	MBBS, M.Phil. Anatomy ICMT
9.	Dr. Shumaila Sohail	Assistant Professor	MBBS, M.Phil. Anatomy CHPE
10.	Dr. Faiza Hanif	Senior Demonstrator	MBBS, M.Phil. Anatomy CHPE
11.	Dr. Ayesha Khalid	Senior Demonstrator	MBBS, M.Phil. Anatomy
12.	Dr. M. Oneeb Saleemi	Senior Demonstrator	MBBS, BSc.
13.	Dr. Adeen Ahmad	Demonstrator PG – Trainee	MBBS
14.	Dr. Mehwish Mustafa	Demonstrator PG – Trainee	MBBS
15.	Dr. Aqsa	Demonstrator PG – Trainee	MBBS
16.	Dr. Iqra	Demonstrator PG – Trainee	MBBS
17.	Dr. Maryam Raza	Demonstrator (Visiting Faculty)	MBBS
18.	Dr. Ramsha Mubeen	Demonstrator (Visiting Faculty)	MBBS

## TIMETABLE

Day	08:00-10:00		10:00-10:30	10:30-11:30	11:30-12:30	12:30-02:30
Monday	Anatomy Demonstration/ Dissection		<b>BREAK</b>	Anatomy Lecture	Biochemistry Lecture	<b>Practical</b> Histology C Physiology A Biochemistry B <b>Tutorial</b> Biochemistry D
Tuesday	Anatomy Demonstration/ Dissection			Anatomy Lecture	Physiology Lecture	<b>Practical</b> Histology A Physiology B Biochemistry D <b>Tutorial</b> Biochemistry C
Wednesday	Anatomy LAB			Biochemistry Lecture	Physiology Lecture	
Thursday	Anatomy Demonstration/ Dissection			Physiology Lecture	Biochemistry Lecture	<b>Practical</b> Histology D Physiology C Biochemistry A <b>Tutorial</b> Biochemistry B
Friday	Integrated lecture/Pakistan studies	Anatomy Lecture 9-10	10:00 – 11:00 Biochemistry Lecture		11:00 – 12:00 Physiology Lecture	
Saturday	Anatomy Demonstration/ Dissection		<b>BREAK</b> 10:30 – 11:00	Anatomy Lecture	Physiology Lecture	<b>Practical</b> Histology B Physiology D Biochemistry C <b>Tutorial</b> Biochemistry A

## **ACADEMIC CALENDAR**

Session start date	28 <sup>th</sup> Feb. 2026
Session end date	10 <sup>th</sup> Oct. 2026
Tentative date of sendup	1 <sup>st</sup> week of November 2026
Tentative date of professional examination.	1 <sup>st</sup> week of December 2026

## **TEACHING AND LEARNING STRATEGIES**

### **LARGE GROUP DISCUSSION:**

Venue: Anatomy Lecture theatre in Anatomy department
Number of total lectures: 4 Lectures/week
Days of Anatomy lectures: Monday, Tuesday, Friday, Saturday

### **PRACTICALS:**

Venue: Histology laboratory in Anatomy Department
Once a week for 2hrs
Days of Histology Practical: Monday, Tuesday, Thursday, Saturday.

### **SMALL GROUP DISCUSSION (Demonstration/Dissection):**

Venue: Dissection hall
5 days per week, 2hrs each
Days: Monday, Tuesday, Wednesday, Thursday, Saturday

## COURSE TIMELINE

**Total Duration: 32 weeks**

**Total Hours: 250**

Regions	Duration	Lectures Embryology + Histology	Practicals Histology	Demonstrations (Gross Anatomy)	Dissection	Total Hours
Head & Neck Endocrinology	11 +1 weeks 28-01-26 to 29-04-26	35	09	44	10	98
Neurosciences	6+1 weeks 30-04-26 to 18-07-26	16	04	24	06	50
Gastrointestinal Tract	6+1 weeks 20-07-26 to 26-08-26	17	08	24	06	55
Genitourinary	5+1 weeks 27-08-26 to 03-10-26	16	6	20	05	47
Total Contact Hours		84	27	112	27	250

# COURSE CONTENT

<p style="text-align: center;"><b>HEAD &amp; NECK &amp; ENDOCRINOLOGY</b> 28-01-2026 to 29-04-2026 (11+1 weeks)</p>	<p style="text-align: center;"><b>NEUROSCIENCES</b> 30-04-2026 to 18-07-2026 (6+1 weeks)</p>
<p><b>GROSS ANATOMY:</b></p> <ul style="list-style-type: none"> <li>- Cranium, Face &amp; Scalp, Meninges, Pterygopalatine Fossa, Ear, Orbital &amp; Oral Cavity, Parotid, Temporal &amp; Infratemporal regions, Nose, Bones &amp; Fascia of Neck, Triangles of Neck, Pharynx, Larynx Glands &amp; Neurovascular Structures of Neck</li> </ul>	<p><b>GROSS ANATOMY:</b></p> <ul style="list-style-type: none"> <li>- Spinal Cord, Brainstem, Cerebellum, Cerebrum, Reticular Formation, Limbic System, Basal Ganglia, Cranial Nerves, Thalamus, Hypothalamus, Autonomic System, Meninges, CSF &amp; Ventricular System</li> </ul>
<p><b>Special Embryology</b></p> <ul style="list-style-type: none"> <li>- Development of Skeletal System (2)</li> <li>- Development of Body Cavities (2)</li> <li>- Development of Respiratory System (3)</li> <li>- Development of CVS (8)</li> <li>- Development of Head &amp; Neck (6)</li> <li>- Development of Special Senses (4)</li> </ul>	<p><b>Special Embryology</b></p> <ul style="list-style-type: none"> <li>- Development of Muscular System (2)</li> <li>- Development of Limbs (2)</li> <li>- Development of Skin &amp; Mammary Glands (2)</li> <li>- Development of Nervous System (5)</li> </ul>
<p><b>Special Histology</b></p> <ul style="list-style-type: none"> <li>- Histology of Lip, Tongue &amp; Salivary Glands (3)</li> <li>- Histology of Endocrine System (3)</li> <li>- Histology of Special Senses (4)</li> </ul>	<p><b>Special Histology</b></p> <ul style="list-style-type: none"> <li>- Histology of Nervous System (4)</li> <li>- Histology of Mammary Glands (1)</li> </ul>
<p><b>Histology Practical</b></p> <ul style="list-style-type: none"> <li>- Lip</li> <li>- Tongue</li> <li>- Glands: Salivary, Thyroid, Parathyroid, Adrenal &amp; Pituitary</li> <li>- Eyelid &amp; Cornea</li> <li>- Eyeball &amp; Retina</li> <li>- Pinna</li> </ul>	<p><b>Histology Practical</b></p> <ul style="list-style-type: none"> <li>- Spinal Cord</li> <li>- Cerebrum</li> <li>- Cerebellum</li> <li>- Mammary Gland</li> </ul>
<p style="text-align: center;"><b>GIT</b> 20-07-2026 to 26-08-2026 (5+1 weeks)</p>	<p style="text-align: center;"><b>GENITOURINARY</b> 27-08-2026 to 03-10-2026 (5+1 weeks)</p>
<p><b>Gross Anatomy</b></p> <ul style="list-style-type: none"> <li>- Lumbar Vertebrae, Anterior Abdominal Wall, Peritoneum, Esophagus, Stomach, Small &amp; Large Intestines, Large Blood Vessels Of Gut, Lumbar Plexus, Extrahepatic Biliary Apparatus, Spleen, Pancreas &amp; Liver.</li> </ul>	<p><b>Gross Anatomy</b></p> <ul style="list-style-type: none"> <li>- Posterior Abdominal Wall, Kidney &amp; Ureter, Suprarenal Gland &amp; Chromaffin System, Sacrum, Bony Pelvis, Pelvic Walls &amp; Floor, Urinary Bladder &amp; Urethra, Rectum &amp; Anal Canal, Male &amp; Female Reproductive Organs, Perineum, Male &amp; Female External Genitalia, Internal Iliac Vessels &amp; Sacral Plexus</li> </ul>
<p><b>Special Embryology</b></p> <ul style="list-style-type: none"> <li>- Development of GIT (8)</li> </ul>	<p><b>Special Embryology</b></p> <ul style="list-style-type: none"> <li>- Development of Urogenital system (6)</li> </ul>
<p><b>Special Histology</b></p> <ul style="list-style-type: none"> <li>- Histology of GIT (9)</li> </ul>	<p><b>Special Histology</b></p> <ul style="list-style-type: none"> <li>- Histology of Renal system (3)</li> <li>- Histology of Male and female Genital system (6)</li> </ul>
<p><b>Histology Practical</b></p> <ul style="list-style-type: none"> <li>- Esophagus</li> <li>- Stomach</li> <li>- Small Intestine</li> <li>- Large Intestines (Colon &amp; Appendix)</li> <li>- Rectum &amp; Anal Canal</li> <li>- Liver &amp; Gallbladder</li> <li>- Pancreas</li> </ul>	<p><b>Histology Practical</b></p> <ul style="list-style-type: none"> <li>- Kidney &amp; Ureter</li> <li>- Urinary Bladder &amp; Urethra</li> <li>- Testis &amp; Vas Deferens</li> <li>- Prostate Gland &amp; Seminal Vesicle</li> <li>- Ovary &amp; Uterine Tube</li> <li>- Uterus</li> </ul>

## ASSESSMENT PLANNER

TOPICS	Assessments.	
<b>Head &amp; Neck and Endocrinology</b>	Substage-01 (ORAL)	19-02-26 to 20-02-26
	Substage-02 (ORAL)	07-03-26 to 09-03-226
	Substage-03 (OSPE)	26-03-26 to 27-03-26
	Substage-04 (WRITTEN)	24-04-26 to 25-04-26
	Stage (ORAL,WRITTEN MCQs,SEQs,OSPE)	27-04-26 to 29-04-26
<b>Neuroanatomy</b>	Substage-01 (ORAL)	21-05-26 to 22-05-26
	Substage-02 (ORAL)	13-07-26 to 14-07-26
	Stage (ORAL,WRITTEN MCQS, SEQs,OSPE)	16-07-26 to 18-07-26
<b>Gastrointestinal Tract (GIT)</b>	Substage-01 (ORAL)	05-08-26 to 06-08-26
	Substage-02 (Written)	24-08-26 to 26-08-26
<b>Genitourinary</b>	Substage-03 (ORAL)	16-09-26 to 17-09-26
	Substage-04 (OSPE)	28-09-26 to 29-09-26
	Stage (ORAL,WRITTEN MCQS, SEQs,OSPE)	01-10-26 to 03-10-26
<b>Embryology &amp; Histology Written Test -01</b>		05-06-26
<b>Embryology &amp; Histology Written Test -02</b>		10-10-26
<b>Sendup and Professional Examination</b>		

# SYLLABUS OUTLINE WITH LEARNING OUTCOMES

## GASTROINTESTINAL TRACT (GIT)

Topic	Learning Outcomes
<b>Oral Cavity</b> Hard & Soft Palate	<ul style="list-style-type: none"> <li>Describe the gross anatomical features of the oral cavity, its boundaries, contents with neurovascular supply and lymphatic drainage.</li> <li>Identify the skeletal framework of the hard palate, its constituent bones, sutures, foramina and correlate it to cleft palate formation.</li> <li><b>Outline</b> the muscles of the soft palate including their <b>attachments, nerve supply and actions.</b></li> <li><b>Explain and correlate</b> the role of the soft palate in <b>swallowing and speech</b>, with relevant clinical conditions (e.g., cleft palate, palatal paralysis).</li> </ul>
Tongue & Hypoglossal Nerve	<ul style="list-style-type: none"> <li>Describe the structure of the tongue including its musculature, neurovascular supply and lymphatic drainage.</li> <li>Explain the anatomical basis and clinical features of hypoglossal nerve lesion.</li> <li>Outline the lymphatic drainage pathways and routes of spread of carcinoma in the oral cavity.</li> </ul>
Salivary glands. (Parotid, submandibular and sublingual)	<ul style="list-style-type: none"> <li>Describe the location, anatomical features, relations, neurovascular supply of the parotid gland.</li> <li>Enlist the structures entering and leaving the parotid gland.</li> <li>Trace the course and opening of the parotid duct.</li> <li>Outline the branching pattern of the facial nerve and correlate it with clinical features of facial nerve injury and complications of parotid tumor surgery.</li> <li>Explain the anatomical basis of common parotid gland disorders including viral inflammation (mumps), bacterial parotitis, and Frey's syndrome.</li> <li>Describe the location, morphology, relations, neurovascular supply and lymphatic drainage of submandibular and sublingual glands and identify their openings.</li> </ul>
Anterior Abdominal Wall	<ul style="list-style-type: none"> <li>Identify and mark the anatomical planes and quadrants used in abdominal division and explain their clinical significance in organ localization and surgical practice.</li> <li>Draw and label the cutaneous innervation and dermatomes of the anterolateral abdominal wall.</li> <li>Discuss the clinical significance of dermatomes in visceral pain localization, referred pain patterns, neurological assessment and nerve blocks.</li> <li>Outline the basic organization and continuity of the fascia of the anterior abdominal wall with surrounding regions.</li> <li>Explain the clinical relevance of abdominal fascia in spread of fluid/infection, surgical incisions, wound healing and hernias.</li> <li>Describe the arterial supply and lymphatic drainage of the anterolateral abdominal wall, and explain the clinical correlation of its venous drainage in caput medusae.</li> <li>Describe the attachments, nerve supply and actions of the muscles of the anterolateral abdominal wall.</li> <li>Identify and mark these muscles on cadavers and anatomical models.</li> <li>Illustrate the extent, formation and contents of the rectus sheath at different levels.</li> <li>Discuss the role of abdominal wall muscles in trunk movement, core stability, intra-abdominal pressure, respiration and visceral support.</li> <li><b>Describe the common abdominal incisions, their anatomical basis and clinical indications.</b></li> </ul>
Inguinal Canal	<ul style="list-style-type: none"> <li>Describe the formation, extent and modifications of the inguinal ligament.</li> <li>Locate superficial and deep inguinal ring on a cadaver or simulated subject.</li> <li>Explain the boundaries, extent and direction of inguinal canal.</li> <li>Enumerate the contents of inguinal canal in males and females.</li> <li>Enlist the layers and contents of spermatic cord.</li> <li>Explain the anatomical basis of the cremasteric reflex, including its reflex arc, nerve supply, and clinical significance.</li> <li><b>Define different types of hernias: inguinal, femoral, umbilical, epigastric, incisional, lumbar.</b></li> </ul>

	<ul style="list-style-type: none"> <li>• <b>Differentiate between direct and indirect inguinal hernias and correlate their clinical features and anatomical relevance.</b></li> </ul>
Peritoneum	<ul style="list-style-type: none"> <li>• Define peritoneum and differentiate between parietal and visceral peritoneum.</li> <li>• Explain the somatic and autonomic innervation of peritoneum with clinical correlation to pain localization.</li> <li>• Define peritoneal cavity and divide it into different potential spaces.</li> <li>• Enlist the boundaries of greater sac, lesser sac and epiploic foramen.</li> <li>• Trace the horizontal and vertical disposition of peritoneum in the abdominal cavity.</li> <li>• Describe omenta, mesenteries, ligaments, recesses, pouches and paracolic gutters.</li> <li>• Trace the spread and accumulation of fluid within the peritoneal cavity.</li> <li>• <b>Discuss the anatomical basis of peritonitis, ascites, abdominal paracentesis, peritoneal dialysis and peritoneal adhesions and adhesiotomy.</b></li> </ul>
Esophagus & Stomach	<ul style="list-style-type: none"> <li>• Describe the gross anatomy of esophagus with its neurovascular supply and lymphatic drainage.</li> <li>• Enlist esophageal constrictions.</li> <li>• Describe the anatomical basis of Dysphagia, esophageal varices, barrette esophagus, achalasia cardia and Gastro Esophageal Reflux Disease (GERD)</li> <li>• Describe the anatomical position, parts, external and internal features, relations and peritoneal reflections of stomach on a prosected specimen.</li> <li>• Draw and label the vascular supply and lymphatic drainage of the stomach.</li> <li>• Discuss the nerve supply of stomach with a special reference to vagotomy.</li> <li>• <b>Explain the underlying anatomy of hypertrophic pyloric stenosis, peptic ulcers, partial and total gastrectomy and carcinoma of the stomach.</b></li> <li>• <b>Describe the importance of endoscopy in evaluation of esophageal varices and Barium meal in radiographic evaluation of esophageal and gastric disorders.</b></li> </ul>
Small Intestine	<ul style="list-style-type: none"> <li>• Enlist different parts of duodenum and describe their peritoneal and visceral relations, neurovascular supply and lymphatic drainage.</li> <li>• Locate the opening of common bile duct on a model of duodenum.</li> <li>• Differentiate between jejunum and ileum on gross examination.</li> <li>• Trace the attachment of root of mesentery in a cadaver/ Anatomical model.</li> <li>• <b>Describe the anatomical relevance of the following conditions:</b> <ul style="list-style-type: none"> <li>○ <b>Duodenal ulcers.</b></li> <li>○ <b>Meckel's diverticulum.</b></li> <li>○ <b>Intestinal obstruction (volvulus, intussusception)</b></li> </ul> </li> </ul>
Large Intestine	<ul style="list-style-type: none"> <li>• Distinguish between small and large intestine on gross examination.</li> <li>• Define appendices epiploicae, Teniae Coli and Haustra.</li> <li>• Describe the gross anatomy of caecum and appendix including peritoneal and visceral relations, neurovascular supply and lymphatic drainage.</li> <li>• Identify the ileocecal junction and locate appendix on a cadaver.</li> <li>• Demonstrate different positions of appendix on an anatomical model.</li> <li>• Describe the gross anatomy and relations (visceral &amp; peritoneal) of ascending, transverse descending and sigmoid colon.</li> <li>• Draw and label the arterial supply of colon.</li> <li>• Describe the venous, lymphatic drainage and nervous innervation of the colon.</li> <li>• <b>Describe anatomical relevance of acute appendicitis and pain in right illiac fossa.</b></li> <li>• <b>Mark the incision of appendectomy on a cadaver/ model and differentiate between open and laparoscopic appendectomy.</b></li> <li>• <b>Explain anatomical basis of ulcerative colitis, spread of colorectal carcinoma, diverticulosis, volvulus, colostomy, sigmoidoscopy and colonoscopy.</b></li> </ul>
Rectum and Anal Canal	<ul style="list-style-type: none"> <li>• Describe the gross anatomy and relations (visceral &amp; peritoneal), neurovascular supply and lymphatic drainage of rectum and anal canal.</li> <li>• Recognize different zones of anal canal by defining pectinate line and white line of Hilton.</li> <li>• Differentiate between the structure and nerve supply of internal and external anal sphincter.</li> <li>• Enumerate the boundaries, contents and communications of ischioanal fossa.</li> <li>• Differentiate between <b>internal and external hemorrhoids</b> based on anatomical location, venous drainage, nerve supply, and clinical features.</li> </ul>

	<ul style="list-style-type: none"> <li>• <b>Describe the anatomical basis and clinical features of rectal prolapse, rectal examination, anal fissure, anal fistula and perianal abscess.</b></li> </ul>
Great Vessels of Abdomen	<ul style="list-style-type: none"> <li>• Describe the extent, course, and anatomical relations of the abdominal aorta.</li> <li>• Classify and outline the branches of the abdominal aorta including its major subdivisions.</li> <li>• Explain the origin, course, and distribution of major branches.</li> <li>• Discuss aortic aneurysm, aortic dissection, branch occlusion, palpation sites and relevance in surgical procedures.</li> <li>• Describe the formation, course, relations, tributaries and termination of IVC.</li> <li>• Explain inferior vena cava syndrome and its role in venous obstruction.</li> <li>• Trace the collateral circulation in IVC obstruction.</li> <li>• <b>Describe the role of IVC in central venous access and in abdominal and vascular surgeries.</b></li> </ul>
Portosystemic Anastomosis	<ul style="list-style-type: none"> <li>• Describe the formation, course, relations, tributaries and termination of portal vein.</li> <li>• Explain the concept of the portal venous system and trace the flow of blood from abdominal organs to the liver sinusoids and hepatic circulation.</li> <li>• Define portosystemic anastomoses and describe their sites, contributing vessels and functional significance.</li> <li>• <b>Define portal hypertension with its clinical features and complications.</b></li> </ul>
Liver	<ul style="list-style-type: none"> <li>• Describe the location, lobes, surfaces, peritoneal and visceral relations of liver.</li> <li>• Palpate the liver in a simulated subject and define hepatomegaly.</li> <li>• Enlist bare areas of liver.</li> <li>• Explain its blood supply, lymphatic drainage, and nerve supply.</li> <li>• Draw and label the segments of liver.</li> <li>• <b>Describe the surgical importance of liver resection and biopsy.</b></li> <li>• <b>Discuss the role of Pringle's maneuver in controlling hepatic bleeding during liver surgery.</b></li> <li>• <b>Define liver cirrhosis and explain its clinical relevance to portal hypertension.</b></li> </ul>
Biliary System	<ul style="list-style-type: none"> <li>• Name different parts of biliary tree and describe their relations and neurovascular supply.</li> <li>• Describe the formation, course, relations and termination of the common hepatic and bile duct.</li> <li>• Enlist the boundaries and contents of Calot's triangle and explain its surgical importance.</li> <li>•</li> <li>• <b>Define obstructive jaundice, gallbladder gangrene, cholelithiasis, choledocholithiasis, cholecystitis.</b></li> <li>• <b>Describe underlying mechanism of biliary colic and its referral to other sites.</b></li> <li>• <b>Mark the incision of cholecystectomy on a cadaver.</b></li> <li>• <b>Describe the types of cholecystectomy (open, laparoscopic, robotic, and subtotal) with reference to relevant hepatobiliary anatomy.</b></li> </ul>
Pancreas	<ul style="list-style-type: none"> <li>• Describe the location, parts, relations, neurovascular supply and lymphatic drainage of pancreas.</li> <li>• Outline the course of main and accessory pancreatic ducts and identify their openings.</li> <li>• <b>Describe the anatomical basis of pancreatitis, pancreatic carcinoma and its spread.</b></li> <li>• <b>Describe the role of ERCP (Endoscopic Retrograde Cholangiopancreatography) in the evaluation and management of disorders of the biliary and pancreatic ductal systems.</b></li> </ul>
Spleen	<ul style="list-style-type: none"> <li>• Demonstrate the anatomical position of spleen.</li> <li>• Describe its location, surfaces, borders, poles, relations, neurovascular supply and the contents of hilum.</li> <li>• <b>Explain clinical manifestations of splenomegaly, splenic rupture and splenectomy.</b></li> </ul>

## HEAD & NECK & ENDOCRINOLOGY

TOPICS	LEARNING OUTCOMES
Topographic anatomy of Skull. Cranial Cavity	<p>Demonstrate the anatomical position of skull with special emphasis on planes of anatomical position.</p> <ul style="list-style-type: none"> <li>• Appreciate the norms of skull from different views along with its foramina</li> <li>• Enlist the structures traversing the foramina of the bones of the skull</li> <li>• Identify important bony landmarks on the bones as viewed from lateral, superior, inferior, anterior and posterior views.</li> <li>• Identify the bones forming the boundaries of orbit, nasal cavity, oral cavity, temporal, infratemporal fossa &amp; pterygopalatine fossa on the given bone. (detail to be done with relevant topics)</li> <li>• Describe and demonstrate the boundaries and gross features of cranial fossae.</li> <li>• List and demonstrate foramina along with structures passing through them in anterior, middle and posterior cranial fossae.</li> <li>• Recognize and demonstrate the important sutures, fontanelle and impressions on the interior of cranial vault.</li> </ul>
Meninges and Dural Venous sinuses	<ul style="list-style-type: none"> <li>• Explain the meninges of brain and spinal cord along with the reflections of dura mater in brain.</li> <li>• Enlist paired and unpaired Dural venous sinuses along with their attachments</li> <li>• Describe the location, important relations, and communications of the cavernous sinus and enumerate structures passing through it.</li> <li>• Describe the clinical presentation of following clinical disorders associated with meninges and Dural venous sinuses: <ul style="list-style-type: none"> <li>• Meningitis</li> <li>• Epidural hemorrhage</li> <li>• Subdural hemorrhage</li> <li>• Subarachnoid hemorrhage</li> </ul> </li> </ul>
Mandible	<ul style="list-style-type: none"> <li>• Describe the ramus and body of the mandible concerning its bony features and attachments.</li> <li>• Identify the anatomical parts of the mandible along with its foramina and structures passing through it</li> <li>• Explain the clinical presentation of different fractures of the mandible with relevant anatomical basis</li> <li>• Identify the bony landmarks and site of attachment of muscle.</li> </ul>

Scalp	<ul style="list-style-type: none"> <li>• Correlate gross features of each layer with an anatomical basis of black eye, profuse bleeding, gaping wound, spread of scalp infection and hematoma formation.</li> <li>• Demonstrate the extent of the scalp on the given model.</li> <li>• Identify the muscles and neurovascular structures related to scalp on prosected specimen/given models.</li> <li>• Describe the layers of the scalp in a sequential order</li> </ul>
Face	<ul style="list-style-type: none"> <li>• Elucidate the cutaneous innervation of face</li> <li>• Enlist the group of facial muscles according to the orifices they guard.</li> <li>• Describe the nerve supply of muscles of facial expressions.</li> <li>• Describe the course of arteries, veins, lymphatics and nerves of the face with the help of model.</li> <li>• Describe the course and distribution of facial nerve</li> <li>• Emphasize the relationship of facial nerve with pterygopalatine and submandibular ganglia</li> <li>• Highlight the effects of lesion of facial nerve at different levels</li> <li>• Differentiate anatomical basis of clinical presentation of UMN and LMN lesion of facial nerve</li> <li>• Correlate gross features of face with anatomical basis of danger area, trigeminal neuralgia, Bell's palsy.</li> <li>• Identify muscles of facial expressions</li> <li>• Demonstrate the cutaneous innervation of the face on the given model</li> <li>• List embryological sources of head and neck structures with special emphasis on pharyngeal apparatus.</li> <li>• Tabulate the nerve and blood supply and derivatives of all arches, pouches, clefts and membranes.</li> </ul>
Submandibular Region	<ul style="list-style-type: none"> <li>• Describe the location of major salivary glands (anatomical relations) along with opening of their ducts.</li> <li>• Illustrate the secretomotor nerve supply of major salivary glands.</li> <li>• Revisit boundaries of submandibular triangle</li> <li>• Describe the parts, relations, neurovasculature of submandibular gland.</li> <li>• Illustrate the routes of submandibular ganglion</li> <li>• Describe the distribution of submandibular ganglion</li> <li>• Correlate the anatomy of submandibular fascial space with Ludwig's angina</li> <li>• Identify the nerves, vessels and glands in the sub mandibular regions on the given model.</li> <li>• Describe the histomorphological features of salivary glands with regards to their secretory and ductal systems</li> <li>• Identify H&amp;E Stained slides of submandibular gland and sublingual glands and draw their labelled diagrams.</li> </ul>

Parotid Region	<ul style="list-style-type: none"> <li>• Elucidate the surfaces, borders, shape, location, parts, relations and drainage of parotid gland</li> <li>• List contents of parotid region</li> <li>• Trace the pathway of autonomic supply of parotid gland.</li> <li>• Enumerate structures embedded in parotid gland in a sequential order.</li> <li>• Interpret the following clinical conditions related to parotid gland: Infection (mumps) , tumor and stone of parotid gland and Frey’s Syndrome.</li> <li>• Identify the nerves, vessels and glands in the parotid region on the given model</li> <li>• Identify H&amp;E Stained slides of parotid gland and draw their labelled diagrams.</li> </ul>
Orbit	<ul style="list-style-type: none"> <li>• Revisit the skeletal framework of bony orbit and its communications</li> <li>• Enlist the contents of orbit</li> <li>• Describe the course and distribution of ophthalmic nerve and artery.</li> <li>• Enumerate different components of the lacrimal apparatus</li> <li>• Describe the nerve supply of the Lacrimal gland</li> <li>• Define Horner’s Syndrome</li> <li>• Explain the developmental anomalies of the nasolacrimal duct</li> <li>• Identify extraocular muscles, and neurovascular structures of eyeball on given models.</li> <li>• Tabulate the attachments, nerve supply, and actions of extraocular muscles</li> <li>• Justify the movements of extraocular muscles based on their attachments</li> <li>• Identify extraocular muscles, and neurovascular structures of the eyeball on given models</li> <li>• Illustrate the course and distribution of 3, 4 and 6 CNs</li> <li>• Outline the route and distribution of ciliary ganglion</li> </ul>
Tongue and oral Cavity	<ul style="list-style-type: none"> <li>• Outline the floor, roof, lateral walls and vestibule of oral cavity.</li> <li>• Describe topographic features of tongue.</li> <li>• Tabulate the actions and nerve supply of muscles (intrinsic and extrinsic) of tongue</li> <li>• Tabulate the attachments, nerve supply, actions of muscles of soft palate.</li> <li>• Illustrate the pathway of gag reflex.</li> <li>• Differentiate a case of UMN and LMN lesion of hypoglossal nerve</li> <li>• Correlate Lymphatic drainage of different parts of tongue with spread of malignancy and infection of tongue.</li> </ul>
Temporal & infratemporal regions + TMJ	<ul style="list-style-type: none"> <li>• Identify the location, boundaries, contents and communications of temporal and infratemporal fossa on a given model and skull.</li> <li>• Describe the course and distribution of mandibular nerve from origin to distribution</li> <li>• Tabulate the attachments, actions and nerve supply of muscles of mastication.</li> <li>• Trace location, various routes and distribution of otic ganglion</li> <li>• Justify role of lateral pterygoid as a peripheral heart on anatomical basis of pterygoid venous plexus</li> <li>• Elucidate importance of pterygoid venous plexus in case of intracranial spread of infection to cavernous sinus.</li> <li>• Specify the origin and distribution of superficial temporal, First and second parts of the maxillary artery</li> <li>• Specify the origin and distribution of Chorda tympani till it joins the lingual nerve.</li> <li>• Outline the type, articular surfaces, capsule, ligaments, supporting factors, movements, and nerve supply of TMJ</li> <li>• Describe movements of TMJ regarding axes and muscles producing them</li> <li>• Correlate a case of dislocation and reduction of TMJ with anatomical knowledge of TMJ.</li> </ul>

	<ul style="list-style-type: none"> <li>• Identify the nerves, vessels and muscles in temporal and infratemporal fossa on the given model.</li> <li>• Identify the involved articular surfaces and site of attachment of muscles on the given model</li> <li>• Demonstrate the different movements at the temporomandibular joint on the given model.</li> </ul>
<p>Nose and Paranasal Sinuses</p>	<ul style="list-style-type: none"> <li>• Describe features of different walls of nose.</li> <li>• Describe the features, vascular supply, nerve supply and openings in lateral wall of nose</li> <li>• Describe the features, vascular supply, and nerve supply of the medial wall of the nose</li> <li>• Highlight the significance of Little's area in a case of epistaxis</li> <li>• Identify the location of pterygopalatine fossa on skull</li> <li>• List bones forming walls of pterygopalatine fossa</li> <li>• Enumerate its contents and communications</li> <li>• Describe the distribution of third part of maxillary artery, nerve and pterygopalatine ganglion</li> <li>• Justify the role of pterygopalatine ganglion in hay fever/allergies</li> <li>• Outline the development of nose and paranasal sinuses</li> <li>• Identify the location of paranasal sinuses in sagittal section of skull</li> <li>• Demonstrate the location and drainage of paranasal sinuses in skull and on radiograph</li> <li>• Demonstrate the structure of lateral wall of nose on the given model</li> <li>• Identify the location of pterygopalatine fossa on skull.</li> </ul>
<p>EAR</p>	<ul style="list-style-type: none"> <li>• Describe the gross anatomical features of the auricle, external auditory meatus, and tympanic membrane.</li> <li>• Correlate the role of first and second pharyngeal apparatus in development of ear.</li> <li>• Describe the differentiation of otic capsule into inner ear.</li> <li>• Correlate the anomalies of external ear with neural crest cells</li> <li>• Identify the histological structure of different parts of ear, particularly the external and internal ear</li> <li>• Identify the gross features of external ear on given model</li> <li>• Identify H&amp;E-stained slide of pinna and cochlea and draw their labelled diagrams.</li> <li>• Correlate nerve supply of external ear and tympanic membrane with clinical significance (perforation of tympanic membrane)</li> <li>• Justify the anatomical basis of otoscopy in infants and adults.</li> <li>• Describe the gross anatomical features, boundaries, structures and contents of middle ear cavity. Describe the structures forming the walls of middle ear cavity on the given model.</li> <li>• Trace/ Outline the pathway and distribution of facial nerve within petrous part of temporal bone</li> <li>• Identify the walls of middle ear on given model.</li> <li>• Highlight the importance of infection in middle ear cavity in relation to its relevant communications.</li> <li>• Identify the bony and membranous parts of inner ear on model</li> <li>• Describe the histological structure of sensory receptor areas of internal ear like Organ of Corti maculae acousticae and crista ampullaris</li> <li>• Identify the cells and spaces in cochlea</li> <li>• Identify the parts of bony and membranous parts of inner ear on given model.</li> </ul>

	<ul style="list-style-type: none"> <li>• Describe various hearing Abnormalities</li> <li>• Discuss the various hearing tests including auditory evoked potentials (especially in reference to menier’s disease)</li> <li>• Interpret audiometry findings in perceptive and conductive deafness</li> <li>• Discuss presentation, investigation and management of hearing loss and common hearing disorders.</li> </ul>
NECK	<ul style="list-style-type: none"> <li>• <b><u>Hyoid bone &amp; Cervical vertebrae</u></b></li> <li>• Explain the gross features and attachments of the hyoid bone</li> <li>• Give distinguishing features of each cervical vertebra. Compare the key anatomical features of each cervical vertebra.</li> <li>• Enumerate structures passing through foramina</li> <li>• Identify the types and movements of atlantoaxial and atlanto-occipital joints</li> <li>• Outline ligamentous attachments on cervical vertebrae.</li> <li>• <b><u>Superficial &amp; deep cervical Fascia</u></b></li> <li>• Outline contents of the superficial fascia of the neck (platysma, external jugular vein)</li> <li>• Enumerate the layers of deep cervical fascia.</li> <li>• Trace / Specify the attachments of investing, pre-tracheal, carotid sheath, and prevertebral layers of fascia.</li> <li>• Identify various modifications and neck spaces formed by fascial attachments.</li> <li>• Comprehend / Describe the clinical importance of neck spaces in the spread of infection.</li> </ul> <p><b><u>Triangles of neck:</u></b></p> <ul style="list-style-type: none"> <li>• Tabulate the attachments, nerve supply, actions of superficial and deep muscles of neck (sternocleidomastoid, suprahyoid, infrahyoid, suboccipital, prevertebral muscles,).</li> <li>• Identify boundaries and contents of triangles of neck on model</li> <li>• Describe the origin, course and distribution of vessels and nerves of neck (cervical plexus, Ansa cervicalis, Common carotid artery, Internal jugular vein, subclavian vessels)</li> <li>• Analyze a case of lesion of accessory glossopharyngeal and vagus nerve on anatomical basis.</li> <li>• Describe the clinical features of torticollis</li> </ul> <p><b><u>Larynx</u></b></p> <ul style="list-style-type: none"> <li>• Describe laryngeal wall in detail with emphasis on cartilages, ligaments, muscles, vascular supply and nerve supply.</li> <li>• Analyze mechanism of abduction and adduction of vocal cords</li> <li>• Distinguish clinical presentations of injury to external, internal and recurrent laryngeal nerves.</li> <li>• Recognize clinical significance of piriform fossa.</li> <li>• Explain the following with reference to their anatomical basis: <ul style="list-style-type: none"> <li>• Laryngoscopy</li> </ul> </li> <li>• Aspiration of foreign body from laryngopharynx.</li> </ul> <p><b><u>PHARYNX</u></b></p> <ul style="list-style-type: none"> <li>• Differentiate extent, anatomical features, vascular supply, nerve supply of three parts of pharynx on anatomical basis List muscles of pharynx with nerve supply and action</li> <li>• Name structures passing through the spaces between muscles of pharynx</li> </ul>

	<ul style="list-style-type: none"> <li>• Trace origin of pharyngobasilar fascia on base of skull.</li> <li>• Correlate anatomical knowledge of pharyngobasilar fascia with patency of nasopharynx</li> <li>• Justify role of Eustachian tube in equalizing middle ear pressure, age related obliquity</li> <li>• Describe anatomical route of spread of infections from nasopharynx to middle ear.</li> <li>• Relate boundaries of tonsillar fossa and tonsillar bed with significant structures that must be protected during tonsillectomy.</li> <li>• Define Killian's dehiscence Skill</li> <li>• Identify and locate different subdivisions and boundaries of pharynx on given model.</li> </ul> <p><b><u>Lymphatic drainage of neck</u></b></p> <ul style="list-style-type: none"> <li>• Enumerate the groups of lymph nodes draining the neck.</li> <li>• Describe their location and areas of drainage.</li> <li>• Describe the formation of jugular lymph trunk.</li> <li>• Describe the clinical importance of</li> <li>• Lymphatic drainage of neck.</li> </ul>
Endocrine Glands	<ul style="list-style-type: none"> <li>• Classify the glands</li> <li>• Describe the structure and location of all endocrine glands in the body Describe the gross anatomy, neurovascular supply and clinical importance of pituitary gland.</li> <li>• Describe the gross anatomy, neurovascular supply and clinical importance of Thyroid gland</li> <li>• Describe the gross anatomy, neurovascular supply and clinical importance of parathyroid glands</li> <li>• Describe the development and congenital anomalies of parathyroid glands</li> <li>• Revisit the gross anatomy, neurovascular supply and clinical importance of endocrine portion of pancreas.</li> <li>• Revisit the gross anatomy, neurovascular supply and clinical importance of adrenal gland</li> <li>•</li> </ul>

## Neurosciences

Course Content	Learning Outcomes
Spinal Cord	<ul style="list-style-type: none"> <li>• List the major divisions, components of the central nervous system.</li> <li>• Demonstrate the structure of brain and spinal cord on prosected specimens and models.</li> <li>• Identify the normal structure of brain and spinal cord in the images of CT scan &amp; MRI. Explain the gross appearance and the nerve cell groups in the anterior, posterior, and lateral gray columns of the spinal cord</li> <li>• Enumerate and illustrate the arrangements of ascending and descending tracts (white matter) in spinal cord at various levels.</li> <li>• Explain the given clinical conditions related to ascending and descending tracts of spinal cord.</li> <li>• Explain the various thermal sensations, thermal receptors, and their excitation and transmission of thermal signals in the nervous system</li> <li>• Classify the different types of pain.</li> <li>• Compare the perception and transmission of the different types of pain.</li> <li>• Explain the pain suppression system in the brain and spinal cord.</li> <li>• Describe the brain's opiate system endorphins and enkephalins</li> <li>• Explain the role of proprioceptors (muscle spindles and Golgi tendon organs) in motor movements</li> <li>• Explain dynamic and static stretch reflex</li> <li>• Describe the flexor reflex and the crossed extensor reflex.</li> <li>• Explain the reciprocal inhibition and reciprocal innervation.</li> <li>• Identify the reflexes of posture and locomotion in the spinal cord.</li> <li>• Explain the role of primary motor cortex, premotor area, and supplementary motor area in the control of voluntary motor movements.</li> <li>• Identify the various pathways for the transmission of signals for voluntary motor control from the motor cortex to the muscles.</li> <li>• Explain the significance of anterior motor neurons as the lower motor neurons.</li> <li>• Identify the role of the brain stem in controlling motor function and role in posture of the body against gravity.</li> <li>• Explain the role of pyramidal and extrapyramidal tract in the voluntary motor movements.</li> <li>• Describe the clinical abnormalities of pain and other somatic sensations</li> <li>• Determine the anatomical and pathophysiological relevance of the following clinical conditions:               <ul style="list-style-type: none"> <li>• Upper motor neuron lesions, lower motor neuron lesions</li> <li>• Hemiplegia, paraplegia and Quadriplegia</li> <li>• Spinal shock syndrome</li> <li>• Complete cord transection syndrome</li> <li>• Anterior cord syndrome</li> <li>• Central cord syndrome</li> <li>• Brown sequard syndrome</li> <li>• Syringomyelia</li> </ul> </li> </ul>

	<ul style="list-style-type: none"> <li>• Poliomyelitis</li> <li>• Multiple sclerosis</li> <li>• Amyotrophic lateral sclerosis</li> </ul>
Brainstem	<ul style="list-style-type: none"> <li>• Describe the gross appearance and internal structure of the medulla oblongata.</li> <li>• Illustrate the cross sections of medulla oblongata at different levels. Explain the effects of raised pressure in the posterior cranial fossa on the structures contained within it.</li> <li>• Describe the gross features and internal structure of pons.</li> <li>• Illustrate cross-section of pons at different levels showing major structures at each level.</li> <li>• Describe the gross appearance and internal structure of the midbrain.</li> <li>• Illustrate cross sections at the level of superior colliculus and inferior colliculus showing major structures at each level.</li> </ul>
Cerebellum	<ul style="list-style-type: none"> <li>• Enumerate and illustrate histological layers of cerebellar cortices and different cell types of these layers.</li> <li>• Summarize the characteristic developmental events of Cerebellum</li> <li>• Describe the gross features of cerebellum.</li> <li>• List intracerebellar nuclei and types of fibers constituting white matter of cerebellum and explain their routes of entry and exit.</li> <li>• Explain the pathways carrying afferent and efferent fibers to and from the cerebellum.</li> </ul>
Cerebrum	<ul style="list-style-type: none"> <li>• Identify main sulci and gyri of cerebral hemispheres and describe the extent of each of them.</li> <li>• Explain the divisions of cerebral lobes on superolateral, medial, and inferior surfaces of cerebral hemispheres.</li> <li>• Enumerate fibers making up the white matter of cerebral hemispheres and describe each of them.</li> <li>• Identify different components of cerebrum on prosected specimen</li> <li>• Describe the cortical functional areas in different lobes of cerebral hemispheres</li> <li>• Draw and Label Homunculus. Define important clinical correlates.</li> <li>• Describe internal structure of cerebral hemisphere; white matter, Basal ganglia, Lateral ventricle</li> </ul>
Diencephalon  Basal Ganglia	<ul style="list-style-type: none"> <li>• Discuss the Location, Relations, Blood supply, nuclei and major connections of Thalamus, Hypothalamus, Epithalamus, Subthalamus, Metathalamus</li> <li>• Describe and Illustrate the Hypothalamic and pituitary gland Nuclei with their functions, location afferents.</li> <li>• Describe the Hypothalamo-Hypophyseal Portal System.</li> <li>• Describe connections and functions of different nuclei constituting basal ganglia.</li> <li>• List hyperkinetic disorders related with various basal nuclei like chorea, hemiballismus and athetosis,</li> <li>• Describe Parkinson disease regarding <ul style="list-style-type: none"> <li>• etiology, pathophysiology, clinical features and treatment.</li> <li>•</li> </ul> </li> </ul>

<p>Ventricular system</p>	<ul style="list-style-type: none"> <li>• Describe the anatomical organization of ventricular system of brain</li> <li>• Explain the boundaries of each ventricle along with their choroid plexus.</li> <li>• Explain formation, circulation and absorption of CSF.</li> <li>• Enlist the structures forming blood brain and blood CSF barriers</li> <li>• Identify the features of various ventricles on models and prosected specimen.</li> <li>• Illustrate the floor of fourth ventricle</li> </ul>
<p>Limbic System</p>	<ul style="list-style-type: none"> <li>• Explain the functions of various components of limbic system and role of hippocampus in memory.</li> <li>• Classify memories based on type of sensory experience, time of retention, synaptic facilitation and habituation</li> <li>• Explain the process of consolidation of memory through chemical and anatomical changes occurring at the synapse.</li> </ul>
<p>BLOOD SUPPLY OF BRAIN, CSF</p>	<ul style="list-style-type: none"> <li>• Describe the blood supply of different parts of brain and spinal cord emphasizing on circle of Willis</li> <li>• Explain the formation and importance of venous system</li> <li>• Identify various blood vessels of brain and spinal cord on models and prosected specimen.</li> <li>• Explain the significance of blood brain barrier.</li> <li>• Describe the process of lumbar puncture, including sequential enumeration of the anatomical structures that a needle passes through during a spinal tap.</li> <li>• Explain causes &amp; varieties of Hydrocephalus</li> </ul>

## HISTOLOGY PRACTICALS

Date	Topic
02-02-2026 to 07-02-2026	Lip
09-02-2026 to 14-02-2026	Tongue
16-02-2026 to 21-02-2026	Salivary glands (Parotid, submandibular, sublingual)
23-02-2026 to 28-02-2026	Thyroid & Parathyroid gland
02-03-2026 to 07-03-2026	Adrenal gland
09-03-2026 to 14-03-2026	Pituitary gland
16-03-2026 to 21-03-2026	Eyelid
24-03-2026 to 28-03-2026	Cornea
30-03-2026 – 11-04-26	Batch C (Cornea) Batch A, D,B (Revision)
13-04-26 to 17-04-26	Eye Ball
20-04-26 to 24-04-26	Pinna
27- 04-26 to 02-05-26	Revision
04-05-2026 to 09-05-2026	Spinal Cord
11-05-2026 to 16-05-2026	Cerebellum
18-05-2026 to 23-05-2026	Cerebrum
25-05-2026 to 30-05-2026	Mammary Gland
20-7-26 to 25-7-26	Oesophagus
27-7-26 to 1-8-26	Stomach
3-8-26 to 8-8-26	Small intestine
10-8-26 to 15-8-26	Large intestine (Colon & Appendix)

17-8-26 to 22-8-26	Rectum & Anal canal
24-8-26 to 29-8-26	Liver & Gall bladder
31-8-26 to 5-9-26	Pancreas

7-9-26 to 12-9-26	Kidney & Ureter
14-9-26 to 19-9-26	Urinary bladder & Urethra
21-9-26 to 26-9-26	Testis & Vas deferens
28-9-26 to 3-10-26	Prostate gland & Seminal vesicles
5-10-26 to 10-10-26	Ovary, Uterine tube & Uterus

## Lecture Distribution

<b>Special Embryology</b>		
<b>Topics</b>	<b>No.of Lectures</b>	<b>Faculty</b>
Skeletal System	2	Dr. Tooba Inam
Body Cavities	2	Dr. Tooba Inam
Respiratory System	3	Dr. Faiza Hanif
CVS	8	Prof. Dr. Sammar Ashraf
Head & Neck	6	Prof. Dr. Tehreem Fatima
Special Senses	4	Dr. Sarah Khan
Muscular System	2	Dr. Tooba Inam
Limbs	2	Dr. Faiza Hanif
Skin & Mammary Gland	2	Dr. Amna Zia
CNS	5	Dr. Sarah Khan
GIT	8	Dr. Sarah Khan
Urinary System	3	Dr. M.Qasim Muneer
Genital System	7	Dr. M.Qasim Muneer

<b>SPECIAL Histology</b>		
<b>Topics</b>	<b>No.of Lectures</b>	<b>Faculty</b>
Lip & Tongue	2	Dr. Amna Zia
Salivary Glands	1	Dr. Amna Zia
Endocrinology	3	Dr. Amna Zia
Special Senses	5	Dr. Sarah Khan
Nervous System	4	Dr. Tooba Inam
GIT	9	Dr. M.Qasim Muneer
Renal System	4	Dr. Amna Zia
Male Genital	5	Dr. Sarah Khan
Female Genital	5	Prof. Dr. Sammar Ashraf

## LECTURES SCHEDULE

Date	Day	Time	Topic	Region	Faculty
30-1-26	Friday	09:00-10:00 am	Lip	Histology	Dr. Amna Zia
31-1-26	Saturday	10:30-11:30 am	Tongue	Histology	Dr. Amna Zia
02-2-26	Monday	10:30-11:30 am	Salivary glands	Histology	Dr. Amna Zia
03-2-26	Tuesday	10:30-11:30 am	Endocrinology I	Histology	Dr. Amna Zia
09-2-26	Monday	10:30-11:30 am	Endocrinology II	Histology	Dr. Amna Zia
10-2-26	Tuesday	10:30-11:30 am	Endocrinology III	Histology	Dr. Amna Zia
13-2-26	Friday	09:00-10:00 am	Skeletal System I	Embryology	Dr. Tooba Inam
14-2-26	Saturday	10:30-11:30 am	Skeletal System II	Embryology	Dr. Tooba Inam
16-2-26	Monday	10:30-11:30 am	Eyelid	Histology	Dr. Sarah Khan
17-2-26	Tuesday	10:30-11:30 am	NAB Seminar		
20-2-26	Friday	09:00-10:00 am	SubStage-1		
21-2-26	Saturday	09:30-10:30 am	Body Cavities I	Embryology	Dr. Tooba Inam
23-2-26	Monday	09:30-10:30 am	Respiratory System I	Embryology	Dr. Faiza Hanif
24-2-26	Tuesday	09:30-10:30 am	Embryology Models	Embryology	Dr. Tooba Inam
27-2-26	Friday	09:00-10:00 am	Respiratory System II	Embryology	Dr. Faiza Hanif
28-2-26	Saturday	09:30-10:30 am	Respiratory System III	Embryology	Dr. Faiza Hanif
02-3-26	Monday	09:30-10:30 am	Special Senses I	Embryology	Dr. Sarah Khan
03-3-26	Tuesday	09:30-10:30 am	CVS I	Embryology	Prof. Dr. Samar Ashraf
07-3-26	Saturday	09:30-10:30 am	CVS II	Embryology	Prof. Dr. Samar Ashraf
09-3-26	Monday	09:30-10:30 am	Special Senses II	Embryology	Dr. Sarah Khan
10-3-26	Tuesday	09:30-10:30 am	CVS III	Embryology	Prof. Dr. Samar Ashraf
13-3-26	Friday	09:00-10:00 am	Special Senses III	Embryology	Dr. Sarah Khan
14-3-26	Saturday	09:30-10:30 am	CVS IV	Embryology	Prof. Dr. Samar Ashraf
16-3-26	Monday	09:30-10:30 am	Special Senses I	Histology	Dr. Sarah Khan
17-3-26	Tuesday	09:30-10:30 am	CVS V	Embryology	Prof. Dr. Samar Ashraf

21-3-26	Saturday	10:30-11:30 am	Eid Holiday		
23-3-26	Monday	10:30-11:30 am	Pakistan Day Holiday		
24-3-26	Tuesday	10:30-11:30 am	CVS VI	Embryology	Prof. Dr. Samar Ashraf
28-3-26	Saturday	10:30-11:30 am	Embryology Models	Embryology	Dr. Amna Zia
30-3-26	Monday	10:30-11:30 am	Special Senses II	Histology	Dr. Sarah Khan
31-3-26	Tuesday	10:30-11:30 am	Head & Neck I	Embryology	Prof. Dr. Tehreem Fatima
11-04-26	Saturday	10:30-11:30 am	Head & Neck II	Embryology	Prof. Dr. Tehreem Fatima
13-4-26	Monday	10:30-11:30 am	Special Senses III	Histology	Dr. Sarah Khan
14-4-26	Tuesday	10:30-11:30 am	Head & Neck III	Embryology	Prof. Dr. Tehreem Fatima
18-4-26	Saturday	10:30-11:30 am	Head & Neck IV	Embryology	Prof. Dr. Tehreem Fatima
20-4-26	Monday	10:30-11:30 am	Special Senses IV	Histology	Dr. Sarah Khan
21-4-26	Tuesday	10:30-11:30 am	Head & Neck V	Embryology	Prof. Dr. Tehreem Fatima
25-4-26	Saturday	10:30-11:30 am	Head & Neck VI	Embryology	Prof. Dr. Tehreem Fatima
27-4-26	Monday	10:30-11:30 am	Models Embryology	Embryology	Dr. Tooba Inam
28-4-26	Tuesday	10:30-11:30 am	Models Embryology	Embryology	Dr. Amna Zia

Date & Day	Time	Topic	Facilitator	Venue
04-05-2026 Monday	08:00-10:00	Introduction to Neuroanatomy Meninges & Cisterns	Dr. Oneeb Saleemi	Anatomy LT
	10:30-11:30	Histology of CNS-I	Dr. Tooba Inam	Anatomy LT
05-05-2026 Tuesday	08:00-10:00	Pakistan Studies 1 & 2	Mr. Bilal Aslam	Anatomy LT
	10:30-11:30	External Features of Spinal Cord <b>(Lecture) 1</b>	Dr. Oneeb Saleemi	Anatomy LT
06-05-2026 Wednesday	08:00-10:00	Pakistan Studies 3 & 4	Mr. Bilal Aslam	Anatomy LT
07-05-2026 Thursday	08:00-10:00	External Features of Brain Stem & Blood Supply of Spinal Cord & Brainstem	Dr. Oneeb Saleemi	Anatomy LT
08-05-2026 Friday	08:00-10:00	Spinal Cord <b>(Lecture) 2</b>	Dr. Amna Zia	Anatomy LT
09-05-2026 Saturday	08:00-10:00	Dissection	Dr. Iqra Zahid Dr. Aqsa Tahir Dr. Mehwish Mustafa	Dissection Hall
	10:30-11:30	Spinal Cord <b>(Lecture) 3</b>	Dr. Amna Zia	Anatomy LT
11-05-2026 Monday	08:00-10:00	Spinal Cord <b>(Lecture) 4</b>	Dr. Amna Zia	Anatomy LT
	10:30-11:30	Histology of CNS-II	Dr. Tooba Inam	Anatomy LT
12-05-2026 Tuesday	08:00-10:00	Pakistan Studies 5 & 6	Mr. Bilal Aslam	Anatomy LT
	10:30-11:30	Medulla Oblongata <b>(Lecture)</b>	Dr. Sarah Khan	Anatomy LT
13-05-2026	08:00-10:00	Pakistan Studies 7 & 8	Mr. Bilal Aslam	Anatomy LT

Wednesday				
14-05-2026 Thursday	08:00-10:00	Pons ( <b>Lecture</b> )	Dr. Sarah Khan	Anatomy LT
15-05-2026 Friday	08:00-10:00	Mid Brain ( <b>Lecture</b> )	Dr. Sarah Khan	Anatomy LT
16-05-2026 Saturday	08:00-10:00	Cerebellum ( <b>Lecture</b> )	Dr. Qasim Muneer	Anatomy LT
	10:30-11:30	Development of CNS-I	Dr. Sarah Khan	Anatomy LT
18-05-2026 Monday	08:00-10:00	Cranial Nerves (Functional Components)	Dr. Qasim Muneer	Anatomy LT
	10:30-11:30	Histology of CNS-III	Dr. Tooba Inam	Anatomy LT
19-05-2026 Tuesday	08:00-10:00	Pakistan Studies 9 & 10	Mr. Bilal Aslam	Anatomy LT
	10:30-11:30	4 <sup>th</sup> Ventricle	Dr. Oneeb Saleemi	Anatomy LT
20-05-2026 Wednesday	08:00-10:00	Dissection	Dr. Iqra Zahid Dr. Aqsa Tahir Dr. Mehwish Mustafa	Dissection Hall
21-05-2026 Thursday	08:00-10:00	<b>Substage-1</b>		
22-05-2026 Friday	08:00-10:00	<b>Substage-1</b>		
23-05-2026 Saturday	08:00-10:00	Diencephalon 1	Dr. Tooba Inam	Anatomy LT
	10:30-11:30	Development of CNS-II	Dr. Sarah Khan	Anatomy LT
25-05-2026 Monday	08:00-10:00	Diencephalon 2	Dr. Tooba Inam	Anatomy LT
	10:30-11:30	Dissection	Dr. Iqra Zahid Dr. Aqsa Tahir Dr. Mehwish Mustafa	Dissection Hall
26-05-2026 Tuesday	08:00-10:00	Assignment		Anatomy LT
	10:30-11:30	Development of CNS-III	Dr. Sarah Khan	Anatomy LT
27-05-2026 Wednesday	Eid Holidays			
28-05-2026 Thursday				
29-05-26 Friday				
30-05-2026 Saturday	08:00-10:00	Hypothalamus ( <b>Lecture</b> ) 1	Dr. Faiza Hanif	Anatomy LT
	10:30-11:30	Development of CNS-IV	Dr. Sarah Khan	Anatomy LT
01-06-2026 Monday	08:00-10:00	Dissection	Dr. Iqra Zahid Dr. Aqsa Tahir Dr. Mehwish Mustafa	Dissection Hall
	10:30-11:30	Hypothalamus ( <b>Lecture</b> ) 2	Dr. Faiza Hanif	Anatomy LT
02-06-2026 Tuesday	08:00-10:00	3 <sup>rd</sup> Ventricle & Dissection	Dr. Oneeb Saleemi	Anatomy LT
	10:30-11:30	Development of CNS-V	Dr. Sarah Khan	Anatomy LT
03-06-2026 Wednesday	08:00-10:00	Basal Ganglia	Dr. Amna Zia	Anatomy LT
04-06-2026 Thursday	08:00-10:00	Cerebrum (Sulci & Gyri)	Dr. M. Oneeb Saleemi	Anatomy LT
05-06-2026 Friday	08:00-10:00	Test-1	Histology & Embryology	
06-06-2026 Saturday	08:00-10:00	Cerebrum (Sulci, Gyri & Blood Supply)	Dr. M. Oneeb Saleemi	Anatomy LT
	10:30-11:30	Development of Limbs	Dr. Faiza Hanif	Anatomy LT
08-06-2026 Monday	08:00-10:00	Cerebrum (Functional Areas)	Dr. M. Oneeb Saleemi	Anatomy LT
	10:30-11:30	Development of CNS-VI	Dr. Sarah Khan	Anatomy LT
09-06-2026 Tuesday	08:00-10:00	Lateral Ventricles & Dissection	Dr. Oneeb Saleemi	Anatomy LT
	10:30-11:30	Development of Skin & Mammary Glands-I	Dr. Amna Zia	Anatomy LT
10-06-2026 Wednesday	08:00-10:00	Limbic System Reticular Formation	Dr. Amna Zia	Anatomy LT
11-06-2026 Thursday	08:00-10:00	CSF (Formation & Circulation) and Cisterns & Dissection	Dr. Oneeb Saleemi	Anatomy LT
12-06-2026	08:00-10:00	<b>Substage – 2</b>		

Friday				
13-06-2026 Saturday	08:00-10:00	<b>Substage – 2</b>		
	10:30-11:30	Development of Skin & Mammary Glands-II	Dr. Amna Zia	Anatomy LT
16-07-2026 Thursday	08:00-10:00	<b>Stage VIVA / OSPE</b>		
17-07-2026 Friday	08:00-10:00	<b>Stage Written</b>		
18-07-2026 Saturday	08:00-10:00	<b>Stage VIVA / OSPE</b>		
	10:30-11:30	Assignment		Anatomy LT

Date	Day	Time	Topic	Region	Faculty
20-7-26	Monday	10:30-11:30	GIT-I	Histology	Dr. Qasim Muneer
21-7-26	Tuesday	10:30-11:30	GIT-II	Histology	Dr. Qasim Muneer
24-7-26	Friday	09:00-10:00	GIT-I	Embryology	Dr. Sarah Khan
25-7-26	Saturday	10:30-11:30	GIT-II	Embryology	Dr. Sarah Khan
27-7-26	Monday	10:30-11:30	GIT-III	Histology	Dr. Qasim Muneer
28-7-26	Tuesday	10:30-11:30	GIT-IV	Histology	Dr. Qasim Muneer
31-7-26	Friday	09:00-10:00	GIT-III	Embryology	Dr. Sarah Khan
1-8-26	Saturday	10:30-11:30	GIT-IV	Embryology	Dr Sarah Khan
3-8-26	Monday	10:30-11:30	GIT-V	Histology	Dr Qasim Muneer
4-8-26	Tuesday	10:30-11:30	GIT-VI	Histology	Dr. Qasim Muneer
7-8-26	Friday	09:00-10:00	GIT-V	Embryology	Dr. Sarah Khan
8-8-26	Saturday	10:30-11:30	GIT-VI	Embryology	Dr. Sarah Khan
10-8-26	Monday	10:30-11:30	GIT-VII	Histology	Dr. Qasim Muneer
11-8-26	Tuesday	10:30-11:30	GIT-VIII	Histology	Dr Qasim Muneer
15-8-26	Saturday	10:30-11:30	GIT Models	Embryology	Dr. Amna Zia
17-8-26	Monday	10:30-11:30	GIT Models	Embryology	Dr. Tooba Inam
18-8-26	Tuesday	10:30-11:30	Renal System -I	Histology	Dr. Amna Zia
22-8-26	Saturday	10:30-11:30	Development of Urinary System-I	Embryology	Dr Qasim Muneer
24-8-26	Monday	10:30-11:30	Renal System-II	Histology	Dr Amna Zia
25-8-26	Tuesday	10:30-11:30	Renal System-III	Histology	Dr. Amna Zia

28-8-26	Friday	09:00-10:00	Development of Urinary System-II	Embryology	Dr Qasim Muneer
29-8-26	Saturday	10:30-11:30	Development of Urinary system III	Embryology	Dr Qasim Muneer
31-8-26	Monday	10:30-11:30	Renal System-IV	Histology	Dr Amna Zia
1-9-26	Tuesday	10:30-11:30	Male Genital System-I	Histology	Dr. Amna Zia
4-9-26	Friday	9:00-10:00	Development of Genital System-I	Embryology	Dr Qasim Muneer
5-9-26	Saturday	10:30-11:30	Development of Genital system-II	Embryology	Dr Qasim Muneer
7-9-26	Monday	10:30-11:30	Male Genital System-II	Histology	Dr. Amna Zia
8-9-26	Tuesday	10:30-11:30	Male Genital System-III	Histology	Dr. Amna Zia
11-9-26	Friday	9:00-10:00	Development of genital system-III	Embryology	Dr Qasim Muneer
12-9-26	Saturday	10:30-11:30	Development of Genital System-IV	Embryology	Dr Qasim Muneer
14-9-26	Monday	10:30-11:30	Male Genital System-IV	Histology	Dr. Amna Zia
15-9-26	Tuesday	10:30-11:30	Female Genital System-I	Histology	Prof. Dr. Samar Ashraf
18-9-26	Friday	9:00-10:00	Development of Genital System-V	Embryology	Dr. Qasim Muneer
19-9-26	Saturday	10:30-11:30	Female Genital System-II	Histology	Prof. Dr. Samar Ashraf
21-9-26	Monday	10:30-11:30	Female Genital System-III	Histology	Prof Dr Samar Ashraf
22-9-26	Tuesday	10:30-11:30	Models	Embryology	Dr. Tooba Inam
25-9-26	Friday	9:00-10:00	Development of Genital System-VI	Embryology	Dr Qasim Muneer
26-9-26	Saturday	10:30-11:30	Female Genital System-IV	Embryology	Prof Dr. Samar Ashraf
28-9-26	Monday	10:30-11:30	Models	Embryology	Dr. Tooba Inam
29-9-26	Tuesday	10:30-11:30	Models	Histology	Dr. Tooba Inam
2-10-26	Friday	9:00-10:00 am	Model	Embryology	Dr. Tooba Inam
3-10-26	Saturday	10:30-11:30	Models	Histology	Dr. Tooba Inam

## **INTERNAL ASSESSMENT**

**Total Marks for Internal Evaluation: 20**

**At end of session, Internal Evaluation or Assessment is calculated as follows:**

- 50% of total attendance
- 50% test marks + sendup marks

Marks of internal evaluation/assessment is added in professional examination.

Thank  
you!

