



Rawalpindi Medical University Anatomy Department Learning Management System (LMS) Curriculum

Ist & 2nd Year MBBS (2025)







The Vice Chancellor envisions the creation of an innovative Learning Management System (LMS) curriculum designed to cater to the evolving needs of today's students. Recognizing the importance of flexibility, the curriculum is structured to allow students to engage in their studies during evening hours, promoting a balanced approach to academic and personal life. With a focus on collaborative learning, students will be encouraged to open books, engage in peer interactions, and work together to solve LMS assessments. Emphasizing the integration of the latest online methodologies, the curriculum aims to create a dynamic and interactive learning environment, fostering critical thinking and problem-solving skills that are essential for success in the modern world. This vision reflects the commitment to making education more accessible, engaging, and aligned with the future of digital learning.

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Our Learning Management System (LMS) curriculum at the Rawalpindi Medical University is designed to create a technology-driven learning environment that fosters a deep and integrated understanding of medical knowledge. By integrating modern educational practices with core medical content, the system promotes continuous engagement and provides students with the tools needed for lifelong learning. Through vertical, horizontal, and spiral integration, our curriculum ensures that students can build upon previous knowledge, connect concepts across disciplines, and revisit key topics at increasing levels of complexity, all while receiving ongoing support through formative and summative assessments. This vision aims to cultivate well-rounded, competent medical professionals who are prepared for both academic challenges and real-world clinical practice.

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Introduction

Our medical university has introduced an innovative Learning Management System (LMS) curriculum for first and second-year MBBS students, aiming to integrate modern technology into traditional medical education. Spearheaded by our Vice Chancellor, this initiative focuses on providing a flexible, interactive, and engaging learning environment through continuous formative assessments and summative evaluations. The curriculum is built around vertical, horizontal, and spiral integration, ensuring that students not only grasp individual modules but also understand the connections between different medical disciplines. By conducting assessments in the evening, students are encouraged to engage with their coursework beyond university walls, promoting independent, self-directed learning.

At the core of this LMS initiative is the use of technology to create an accessible, interactive platform that supports students in managing their learning. The system allows students to track their progress, access course materials, and collaborate with peers, all while developing critical thinking and reflective learning skills. This technology-driven approach aims to foster both academic excellence and professional preparedness, equipping students with the knowledge and skills needed for success in medical practice and future exams like the USMLE. By blending modern teaching methods with traditional medical training, our LMS curriculum prepares students to become competent, well-rounded healthcare professionals.

Implementation

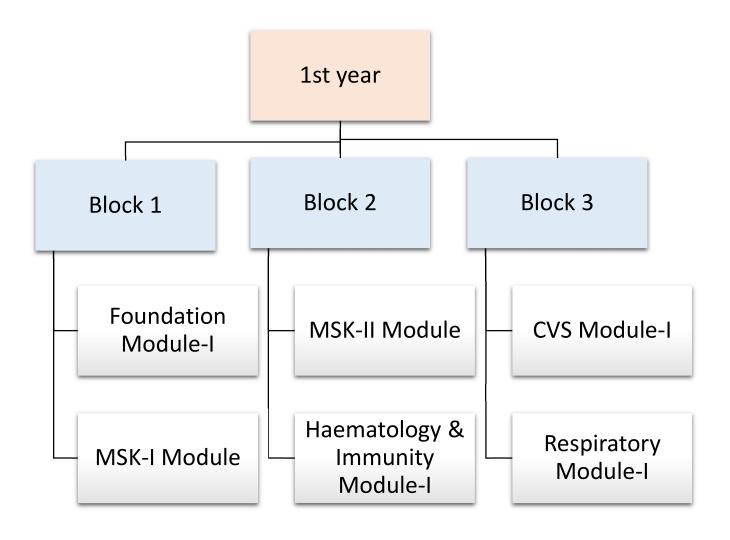
The implementation of the LMS curriculum involves a structured approach that combines formative and summative assessments throughout the academic year. Each of the first and second-year MBBS students will engage in two formative assessments per module, allowing for regular feedback and the opportunity to review and improve their understanding of core content. At the end of every two modules, a summative block LMS assessment will be conducted, providing a comprehensive evaluation of student progress and reinforcing the cumulative learning from previous modules. The integration of vertical, horizontal, and spiral concepts within the curriculum ensures that students develop a well-rounded understanding that links different disciplines and revisits key material at appropriate stages of their education. The use of technology in delivering these assessments allows for greater flexibility, accessibility, and scalability, ensuring that students have the support they need to succeed in a modern medical education environment.

Outcomes

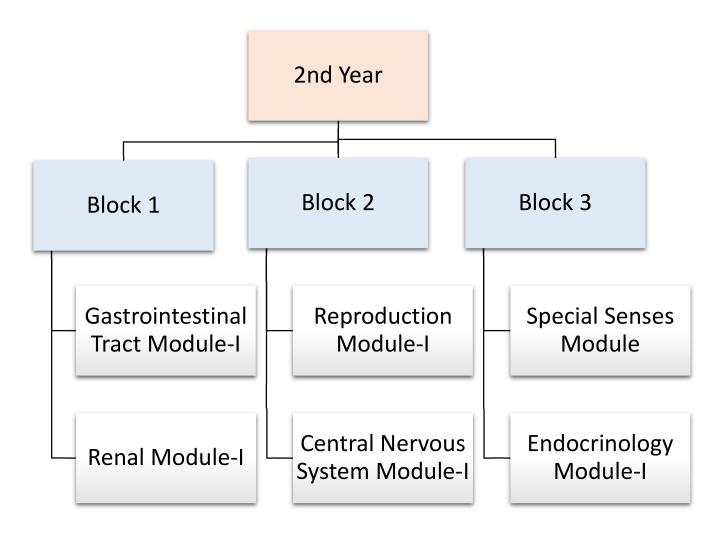
The LMS system not only supports academic learning but also prepares students for professional exams, promotes flexibility, and cultivates key skills for their future medical careers.

USMLE-based Preparation: The LMS curriculum is aligned with the structure
and content of the United States Medical Licensing Examination (USMLE),
helping students develop the foundational knowledge and test-taking skills
required for this important international benchmark in medical education.
Learning Beyond University Walls: Conducted during evening hours, the LMS
provides students the flexibility to learn outside traditional classroom settings,
enabling them to balance their academic responsibilities with personal
commitments and access learning materials at their own convenience.
Harnessing Technology for Learning: By integrating advanced technology, the
LMS creates an interactive, engaging learning environment where students can
access resources, participate in assessments, and track their progress from
anywhere, enhancing the learning experience and supporting a modern approach
to medical education.
Promoting Self-Directed Learning: The LMS fosters a culture of independent
learning, encouraging students to take ownership of their educational journey,
explore topics in depth, and engage with diverse resources beyond the core
curriculum.
Encouraging Reflective Learning: Through regular formative assessments and
feedback, students are prompted to reflect on their performance, identify strengths
and areas for improvement, and implement strategies for continuous self-
improvement and mastery of medical content.
Integration Across Disciplines: Vertical, horizontal, and spiral integration
ensures that students not only learn individual modules but understand how
different concepts interconnect, promoting a more comprehensive and holistic
understanding of medical knowledge.
Continuous Assessment and Progress Tracking: Regular formative assessments
allow for ongoing evaluation, helping students identify gaps in their knowledge
early, while summative block assessments provide a comprehensive review and
ensure readiness for future academic and clinical challenges.
Collaboration and Peer Learning: The LMS encourages collaborative learning
through group discussions, peer assessments, and shared resources, promoting a
sense of community and collective learning among students.

1st Year Module Breakdown



2nd Year Module Breakdown



Module Wise Learning Objectives Foundation Module Large Group Interactive Session (LGIS)

Topic	Learning Objectives	Calgary	Learning	Learning
	At the End of One Hour the Lecture the Student	Gauge	Domain	Resources
	Should Be Able To			
	Define the term Anatomy and its various branches	Should Know	C1	
	Define different terminologies related to Anatomy	Should Know		 Clinically
	Describe different Anatomical planes and	Must Know	C2	Oriented
	directions in relation to anatomical position	77'		Anatomy by Keith Moore 9th
	Elaborate different phases in life span of man	Nice to Know	C2	edition.
	Define basic tissues of human body	Should Know	C1	• Cunningham's
	Discuss general outlines and functions of basic tissues	Must Know	C2	Manual of
Introduction to	Describe formation of different systems of body	Should Know	C2	Practical
General Anatomy		Nice to Know	C3	Anatomy by G.J.
,	Understand the curative and preventive health care measures.	Nice to Know	C3	Romanes, 16th
	Practice the principles of bioethics	Nice to Know	C3	edition, Vol-I, II and III
	Apply the strategic use of artificial intelligence in	Nice to know	C3	and III
	healthcare	Trice to know	<i>C3</i>	
	Read relevant research article	Nice to know	C3	
	Use HEC digital library	Nice to know	C3	
	Discuss significance and importance of studying	Should Know	C2	The developing
Introduction to	Embryology.	Should Tellow	02	Human by Keith
Human	Define different terminologies to describe	Must Know	C1	Moore 8th
Development	developmental stages.			edition, chapter
	Describe series of critical events that take place	Must Know	C2	no.1
	during embryonic development.			
	Appreciate difference between embryonic and fetal	Must Know	C2	
	period.			
	Discuss common chromosomal abnormalities.	Should Know	C2	
	Understand the curative and preventive health care	Nice to know	C3	
	measures.	Nice to know	C3	
	Apply the strategic use of artificial intelligence in healthcare.	NICE to Know	C3	
	Practice principles of bioethics	Nice to know	C3	
	Use HEC digital library.	Nice to know	C3	
	Read relevant research article.	Nice to know	C3	
	Discuss role of female hormones during oogenesis	Must Know	C2	
	Describe different stages of oogenesis	Must Know	C2	The developing
	Correlate clinical aspects of gametogenesis	Must Know	C3	Human by Keith
	To understand the bio-physiological aspects of	Must Know	C2	Moore 8th
	gametogenesis			edition, chapter
	Understand the curative and preventive health care	Nice to know	C3	no.1
Oogenesis	measures.		-	
	Apply the strategic use of artificial intelligence in	Nice to know	C3	
	healthcare	NT 1	G2	
	Practice the principles of bioethics H. HEG First All'I	Nice to know Nice to know	C3	
	Use HEC digital library Read a relevant research article	Nice to know	C3	
		Should Know	C1	
	Define spermatogenesis.Describe different phases of spermatogenesis	Should Know	C2	The developing
	Discuss stages of spermiogenesis	Should Know	C2	Human by Keith
Spermatogenesis	Elaborate functions of male hormones during	Should know	C2	Moore 8th
	spermatogenesis	SHOULD KILOW	02	edition, chapter
	Understand the curative and preventive health care	Nice to know	C3	no.1
	measures.		-	
	Practice the principles of bioethics	Nice to know	С3	
	Apply the strategic use of artificial intelligence in	Nice to know	С3	
	healthcare			
	Able to read a relevant research article	Nice to know	C3	
	Use HEC digital library	Should Know	С3	

	Understand Ovarian and Uterine cycle	Must Know	C1	The developing
				Human by Keith
	Correlate Ovarian and Uterine cycles	Must Know	C3	Moore 8th
	Describe different phases of Ovarian and Uterine	Must Know	C2	edition, chapter
	cycles	3.6		no.1
Female	Enumerate female sex hormones	Must Know	C1	_
Reproductive	Discuss functional significance of female	Must Know	C2	
Cycles	reproductive hormones in reproductive cycles) f . T/	G2	_
	Discuss the anovulatory cycle in female	Must Know	C3	_
	Understand the bio-physiological aspects female	Nice to know	C2	
	reproductive cycle	NT 4 1	C)	_
	Focus on provision of curative and preventive	Nice to know	C3	
	health care services	Nice to know	C2	_
	Read a relevant research article		C3	_
	Apply the strategic use of artificial intelligence in healthcare	Nice to know	C3	
		Nice to know	C3	
	Use HEC digital library			TDI 1 1 '
	Describe follicular development, ovulation and	Must Know	C2	• The developing
	subsequent events in ovary	Must Know	C1	Human by Keith Moore 8th
	Give an account on role of luteinizing hormone in	Must Know	C1	edition, chapter
	ovulation	Must Know	C2	no.1
Ovulation and	 Discuss capacitation in female genital tract Describe different phases and results of fertilization 	Should Know	C2	
Fertilization	<u> </u>	Should Know Should Know	C2 C1	_
	Enlist different technologies of assisted fortilization	Should Know Should Know		_
	Enlist different technologies of assisted fertilization Discuss different technologies of assisted.	Should Know Should Know	C1 C3	_
	Discuss different techniques of assisted Topical appropriate and the second seco	Snould Know	C3	
	reproduction with special emphasis on IVF	Nice to know	C2	_
	Discuss the bio-physiological aspects of ovulation and fertilization	Nice to know	CZ	
	Focus on provision of curative and preventive	Nice to know	С3	_
	health care services.	NICE to know	C3	
	Practice principles of bioethics	Nice to know	C3	_
	Apply the strategic use of artificial intelligence in	Nice to know	C3	_
	healthcare	NICC to Know	CJ	
	Understand the curative and preventive health care	Nice to know	C3	
	measures.	TVICE to Know	03	
	Read a relevant research article	Nice to know	C3	_
	Use HEC digital library	Nice to know	C3	_
	Define cleavage	Must Know	C1	The developing
	Define compaction	Must Know	C1	Human by Keith
	Describe blastocyst formation	Must Know	C2	Moore 8th
	TT 1 . 1.1 1 . 1 . 1	Must Know	C2	edition, chapter
Cleavage and	Understand the bio-physiological aspects of cleavage and blastocyst	Widst Know	CZ	no.1
Formation of	Correlate clinical condition of cleavage and	Should Know	C3	_
Blastocyst	blastocyst formation		<i>-5</i>	
	Apply the strategic use of artificial intelligence in	Nice to know	C3	_
	healthcare			
	Understand the curative and preventive health care	Nice to know	С3	
	measures.			
	Practice principles of bioethics	Nice to know	СЗ	7
	Read a relevant research article	Nice to know	СЗ	7
	Use HEC digital library	Nice to know	C3	
	Describe the Sources of development of mammary	Must Know	C2	The developing
	gland.			human, 8th edition,
Development Of	Discuss different stages of activity of mammary	Must Know	C2	chapter no. 19
Mammary Gland	gland.			
	Understand the bio-physiological aspects of	Must Know	C2	
	mammary gland.			
	Correlate clinical conditions of mammary gland	Should Know	C3	
	Apply the strategic use of artificial intelligence in	Nice to know	С3	
	healthcare			
	Practice principles of bioethics.	Nice to know	C3	
	Understand the curative and preventive health care	Nice to know	С3	
	measures.			
	Read a relevant research article;	Nice to know	С3	
	•	· · · · · · · · · · · · · · · · · · ·		•

	Use HEC digital library.	Nice to know	С3	
	Define Epithelium	Must Know	C1	• diFiore's Atlas of
	Discuss general features of Epithelial cells (basal,	Must Know	C2	histology with
	apical and lateral surfaces)			clinical
	Classify epithelium	Must Know	C2	correlation, 11 th edition, chapter 2
	Explain the histological structure of simple epithelium	Must Know	C2	Junqueira's Basic
Types of Epithelium	• Describe the location and functions of simple epithelium	Must Know	C2	Histology, 15 th edition, chapter no. 4
Epititeituiii	Classify stratified epithelium.	Must Know	C2	
	Describe the functions and distribution of stratified epithelium	Must Know	C1	
	Appreciate the differences between stratified and pseudostratified epithelium	Must Know	C2	
	Describe characteristics of transitional epithelium	Must Know	C2	
	Correlate clinical aspects of different types of	Should Know	С3	
	epithelia			
	To understand the bio-physiological aspects of different types of epithelia	Nice to know	C3	
	Apply the strategic use of artificial intelligence in healthcare	Nice to know	С3	
	Understand the curative and preventive health care measures.	Nice to know	С3	
	Practice principles of bioethics	Nice to know	C3	
	Read a relevant research article	Nice to know	С3	
	Use HEC digital library	Nice to know	С3	
	Enumerate different apical modifications of cells	Must Know	C1	• diFiore's Atlas of
	Describe histological structure of each apical modification.	Must Know	C2	histology with clinical
Specializations of Apical Cell	Discuss functions of each type of apical modifications	Must Know	C2	correlation, 11 th edition, chapter 1
Surface	Correlate clinical aspects of Specializations of apical cell surfaces	Should Know	С3	Junqueira's Basic Histology, 15 th
	Understand the bio-physiological aspects of specializations of apical cell surface	Nice to know	C2	edition, chapter no. 22
	Enlist causes of infertility.	Should Know	C 1	
	Apply the strategic use of artificial intelligence in healthcare	Nice to know	С3	
	Practice principles of bioethics	Nice to know	С3	
	Understand the curative and preventive health care measures.	Nice to know	C3	
	Read a relevant research article	Nice to know	С3	
	Use HEC digital library	Nice to know	С3	
	Enumerate different cell junctions	Must Know	C1	• diFiore's Atlas of
	Describe histological structure of different cell junctions	Must Know	C2	histology with clinical
Intercellular	Understand the bio-physiological aspects of intercellular junctions and adhesions	Should Know	C2	correlation, 11 th edition, chapter 1
Junctions and Adhesions	Apply the strategic use of artificial intelligence in healthcare	Nice to know	C3	Junqueira's Basic Histology, 15 th
	Practice principles of bioethics	Nice to know	С3	edition, chapter no.
	Understand the curative and preventive health care	Nice to know	C3	22
	measures. • Read a relevant research article	Nice to know	C3	
	Use HEC digital library	Nice to know	C3	
	Define gland.	Must Know	C1	diFiore's Atlas of
	Compare between exocrine and endocrine glands with examples.	Must Know	C2	histology with clinical
Glandular	Classify glands on the basis of morphology, secretory product, and mode of secretion.	Must Know	C2	correlation, 11 th edition, chapter 1
Epithelium	 Understand the bio-physiological aspects of glands. 	Should know	C2	Junqueira's Basic
	Practice principles of bioethics.	Nice to know	C3	Histology, 15 th
	Apply the strategic use of artificial intelligence in	Nice to know	С3	edition, chapter no.
	healthcare.			22

	Understand the curative and preventive health care measures.	Nice to know	С3	
	Read a relevant research article	Nice to know	С3	-
	Use HEC digital library		C3]
	Describe the Sources of development of mammary gland	Must Know	C2	diFiore's Atlas of histology with
	Discuss the ultra-structure of mammary gland	Must Know	C2	clinical
Development and Histology Of	Discuss different stages of activity of mammary gland	Must Know	C2	correlation, 11 th edition, chapter 1
Mammary Gland	Understand the bio-physiological aspects of mammary gland	Should Know	C2	Junqueira's Basic Histology, 15 th edition, chapter no.
	Correlate clinical conditions of mammary glands.	Should Know	C3	
	Practice principles of bioethics	Nice to know	C3	22
	Apply the strategic use of artificial intelligence in healthcare	Nice to know	C3	
	Understand the curative and preventive health care measures.	Nice to know	C3	
	Read a relevant research article	Nice to know	C3]
	Use HEC digital library	Nice to know	C3]

SMALL GROUP DISCUSSION (SGDS)

Demonstration/Dis section	At the End of The Demonstration Student Should Be Able To	Calgary Gauge	Learning Domains	Learning Resources
Anatomicomedical Terminology I (Anatomical	Describe different anatomical planes of human	Must Know	C2	Clinical Oriented
	body and correlate with radiological anatomy			Anatomy by Keith
	Demonstrate anatomical position of human body	Nice to know	C3	L. Moore.8 TH Edition.
Position and	Apply the strategic use of artificial intelligence in	Nice to know	P	• (Chapter 3,
Planes)	healthcare	27	C3	Page143,153,154)
,	Practice principles of bioethics	Nice to know	C3	.https://www.yout
	Read a relevant research article	Nice to know	СЗ	ube.com/watch?v= Ykfzt-olaYs
	Define different terms related to body parts	Must Know	C1	Clinical Oriented
Anatomicomedical	Describe axis of movement	Must Know	C2	Anatomy by Keith
Terminology -II	Demonstrate axis of movement	Must Know	P	L. Moore.8 TH
(Anatomical Terms	Strategic use of artificial intelligence in healthcare	Nice to know	C3	Edition.
and Axis of	Focus on provision of curative and preventive	Nice to Know	C3	• (Chapter 3,
Movements)	health care services			Page143,153,154)
	Practice principles of bioethics	Nice to know	C3	https://www.voutu
	Apply the strategic use of artificial intelligence in healthcare	Nice to know	СЗ	https://www.youtu be.com/watch?v= Ykfzt-olaYs
	Understand the curative and preventive health care measures.	Nice to know	СЗ	1 KIZI-OIA I S
	Read a relevant research article	Nice to know	C3	
	Use HEC digital library	Nice to know	C3	
	Define cell	Must Know	C1	Clinical Oriented
	Define tissue	Must Know	C1	Anatomy by Keith
	Describe basic tissues of human body	Must Know	C2	L. Moore.8 TH
	Practice principles of bioethics	Nice to know	C3	Edition. (Chapter
Anatomicomedical	Apply the strategic use of artificial intelligence in	Nice to know	C3	3,
Terminology -III (Cell and Tissues)	healthcare	Nice to know	C3	Page143,153,154)
(Cell and Tissues)	Understand the curative and preventive health care services			https://www.youtu be.com/watch?v=
	Read a relevant research article	Nice to know	C3	Ykfzt-olaYs
	Use digital library	Nice to know	C3	CILL 10 1 1
	Describe general organization of different systems of body	Must Know	C2	Clinical Oriented Anatomy by Keith
	Discuss concepts of skin and fascia	Must Know	C2	L. Moore.8 TH
	Describe the classification of blood vessels	Must Know	C2	Edition. (Chapter 3,
Anatomicomedical Terminology-IV	Describe the concepts of divisions of nervous system	Must Know	C1	Page143,153,154)
(Skin and Body	Describe the formation of spinal nerve	Should Know	C2	https://www.youtu
Systems)	Practice principles of bioethics	Nice to know	C3	be.com/watch?v=
	Understand the curative and preventive health care measures.	Nice to know	C3	Ykfzt-olaYs
	Read a relevant research article	Nice to know	С3	
	Apply strategic use of artificial intelligence in healthcare			
	Use HEC digital library	Nice to know	C3	
	Determine the side	Must Know	C2	Clinical Oriented
Clavicle	Demonstrate anatomical position, general features,	Must Know	P	Anatomy by Keith
	attachments and articulations (medial and lateral).			L. Moore.8 TH
	Elaborate pectoral girdle formation movement and dislocation.	Must Know	СЗ	Edition. Clavicle (Chapter 3,
	Describe ossification in detail and Fracture Of clavicle.	Should Know	С3	Page143,153,154)
	Practice principles of bioethics	Nice to know	C3	https://www.youtu
	Apply the strategic use of artificial intelligence in healthcare	Nice to know	СЗ	be.com/watch?v= Ykfzt-olaYs
	Understand the curative and preventive health care measures.	Nice to know	C3	
	incasures.			1

	Read a relevant research article	Nice to know	C3	
	Determine the side	Must Know	C2	Clinical Oriented
	Demonstrate anatomical position, general features, attachments, and articulation. (clavicle and shoulder joints)	Must Know	P	Anatomy by Keith L. Moore.8TH Edition. (Chapter
Scapula	Describe scapular anastomosis and its clinical significance	Must Know	С3	3, Page143- 145,154,171,172).
	Demonstrate Scapular movements.	Must Know	P	https://www.youtu
	Practice principles of bioethics	Nice to know	C3	be.com/watch?v=z
	Apply the strategic use of artificial intelligence in healthcare	Nice to know	СЗ	FawNgaSL6E
	Focus on provision of curative and preventive health care services	Nice to know	СЗ	
	Use HEC digital library.	Nice to know	C3	
	Read a relevant research article	Nice to know	C3	
	Determine the side	Must Know	C2	Clinical Oriented
	Demonstrate anatomical position, general features, attachments and articulation (shoulder and elbow).	Must Know	P	Anatomy by Keith L.
Humerus	Describe the importance of anatomical and surgical neck of humurus	Should Know	C2	Moore.8TH Edition. (Chapter
	Correlate axillary, radial, median and ulnar nerve damage with respect to various fractures of humerus.	Should Know	C2	3, Page 168,169). https://teachmeana tomy.info/
	Describe Significance of bicipital groove, angle of humeral torsion and carrying angle	Must Know	C2	
	Discuss Ossification and fractures	Should to know	С3	
	Understand the curative and preventive health care measures.	Nice to know	С3	
	Apply the strategic use of artificial intelligence in healthcare	Nice to know	С3	
	Practice principles of bioethics	Nice to know	С3	
	Use HEC digital library	Nice to know	C3	
	Read a relevant research article	Nice to know	C3	
	 Describe Superficial fascia with cutaneous nerves and vessels of anterior axioappendicular region Tabulate muscles of the anterior axioappendicular region 	Must Know	C2	Clinical Oriented Anatomy by Keith L. Moore.8TH
	Understand the bio-physiological aspects of anterior axioappendicular region.	Should Know	C1	Edition. (Chapter 3, Page 168,169).
Anterior	Strategic use of artificial intelligence in healthcare	Nice to Know	C3	https://teachmeana
Axioappendicular Region	Understand the curative and preventive health care measures	Nice to know	СЗ	tomy.info/
	 Practice principles of bioethics Apply the strategic use of artificial intelligence in 	Nice to Know	C3	_
	healthcare Use HEC digital library	Nice to Know	С3	
	Read a relevant research article	Nice to know	C3	
	Tabulate muscles of the pectoral region (origin, insertion, nerve supply, action and applied).	Must Know	C2	Clinical Oriented Anatomy by
Posterior Axioappendicular	Identify and describe the pectoral and clavipectoral fascia	Must Know	C2	Keith L. Clinical Oriented
Muscles	Use HEC digital library	Nice to Know	C3	Anatomy by
	Understand the curative and preventive health care measures	Nice to know	С3	Keith L. Moore.8TH
	Apply the strategic use of artificial intelligence in healthcare	Nice to Know	С3	Edition. (Chapter 3, Page 168,169).
	Read a relevant research article	Nice to Know	C3	https://teachmeana tomy.info/
	Define axilla	Must Know	C2	Clinical Oriented
	Describe its boundaries. Enumerate the Contents of axilla, (axillary artery	Must Know Must Know	C2	Anatomy by Keith L. Moore.8TH
	with its branches, axillary vein and tributaries, axillary lymphatics, lymph nodes and brachial		C2	Edition. (Chapter 3, Page 191-196).

Axilla	plexus).			https://www.youtu
1 2.22.22	Describe the clinical significance of axillary lymph nodes	Should Know	С3	be.com/watch?v=1 qgqrXlpr1Y
	Practice principles of bioethics	Nice to Know	С3	
	Understand the curative and preventive health care measures	Nice to know	С3	
	Apply the strategic use of artificial intelligence in healthcare	Nice to Know	С3	
	Read a relevant research article	Nice to Know	C3	
	Use HEC digital library	Nice to Know	С3	
	Describe the formation of brachial plexus its roots and trunks.	Must Know	C2	Clinical Oriented Anatomy by Keith
Brachial Plexus	Describe the origin and root value of different nerves arising	Must Know	C2	L. Moore.8TH Edition. (Chapter
	Understand the curative and preventive health care measures	Nice to Know	С3	3, Page 199-200). https://teachmeana
	Practice principles of bioethics	Nice to Know	C3	tomy.info/
	Apply the strategic use of artificial intelligence in healthcare	Nice to Know	C3	https://www.youtu be.com/watch?v=c
	Read a research article on brachial plexus	Nice to Know	C3	9giLkwgYA0
	Use HEC digital library	Nice to Know	C3	
Brachial Plexus	Describe the different neurological deficits arising as a result of damaged to roots, trunks and branches of brachial plexus at different levels.	Must Know	С3	Clinical Oriented Anatomy by Keith L. Moore.8TH
Injuries	Describe the origin and root value of different nerves arising	Must Know	С3	Edition. (Chapter 3, Page 199-200).
	Read a research article on brachial plexus	Nice to know	C3	https://teachmeana
	Understand the curative and preventive health care measures	Nice to know	С3	tomy.info/ https://www.youtu
	Practice principles of bioethics	Nice to know	C3	be.com/watch?v=c
	Apply the strategic use of artificial intelligence in healthcare	Nice to know	С3	9giLkwgYA0
	Read a relevant research article	Nice to know	С3	
	Use HEC digital library	Nice to know	C3	
	Describe the extent of breast	Must Know	C2	Clinical Oriented
	Describe the relations of breast	Must Know	C2	Anatomy by Keith
	Describe structure of gland.	Must Know	C2	L. Moore.8TH
Breast	Discuss the blood supply, venous drainage and lymphatics.	Must Know	C2	Edition. (Chapter 4, Page 315-
Breast	Correlate Clinical picture and lymphatic spread in breast carcinoma.	Should know	C3	318,323-326). https://www.youtu
	Discuss congenital anomalies of breast	Should know	С3	be.com/watch?v= OW0qQnT5GoA
	Practice principles of bioethics	Nice to know	C3	O W 0qQIII 3 GOM
	Understand the curative and preventive health care measures	Nice to know	С3	
	Read a relevant research article	Nice to know	C3	
	Apply the strategic use of artificial intelligence in healthcare	Nice To Know		
	Use HEC digital library	Nice to know	C3	
	Interpret the normal radiologic appearance of bones in axioappendicular region.	Must Know	С3	
	Apply the strategic use of artificial intelligence in healthcare	Nice to know	С3	
	Practice principles of bioethics	Nice to know	C3	
	Understand the curative and preventive health care measures	Nice to know	C3	

PRACTICALS SKILL LABORATORY (SKL)

Practical	At the End of The Practical Student	Calgary Gauge	Learning	Learning Resources
	Should Be Able To		Domains	
		Histology		
Introduction to Microscope	Identify different types of microscopes.	Should know	C1	DiFiore's Atlas of histology with clinical correlation, 11 th
	Describe functions of different parts of microscope.	Should know	C1	edition, chapter1. • Junqueira's Basic Histology,
	Identify different types of lenses.	Should know	C1	15 th edition, chapter no. 1
	Focus slides.	Must know	P	• USMLE Q Bank Step 1 (Volume 1) 2023-2034
Simple	Classify epithelium.	Should know	C2	DiFiore's Atlas of histology
epithelium	Illustrate different types of simple epithelium	Should know	P	with clinical correlation, 11 th edition, chapter2
	Identify types of simple epithelium.	Should know	Р	Junqueira's Basic Histology, 15 th edition, chapter no. 4
	Write two points of identification	Must know	C1	-
Stratified	Classify stratified epithelium.	Should know	C1	DiFiore's Atlas of histology
epithelium /Transitional	Illustrate different types of stratified epithelium	Should know	C1	with clinical correlation, 11 th edition, chapter 2
Epithelium	Discuss functions of stratified epithelium	Should know	C2	Junqueira's Basic Histology, 15 th edition, chapter no. 4
	Enlist sites of specific type of epithelium	Should know	C2	• USMLE Q Bank Step 1 (Volume 1) 2023-2034
	Identify epithelium under microscope	Should know	C1	
	Write two points of identification	Must know	P	
Mammary gland	Illustrate the different stages of activity of mammary gland	Should know	C2	DiFiore's Atlas of histology with clinical correlation, 11 th
	Identify the slides of different stages of mammary gland	Must know	P	 edition, chapter 19 Junqueira's Basic Histology, 15th edition, chapter no. 22 USMLE Q Bank Step 1 (Volume 1) 2023-2034

TOS for LMS Assessment of Foundation Module-I Of First Year MBBS, Batch -52 (Session 2024-25)

 1^{ST} LMS Assessment for the first year MBBS for the Foundation Module will be held on 03-03-2025 (Monday) from 7:00pm to 7:30pm. Details of topics are mentioned in the table below:

S No.	Domain of Teaching	- v	No. of MCQs	Cognitive Domain		
	Activity			C1	C2	C3
1.	LGIS	General Anatomy Introduction to General Anatomy	05	1	2	2
		General Embryology Introduction to Human development	05	1	2	2
2.	SGD/Dissection	Anatomicomedical terminologies a. Position and Planes b. Anatomical terms and axis of movements c. Cell and Tissues d. Skin and Body Systems Clavicle Scapula Humerus	15	5	5	5
3.	Practical	Introduction to Microscope and Preparation of Slide. Artifacts	05	1	2	2
4.		TOTAL		3	0	

Learning Resources:

- Embryology :- KLM Embryology Developing Human 11th Edition
- Histology:-Junqueira's Basic Histology 18th Edition
- Gross Anatomy:- KLM clinically oriented anatomy edition 10
- USMLE Q Bank Step 1 (Volume 1) 2023-2034
 UWORLD Step 1 (Volume 3) 2023-2024

Dr. Ayesha Yousaf Head / Prof. of Anatomy Dean Basic Sciences Rawalpindi Medical University Rawalpindi

TOS for LMS Assessment of Foundation Module-I Of First Year MBBS, Batch -52 (Session 2024-25)

1ST LMS Assessment for the first year MBBS for the Foundation Module will be held on 17-03-2025 (Monday) from 7:00pm to 7:30pm. Details of topics are mentioned in the table below:

S No.	Domain of Teaching	Topic	No. of MCQs	Cognitive Domain		
	Activity		1,100	C1	C2	C3
5.	LGIS	Embryology	05	1	2	2
		Gametogenesis				
		Female reproductive cycles				
		Fertilization				
		Histology	05	1	2	2
		Types of epithelium				
		Cell surface modification				
		Intercellular junctions				
6.	SGD/Dissection	Anterior Axioappendicular Muscles	15	5	5	5
		Posterior Axioappendicular Muscles				
		Axilla				
		Brachial Plexus				
7.	Practical	Simple Epithelium	05	1	2	2
		Stratified epithelium				
8.		TOTAL		3	30	

Learning Resources:

- Embryology :- KLM Embryology Developing Human 11th Edition
- Histology:-Junqueira's Basic Histology 18th Edition
- Gross Anatomy:- KLM clinically oriented anatomy edition 10
- USMLE Q Bank Step 1 (Volume 1) 2023-2034
 UWORLD Step 1 (Volume 3) 2023-2024

Dr. Ayesha Yousaf Head / Prof. of Anatomy Dean Basic Sciences Rawalpindi Medical University Rawalpindi

Musculoskeletal Module I (MSK-I)

Learning Objectives

Large Group Interactive Session (LGIS)

Topic	Learning Objectives	Calgary	Learning	Learning Resources
•	At the end of session students should be able to	Gauge	Domain	3
	Embryology			
	Describe formation of Amniotic Cavity,	Should know	C2	
	embryonic disc and Umbilical vesicle			KLM Embryology
Formation of	Discuss development of chorionic sac	Should know	C2	Developing Human
Bilaminar	Outline the process of implantation	Should know	C1	11 th Edition
Embryonic Disc	Describe changes in Gravid Endometrium	Should know	C2	• USMLE Q Bank Step 1 (Volume 1)
(2 nd week of	Understand the Bio-physiological aspects of gravid	Should know	C2	2023-2034
Human Development)	endometrium			
Development)	Corelate with the clinical conditions	Must know	C3	
	focus on provision of curative and preventive health	Nice to know	C3	
	care measures			
	Practice principles of bioethics	Nice to know	C3	
	Apply strategic use of AI in health care	Nice to know	C3	
	read relevant research article	Nice to know	C3	_
	Discuss process of gastrulation with special	Should know	C2	
Gastrulation	reference to primitive streak			KLM Embryology
	Describe the fate of primitive streak	Should know	C2	Developing Human
Establishment of	Discuss establishment of body axis	Should know	C2	11 th
Body Axis and	Draw fate map and discuss its importance in future	Should know	C2	Edition
Fate Map (3 rd week)	development		52	USMLE Q Bank Stan 1
week)	Understand the Biophysiological aspects of	Should know	C2	Step 1 (Volume 1) 2023-
	gastrulation			2034
	Describe congenital abnormalities associated with	Should know	C3	
	gastrulation	Must know	C3	
	Corelate with the clinical conditions		C3	
	focus on provision of curative and preventive health care	Nice to know	C3	-
	Practice principles of bioethics	Nice to know	C3	
	Apply strategic use of AI in health care	Nice to know	C3	-
	Read a relevant Research article			
	Define notochord	Should know	C1	
Notochord	Delineate different stages of notochord formation	Should know	C1	KLM Embryology
Formation	Discuss the importance of notochord in	Should know	C2	Developing Human
	development of central nervous system			11th Edition
(3 rd week)	Describe role of notochord in development of axial	Should know	C1	USMLE Q Bank Start 1 (Valence 1)
	Skeleton			Step 1 (Volume 1) 2023-2034
	Describe the fate of notochord	Should know	C2	2023-2034
	Correlate with clinical conditions of notochord	Must know	C3	-
	formation			
	focus on provision of curative and preventive health care	Nice to know	C3	
	measures			
	Practice principles of bioethics	Nice to know	C3	
	Apply strategic use of AI in health care	Nice to know	C3	
	read relevant research article	Nice to know	C3	
	Define neurulation	Should know	C1	
	Describe formation of neural plate and neural tube	Should know	C2	KLM Embryology
	Discuss neural crest formation	Should know	C2	Developing Human
	Enlist derivatives of neural crest cells	Should know	C1	11 th Edition
Neurulation	Understand the bio-physiological aspects of	Should know	C2	USMLE Q Bank Star 1 (Valence 1)
(3 rd week)	Neurulation			Step 1 (Volume 1) 2023-2034
	Discuss neural tube defects	Should know	C3	
	Discuss different types of spina bifida	Should know	C3	
	Discuss the importance of folic acid in the prevention	Should know	C2	1
	of spina bifida			
	Corelate with the clinical conditions	Must know	С3	
	focus on provision of curative and preventive health	Nice to know	C3	
	care measures			_
	Practice principles of bioethics	Nice to know	C3	_
	Apply strategic use of AI in health care	Nice to know	C3	_
	read relevant research article	Nice to know	C3	
	Enumerate three germ layers and their derivatives	Nice to know	C1	

Development and	•	Describe different divisions of mesoderm	Nice to know	C2		
Differentiation of	•	Describe development of somites and their	Should know	C2	•	KLM
Somites	•	differentiation	Should know	CZ		Embryology Developing
	•	Explain different stages of somite development	Should know	C2	1	Human 11 th
	•	Understand the Biophysiological aspects of Somite	Must know	C2	1	Edition
		differentiation			•	USMLE Q
	•	Correlate clinical aspects of somite differentiation	Must know	С3	1	Bank Step 1 (Volume 1)
	•	Focus on provision of curative and preventive health	Nice to know	С3		2023-2034
		care measures				
	•	Practice principles of bioethics	Nice to know	C3	_	
	•	Apply strategic use of AI in health care	Nice to know	С3	_	
	•	Read relevant research article	Nice to know	C3		
Early Development	•	Describe early development of cardiovascular system	Should know	C2		KLM
of Cardiovascular	•	and chorionic villi Discuss development of intraembryonic coelom	Should know	C2	-	Embryology
System & highlights	•	Define angiogenesis and vasculogenesis.	Should know	C2 C1	-	Developing Human 11 th
of 4th-8th week	•	Correlate clinical aspects of angiogenesis	Should know	C3	-	Edition
	•	Summarize the main developmental events and	Should know	C2	•	USMLE Q
		changes in external form of the embryo during the 4th		02		Bank Step 1 (Volume 1)
		to 8th weeks				2023-2034
	•	Corelate with the clinical conditions	Must know	С3	1	
	•	focus on provision of curative and preventive health	Nice to know	СЗ		
		care measures			_	
	•	Practice principles of bioethics	Nice to know	C3	4	
	•	Apply strategic use of AI in health care	Nice to know	C3	_	
	•	read relevant research article	Nice to know	C3		
	•	Enlist different phases of embryonic development	Should know	C1	•	KLM
Folding of Embryo	•	Describe folding of the embryo in median plane	Should know	C2	-	Embryology
<i>5</i> , 0	•	Describe folding of the embryo in horizontal plane	Should know Should know	C2	-	Developing Human 11 th
	•	Discuss results of folding	Should know Should know	C2	-	Edition
	•	Discuss Omphalocele and Gastroschisis	Must know	C3	•	USMLE Q
	•	Corelate with the clinical conditions focus on provision of curative and preventive health	Nice to know	C3	-	Bank Step 1
	•	care measures	NICC to Know	C3		
	•	Practice principles of bioethics	Nice to know	C3	1	
	•	Apply strategic use of AI in health care	Nice to know	C3	1	
	•	read relevant research article	Nice to know	C3	1	
	•	Describe different criteria for fetal age estimation	Should know	C2	1	
	•	Discuss the trimesters of pregnancy with their	Should know	C2		KLM
		importance				Embryology
T . 1 . 1	•	Describe highlights of fetal period	Should know	C2		Developing
Fetal period	•	Differentiate between embryonic and fetal period	Should know	C2		Human 11 th Edition
	•	Tabulate growth in length and weight during fetal	Should know	C2		USMLE Q
		period	C1 111		-	Bank Step 1
	•	Enumerate and discuss factors influencing fetal growth	Should know	C2	-	(Volume 1)
	•	Define the term perinatology	Should know Should know	C1	-	2023-2034
	•	Enlist and briefly describe procedures for assessing fetal well-being	SHOUIG KHOW	C3		
	•	Correlate clinical aspects of fetal period	Should know	C3	1	
	•	focus on provision of curative and preventive health	Must know	C3	1	
		care measures				
	•	Practice principles of bioethics	Nice to know	C3		
	•	Apply strategic use of AI in health care	Nice to know	C3		
	•	read relevant research article	Nice to know	С3		
	1	Discuss Implantation and establishment of the embryo	Should know	C2	•	KLM
Placenta	•		1		_	Embryology
		within the uterus	C1 111			
	•	Describe the differentiation of the uterine lining into	Should know	C2		Developing
	•	Describe the differentiation of the uterine lining into decidua			_	Human 11 th
	•	Describe the differentiation of the uterine lining into decidua Describe the development of a placenta	Should know	C2	-	
	•	Describe the differentiation of the uterine lining into decidua Describe the development of a placenta Describe fetal – maternal circulation	Should know Should know	C2 C2	•	Human 11 th Edition USMLE Q Bank Step 1
	•	Describe the differentiation of the uterine lining into decidua Describe the development of a placenta Describe fetal – maternal circulation Discuss the bio-physiological aspects of placenta	Should know Should know Should know	C2 C2 C2	•	Human 11 th Edition USMLE Q Bank Step 1 (Volume 1)
	•	Describe the differentiation of the uterine lining into decidua Describe the development of a placenta Describe fetal – maternal circulation Discuss the bio-physiological aspects of placenta Corelate the clinical conditions associated with	Should know Should know	C2 C2	•	Human 11 th Edition USMLE Q Bank Step 1
	•	Describe the differentiation of the uterine lining into decidua Describe the development of a placenta Describe fetal – maternal circulation Discuss the bio-physiological aspects of placenta	Should know Should know Should know	C2 C2 C2	•	Human 11 th Edition USMLE Q Bank Step 1 (Volume 1)
	•	Describe the differentiation of the uterine lining into decidua Describe the development of a placenta Describe fetal – maternal circulation Discuss the bio-physiological aspects of placenta Corelate the clinical conditions associated with placenta	Should know Should know Should know Must know	C2 C2 C2 C3	•	Human 11 th Edition USMLE Q Bank Step 1 (Volume 1)
	•	Describe the differentiation of the uterine lining into decidua Describe the development of a placenta Describe fetal – maternal circulation Discuss the bio-physiological aspects of placenta Corelate the clinical conditions associated with placenta focus on provision of curative and preventive health	Should know Should know Should know Must know	C2 C2 C2 C3	•	Human 11 th Edition USMLE Q Bank Step 1 (Volume 1)
	•	Describe the differentiation of the uterine lining into decidua Describe the development of a placenta Describe fetal – maternal circulation Discuss the bio-physiological aspects of placenta Corelate the clinical conditions associated with placenta focus on provision of curative and preventive health care measures	Should know Should know Should know Must know Nice to know	C2 C2 C2 C3	•	Human 11 th Edition USMLE Q Bank Step 1 (Volume 1)
	•	Describe the differentiation of the uterine lining into decidua Describe the development of a placenta Describe fetal – maternal circulation Discuss the bio-physiological aspects of placenta Corelate the clinical conditions associated with placenta focus on provision of curative and preventive health care measures Practice principles of bioethics	Should know Should know Should know Must know Nice to know	C2 C2 C2 C3 C3	•	Human 11 th Edition USMLE Q Bank Step 1 (Volume 1)

	Discuss origin, composition, location, function and fate of yolk sac	Should know	C2	KLM Embryology
Fetal Membranes and	Explain origin, composition, location, function and fate of Amnion	Should know	C2	Developing Human 11 th
Multiple Pregnancies	Describe formation of umbilical cord and its structure	Should know	C2	Edition
	Define Allantois along with its importance and function	Should know	C1	USMLE Q
	Discuss different types of twins	Should know	C2	Bank Step 1 (Volume 1)
	Correlate clinical aspects of fetal membranes	Must know	C3	2023-2034
	Correlate with the clinical conditions of twin pregnancy	Must know	C3	
	focus on provision of curative and preventive health care measures	Nice to know	C3	
	Practice principles of bioethics	Nice to know	С3	
	Apply strategic use of AI in health care	Nice to know	С3	
	read relevant research article	Nice to know	С3	
	Histology LGIS			
	Define connective tissue	Should know	C1	Junqueira's
Cells of connective	Classify connective tissue	Should know	C2	Basic Histology
tissue, Embryonic	Enlist and explain types of cells in CT	Should know	C2	18th Edition
connective tissue / mucoid	• Enumerate sites and describe the function of each type of cell of connective tissue	Should know	C2	• USMLE Q Bank Step 1
Connective Tissue	Understand the Biophysiological aspects of connective tissue	Should know	C2	(Volume 1) 2023-2034
	Draw and label histological structure of mucoid CT.	Should know	C2	1
	Describe fibers in mucoid CT	Should know	C2	1
	Correlate clinical conditions of CT	Must know	C3	
	focus on provision of curative and preventive health care measures	Nice to know	С3	
	Practice principles of bioethics	Nice to know	C3	_
	Apply strategic use of AI in health care	Nice to know	C3	_
	read relevant research articles	Nice to know	C3	
Loose aerolar connective	Enumerate examples and location of reticular, connective tissue	Should know	C1	• Junqueira's
tissue & its types	Illustrate histological structure of loose and reticular	Should know	C2	Basic Histology 18th Edition
Reticular CT	connective tissue	Must know	G2	USMLE Q Dank Stan 1
	Correlate clinical aspects of loose and reticular CT	Nice to know	C3	Bank Step 1 (Volume 1)
	focus on provision of curative and preventive health care measures	Nice to know	C3	2023-2034
	Practice principles of bioethics	Nice to know	C3	_
	Apply strategic use of AI in health care	Nice to know	C3	_
	read relevant research article	Nice to know	C3	
		Should know	C1	- T
Connective	• Enumerate examples and location of adipose and dense			Junqueira's
Connective	• Enumerate examples and location of adipose and dense CT.			Basic Histology
tissue III Adipose CT	CT.Draw, describe and label histological structure of all	Should know	C2	Basic Histology 18th Edition USMLE O
tissue III	 CT. Draw, describe and label histological structure of all types of connective tissue. Differentiate between dense regular and irregular 	Should know Should know	C2 C2	18th Edition USMLE Q Bank Step 1
tissue III Adipose CT Dense regular and	 CT. Draw, describe and label histological structure of all types of connective tissue. Differentiate between dense regular and irregular connective tissue microscopically 	Should know	C2	18th Edition USMLE Q
tissue III Adipose CT Dense regular and	 CT. Draw, describe and label histological structure of all types of connective tissue. Differentiate between dense regular and irregular connective tissue microscopically Correlate clinical aspects of loose and reticular CT 	Should know Must know	C2 C3	18th Edition USMLE Q Bank Step 1 (Volume 1)
tissue III Adipose CT Dense regular and	 CT. Draw, describe and label histological structure of all types of connective tissue. Differentiate between dense regular and irregular connective tissue microscopically Correlate clinical aspects of loose and reticular CT focus on provision of curative and preventive health 	Should know	C2	18th Edition USMLE Q Bank Step 1 (Volume 1)
tissue III Adipose CT Dense regular and	 CT. Draw, describe and label histological structure of all types of connective tissue. Differentiate between dense regular and irregular connective tissue microscopically Correlate clinical aspects of loose and reticular CT focus on provision of curative and preventive health care measures 	Should know Must know	C2 C3	18th Edition USMLE Q Bank Step 1 (Volume 1)
tissue III Adipose CT Dense regular and	 CT. Draw, describe and label histological structure of all types of connective tissue. Differentiate between dense regular and irregular connective tissue microscopically Correlate clinical aspects of loose and reticular CT focus on provision of curative and preventive health care measures 	Should know Must know Nice to know	C2 C3 C3	18th Edition USMLE Q Bank Step 1 (Volume 1)
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tissue III Adipose CT Dense regular and	 CT. Draw, describe and label histological structure of all types of connective tissue. Differentiate between dense regular and irregular connective tissue microscopically Correlate clinical aspects of loose and reticular CT focus on provision of curative and preventive health care measures Practice principles of bioethics Apply strategic use of AI in health care 	Should know Must know Nice to know Nice to know Nice to know	C2 C3 C3 C3 C3 C3	18th Edition USMLE Q Bank Step 1 (Volume 1) 2023-2034
tissue III Adipose CT Dense regular and	 CT. Draw, describe and label histological structure of all types of connective tissue. Differentiate between dense regular and irregular connective tissue microscopically Correlate clinical aspects of loose and reticular CT focus on provision of curative and preventive health care measures Practice principles of bioethics Apply strategic use of AI in health care read relevant research article 	Should know Must know Nice to know Nice to know Nice to know Nice to know	C2 C3 C3 C3 C3 C3 C3 C3	18th Edition USMLE Q Bank Step 1 (Volume 1) 2023-2034 Junqueira's
tissue III Adipose CT Dense regular and	 CT. Draw, describe and label histological structure of all types of connective tissue. Differentiate between dense regular and irregular connective tissue microscopically Correlate clinical aspects of loose and reticular CT focus on provision of curative and preventive health care measures Practice principles of bioethics Apply strategic use of AI in health care read relevant research article Classify cartilage Enlist sites of hyaline, fibro and elastic cartilage Appreciate microscopic structure of Hyaline, Elastic 	Should know Must know Nice to know Nice to know Nice to know Nice to know Should know	C2 C3 C3 C3 C3 C3 C3 C2	18th Edition USMLE Q Bank Step 1 (Volume 1) 2023-2034
tissue III Adipose CT Dense regular and irregular connective	 CT. Draw, describe and label histological structure of all types of connective tissue. Differentiate between dense regular and irregular connective tissue microscopically Correlate clinical aspects of loose and reticular CT focus on provision of curative and preventive health care measures Practice principles of bioethics Apply strategic use of AI in health care read relevant research article Classify cartilage Enlist sites of hyaline, fibro and elastic cartilage Appreciate microscopic structure of Hyaline, Elastic and Fibrocartilage 	Should know Must know Nice to know Nice to know Nice to know Nice to know Should know Should know	C2 C3 C3 C3 C3 C3 C3 C3 C1	18th Edition USMLE Q Bank Step 1 (Volume 1) 2023-2034 Junqueira's Basic Histology 18th Edition USMLE Q Bank Step 1
tissue III Adipose CT Dense regular and	 CT. Draw, describe and label histological structure of all types of connective tissue. Differentiate between dense regular and irregular connective tissue microscopically Correlate clinical aspects of loose and reticular CT focus on provision of curative and preventive health care measures Practice principles of bioethics Apply strategic use of AI in health care read relevant research article Classify cartilage Enlist sites of hyaline, fibro and elastic cartilage Appreciate microscopic structure of Hyaline, Elastic and Fibrocartilage 	Should know Must know Nice to know Nice to know Nice to know Should know Should know Should know	C2 C3 C3 C3 C3 C3 C3 C2 C1 C2	18th Edition USMLE Q Bank Step 1 (Volume 1) 2023-2034 Junqueira's Basic Histology 18th Edition USMLE Q Bank Step 1 (Volume 1)
tissue III Adipose CT Dense regular and irregular connective	 CT. Draw, describe and label histological structure of all types of connective tissue. Differentiate between dense regular and irregular connective tissue microscopically Correlate clinical aspects of loose and reticular CT focus on provision of curative and preventive health care measures Practice principles of bioethics Apply strategic use of AI in health care read relevant research article Classify cartilage Enlist sites of hyaline, fibro and elastic cartilage Appreciate microscopic structure of Hyaline, Elastic and Fibrocartilage Differentiate between three cartilages 	Should know Must know Nice to know Nice to know Nice to know Nice to know Should know Should know Should know Should know	C2 C3 C3 C3 C3 C3 C3 C2 C1 C2 C2	18th Edition USMLE Q Bank Step 1 (Volume 1) 2023-2034 Junqueira's Basic Histology 18th Edition USMLE Q Bank Step 1
tissue III Adipose CT Dense regular and irregular connective	 CT. Draw, describe and label histological structure of all types of connective tissue. Differentiate between dense regular and irregular connective tissue microscopically Correlate clinical aspects of loose and reticular CT focus on provision of curative and preventive health care measures Practice principles of bioethics Apply strategic use of AI in health care read relevant research article Classify cartilage Enlist sites of hyaline, fibro and elastic cartilage Appreciate microscopic structure of Hyaline, Elastic and Fibrocartilage Differentiate between three cartilages Describe the structure of perichondrium 	Should know Must know Nice to know Nice to know Nice to know Nice to know Should know Should know Should know Should know Should know Should know	C2 C3 C3 C3 C3 C3 C2 C1 C2 C2 C2 C2	18th Edition USMLE Q Bank Step 1 (Volume 1) 2023-2034 Junqueira's Basic Histology 18th Edition USMLE Q Bank Step 1 (Volume 1)
tissue III Adipose CT Dense regular and irregular connective	 CT. Draw, describe and label histological structure of all types of connective tissue. Differentiate between dense regular and irregular connective tissue microscopically Correlate clinical aspects of loose and reticular CT focus on provision of curative and preventive health care measures Practice principles of bioethics Apply strategic use of AI in health care read relevant research article Classify cartilage Enlist sites of hyaline, fibro and elastic cartilage Appreciate microscopic structure of Hyaline, Elastic and Fibrocartilage Differentiate between three cartilages Describe the structure of perichondrium Describe the arrangement of layers in articular cartilage 	Should know Must know Nice to know Nice to know Nice to know Should know	C2 C3 C3 C3 C3 C3 C2 C1 C2 C2 C2 C2 C2 C2	18th Edition USMLE Q Bank Step 1 (Volume 1) 2023-2034 Junqueira's Basic Histology 18th Edition USMLE Q Bank Step 1 (Volume 1)
tissue III Adipose CT Dense regular and irregular connective	 CT. Draw, describe and label histological structure of all types of connective tissue. Differentiate between dense regular and irregular connective tissue microscopically Correlate clinical aspects of loose and reticular CT focus on provision of curative and preventive health care measures Practice principles of bioethics Apply strategic use of AI in health care read relevant research article Classify cartilage Enlist sites of hyaline, fibro and elastic cartilage Appreciate microscopic structure of Hyaline, Elastic and Fibrocartilage Differentiate between three cartilages Describe the structure of perichondrium Describe the arrangement of layers in articular cartilage Understand the Biophysiological aspects of cartilage 	Should know Must know Nice to know Nice to know Nice to know Should know	C2 C3 C3 C3 C3 C3 C2 C1 C2 C2 C2 C2 C2 C2 C2	18th Edition USMLE Q Bank Step 1 (Volume 1) 2023-2034 Junqueira's Basic Histology 18th Edition USMLE Q Bank Step 1 (Volume 1)
tissue III Adipose CT Dense regular and irregular connective	 CT. Draw, describe and label histological structure of all types of connective tissue. Differentiate between dense regular and irregular connective tissue microscopically Correlate clinical aspects of loose and reticular CT focus on provision of curative and preventive health care measures Practice principles of bioethics Apply strategic use of AI in health care read relevant research article Classify cartilage Enlist sites of hyaline, fibro and elastic cartilage Appreciate microscopic structure of Hyaline, Elastic and Fibrocartilage Differentiate between three cartilages Describe the structure of perichondrium Describe the arrangement of layers in articular cartilage Understand the Biophysiological aspects of cartilage Correlate with clinical conditions focus on provision of curative and preventive health care measures 	Should know Must know Nice to know Nice to know Nice to know Should know	C2 C3 C3 C3 C3 C3 C2 C1 C2 C2 C2 C2 C2 C2 C2	18th Edition USMLE Q Bank Step 1 (Volume 1) 2023-2034 Junqueira's Basic Histology 18th Edition USMLE Q Bank Step 1 (Volume 1)
tissue III Adipose CT Dense regular and irregular connective	 CT. Draw, describe and label histological structure of all types of connective tissue. Differentiate between dense regular and irregular connective tissue microscopically Correlate clinical aspects of loose and reticular CT focus on provision of curative and preventive health care measures Practice principles of bioethics Apply strategic use of AI in health care read relevant research article Classify cartilage Enlist sites of hyaline, fibro and elastic cartilage Appreciate microscopic structure of Hyaline, Elastic and Fibrocartilage Differentiate between three cartilages Describe the structure of perichondrium Describe the arrangement of layers in articular cartilage Understand the Biophysiological aspects of cartilage Correlate with clinical conditions focus on provision of curative and preventive health care measures Practice principles of bioethics 	Should know Must know Nice to know Nice to know Nice to know Should know Nice to know	C2 C3 C3 C3 C3 C3 C2 C1 C2 C2 C2 C2 C2 C3	18th Edition USMLE Q Bank Step 1 (Volume 1) 2023-2034 Junqueira's Basic Histology 18th Edition USMLE Q Bank Step 1 (Volume 1)
tissue III Adipose CT Dense regular and irregular connective	 CT. Draw, describe and label histological structure of all types of connective tissue. Differentiate between dense regular and irregular connective tissue microscopically Correlate clinical aspects of loose and reticular CT focus on provision of curative and preventive health care measures Practice principles of bioethics Apply strategic use of AI in health care read relevant research article Classify cartilage Enlist sites of hyaline, fibro and elastic cartilage Appreciate microscopic structure of Hyaline, Elastic and Fibrocartilage Differentiate between three cartilages Describe the structure of perichondrium Describe the arrangement of layers in articular cartilage Understand the Biophysiological aspects of cartilage Correlate with clinical conditions focus on provision of curative and preventive health care measures Practice principles of bioethics 	Should know Must know Nice to know Nice to know Nice to know Nice to know Should know Nice to know Nice to know	C2 C3 C3 C3 C3 C3 C2 C1 C2 C2 C2 C2 C2 C3 C3	18th Edition USMLE Q Bank Step 1 (Volume 1) 2023-2034 Junqueira's Basic Histology 18th Edition USMLE Q Bank Step 1 (Volume 1)
tissue III Adipose CT Dense regular and irregular connective	 CT. Draw, describe and label histological structure of all types of connective tissue. Differentiate between dense regular and irregular connective tissue microscopically Correlate clinical aspects of loose and reticular CT focus on provision of curative and preventive health care measures Practice principles of bioethics Apply strategic use of AI in health care read relevant research article Classify cartilage Enlist sites of hyaline, fibro and elastic cartilage Appreciate microscopic structure of Hyaline, Elastic and Fibrocartilage Differentiate between three cartilages Describe the structure of perichondrium Describe the arrangement of layers in articular cartilage Understand the Biophysiological aspects of cartilage Correlate with clinical conditions focus on provision of curative and preventive health care measures Practice principles of bioethics Apply strategic use of AI in health care 	Should know Must know Nice to know Nice to know Nice to know Should know Nice to know Nice to know Nice to know	C2 C3 C3 C3 C3 C3 C3 C2 C1 C2 C2 C2 C2 C2 C3 C3 C3	18th Edition USMLE Q Bank Step 1 (Volume 1) 2023-2034 Junqueira's Basic Histology 18th Edition USMLE Q Bank Step 1 (Volume 1) 2023-2034
tissue III Adipose CT Dense regular and irregular connective Cartilage	 CT. Draw, describe and label histological structure of all types of connective tissue. Differentiate between dense regular and irregular connective tissue microscopically Correlate clinical aspects of loose and reticular CT focus on provision of curative and preventive health care measures Practice principles of bioethics Apply strategic use of AI in health care read relevant research article Classify cartilage Enlist sites of hyaline, fibro and elastic cartilage Appreciate microscopic structure of Hyaline, Elastic and Fibrocartilage Differentiate between three cartilages Describe the structure of perichondrium Describe the arrangement of layers in articular cartilage Understand the Biophysiological aspects of cartilage Correlate with clinical conditions focus on provision of curative and preventive health care measures Practice principles of bioethics Apply strategic use of AI in health care read relevant research article 	Should know Nice to know Nice to know Nice to know Nice to know Should know Nice to know Nice to know Nice to know Nice to know	C2 C3 C3 C3 C3 C3 C2 C1 C2 C2 C2 C2 C2 C3 C3 C3 C3 C3 C3	18th Edition USMLE Q Bank Step 1 (Volume 1) 2023-2034 Junqueira's Basic Histology 18th Edition USMLE Q Bank Step 1 (Volume 1) 2023-2034 Junqueira's
tissue III Adipose CT Dense regular and irregular connective	 CT. Draw, describe and label histological structure of all types of connective tissue. Differentiate between dense regular and irregular connective tissue microscopically Correlate clinical aspects of loose and reticular CT focus on provision of curative and preventive health care measures Practice principles of bioethics Apply strategic use of AI in health care read relevant research article Classify cartilage Enlist sites of hyaline, fibro and elastic cartilage Appreciate microscopic structure of Hyaline, Elastic and Fibrocartilage Differentiate between three cartilages Describe the structure of perichondrium Describe the arrangement of layers in articular cartilage Understand the Biophysiological aspects of cartilage Correlate with clinical conditions focus on provision of curative and preventive health care measures Practice principles of bioethics Apply strategic use of AI in health care read relevant research article Describe structure and functions of bone cells 	Should know Must know Nice to know Nice to know Nice to know Nice to know Should know Should know Should know Should know Should know Should know Nice to know Should know	C2 C3 C3 C3 C3 C3 C2 C1 C2 C2 C2 C2 C2 C3	18th Edition USMLE Q Bank Step 1 (Volume 1) 2023-2034 Junqueira's Basic Histology 18th Edition USMLE Q Bank Step 1 (Volume 1) 2023-2034

	comment home			USMLE Q
	compact boneDescribe structure of osteon.	Should know	C2	Bank Step 1
	Understand the Biophysiological aspects of bone	Should know	C2	(Volume 1)
		Must know	C2	2023-2034
	Correlate clinical aspects of bone focus on provision of curative and preventive health	Nice to know	C3	-
	care measures	TVICE to Know	C3	
	Practice principles of bioethics	Nice to know	C3	1
	Apply strategic use of AI in health care	Nice to know	C3	1
	read relevant research article	Nice to know	C3	-
	Describe osteogenesis	Should know	C2	
Bone-II	Discuss bone growth, remodeling and repair	Should know	C2	 Junqueira's Basic Histology
(Ossification)	Describe histological changes in bones in osteoporosis,	Should know	C3	18th Edition
	rickets, osteomalacia, osteopetrosis and bone tumors		0.5	USMLE Q
	Correlate with the clinical conditions.	Must know	C3	Bank Step 1
	focus on provision of curative and preventive health	Nice to know	C3	(Volume 1)
	care measures			2023-2034
	Practice principles of bioethics	Nice to know	C3	-
	Apply strategic use of AI in health care	Nice to know	C3	-
	read relevant research article	Nice to know	C3	1
	Gross Anatomy			<u>l</u>
	Describe the functions of bone and skeleton	Should know	C2	KLM clinically
Bone-I	Identify general features of bone	Should know	C2	oriented
(General Features)	Differentiate between maceration and decalcification of	Should know	C2	anatomy
	bones			edition 10
	Correlate with clinical conditions of bone	Must know	С3	USMLE Q Bank Stan 1
	focus on provision of curative and preventive health	Nice to know	C3	Bank Step 1 (Volume 1)
	care measures Practice principles of bioethics	Nice to know	C3	2023-2034
	Apply strategic use of AI in health care	Nice to know	C3	-
	read relevant research article	Nice to know	C3	-
	Classify bones based on different criteria	Should know	C2	
Bone-II	Describe the growing end hypothesis	Should know	C2	KLM Clinically
Classification &	Describe the growing end hypothesis Describe blood supply of bones	Should know	C2	oriented anatomy edition
Blood supply)	Appreciate role of bones in estimation of sex, age and	Should know	C2	10
	stature.			USMLE Q
	Correlate with the clinical conditions.	Must know	С3	Bank Step 1 (Volume 1)
	• focus on provision of curative and preventive health care measures	Nice to know	C3	2023-2034
	Practice principles of bioethics	Nice to know	C3	-
	Apply strategic use of AI in health care	Nice to know	C3	1
	read relevant research article	Nice to know	C3	-
	Define joints	Should know	C1	
	Classify fibrous joints with examples	Should know	C2	 KLM clinically oriented
Joints-I	Classify norous joints with examples Classify cartilaginous joints with examples	Should know	C2	anatomy edition
(Types)	Classify cartinaghous joints with examples Classify synovial joints with examples	Should know	C2	10
	Understand the Bio-physiological aspects of joints	Should know	C2	USMLE Q
	Correlate with the clinical conditions	Must know	C2	Bank Step 1
	focus on provision of curative and preventive health	Nice to know	C3	(Volume 1) 2023-2034
	care measures	11100 00 11110 11	03	2023-2034
	Practice principles of bioethics	Nice to know	C3	
	Apply strategic use of AI in health care	Nice to know	С3	
	read relevant research article	Nice to know	C3	
	Describe structure of synovial joint	Should know	C2	KLM clinically
Joints-II	Discuss movements at various types of joints	Should know	C2	oriented
(Movements)	Correlate with the clinical conditions	Must know know	С3	anatomy edition 10
	Understand the Bio-physiological aspects of joints	Nice to know	C3	• USMLE Q Bank Step 1 (Volume 1) 2023-2034

SMALL GROUP DISCUSSION (SGDS)

Topic	Learning Objectives At the end of Session students should be able to	Calgary gauge	Learning Domain	Learning Resource
	Gross Anatomy			
	• Classify the joint (according to type, shape and movement)	Should know	C2	Clinical Oriented
	Discuss the attachments of capsule and ligament	Should know	C2	Anatomy by Keith L. Moore.8 TH Edition.
	• Enlist the intra-articular structure (tendon of biceps brachii)	Should know	C1	(Chapter 3, Page
	Describe attachment of glenoidal labrum with its	Should know	C2	266- 271,284-285).
	significance in relation to synovial membrane	G1 111		https://teachmeanatomy.inf o/upper-
	Discuss the neurovascular supply	Should know	C2	limb/joints/shoulder
Shoulder Joint	Discuss factors indispensable for stability of joint	Should know	C2	USMLE Q Bank
	Discuss the movements at shoulder joint	Should know	C2	Step 1 (Volume
	• Enlist related bursae.	Should know	C1	1) 2023-2034
	• Explain the related clinicals (shoulder dislocation, rotator	Must know	C3	
	cuff injuries, Glenoid Labrum tears, Frozen shoulder)			
	Correlate with the clinical conditions	Nice to know	C3	
	• focus on provision of curative and preventive health care measures	Nice to know	C3	
	Practice principles of bioethics	Nice to know	C3	
	• Apply strategic use of AI in health care	Nice to know	C3	
	Tabulate muscles of flexor compartment with their	Should know	C2	
	origin, insertion, nerve supply and actions	G1 111		 Clinical Oriented Anatomy by Keith L.
Flexor	Describe Neurovascular organization of arm.	Should know	C2	Moore.8 TH Edition.
compartment & Neurovascular	Map the outline of Brachial artery and Musculo cutaneous nerve in a simulated patient or model	Should know	P	(Chapter 3, Page201- 211,211-214).
organization of the arm	Correlate with the clinical conditions (biceps tendinitis, dislocation of tendon of biceps brachii)	Must know	СЗ	https://teachmeanatom y.info/upper- limb/muscles/anterior-
	• focus on provision of curative and preventive health care measures	Nice to know	C3	forearm/ • USMLE Q Bank
	Practice principles of bioethics	Nice to know	C3	Step 1 (Volume
	Apply strategic use of AI in health care	Nice to know	C3	1) 2023-2034
	Read a relevant research article	Nice to know	C3	
Extensor compartment of	Tabulate Muscles of extensor compartment with origin insertion, nerve supply and actions	Should know	C2	Clinical Oriented Anatomy by Keith L. Moore.8 TH Edition.
the arm	Describe the neurovascular organization	Should know	C2	(Chapter 3, Page201-
	Discuss consequences of injury to radial nerve (wrist drop), venipuncture in cubital fossa)	Should know	C3	211,211-214). https://teachmeanatomy.inf
	Map the outline of Radial nerve and ulnar nerve on a simulated patient or model	Should know	P	o/upper- limb/muscles/upper-arm/
	Correlate with the clinical conditions	Must know	C3	LISMLE O Don's
		Nice to know		USMLE Q Bank Step 1 (Volume
	focus on provision of curative and preventive health care measures		C3	1) 2023-2034
	Practice principles of bioethics	Nice to know	C3	
	Apply strategic use of AI in health care	Nice to know	С3	
	Read relevant research article	Nice to know	C3	1
	Determine the side	Should know	C1	
		Should know	P	Clinical Oriented
	Demonstrate anatomical position	Should know	C2	Anatomy by Keith L.
	Discuss general features, attachments and articulations	Should know	C2 C2	Moore.8 TH Edition. (Chapter 3,
	Describe ossification	Should know	C2	Page147).
Ulna	Elaborate interosseous membrane and its importance	Must know	C2	https://teachmeanatomy.inf
	Correlate with the clinical conditions	Nice to know	C3	o/upper-limb/bones/ulna/
	focus on provision of curative and preventive health care measures			
	Practice principles of bioethics	Nice to know	C3	_
	Apply strategic use of AI in health care	Nice to know	C3	
	Read a relevant research article	Nice to know	C3	
	1	Should know	C1	Clinical Oriented

	Demonstrate its anatomical position	Should know	P	Anatomy by Keith L.
	Discuss general features, attachments and articulations	Should know	C2	Moore.8 TH Edition.
Radius	Describe its ossification	Should know	C2	(Chapter 3, Page 148).
	Describe his destination Describe the interosseous membrane and its importance	Should know	C2	
	Correlate the clinical conditions	Must know	C3	https://teachmeanatomy.in
		Nice to know	C3	<u>fo/upper-</u>
	 focus on provision of curative and preventive health care measures 	Trice to know	C3	<u>limb/bones/radius/</u>
	Practice principles of bioethics	Nice to know	С3	_
	Apply strategic use of AI in health care	Nice to know	C3	
1	Read a relevant research article	Nice to know	С3	
	Tabulate muscles of flexor compartment with their	Should know	C2	
Flexor	origin, insertion, nerve supply and actions			Clinical Oriented
compartment of the forearm	Correlate with clinical conditions associated with flexor	Must know	C3	Anatomy by Keith L. Moore.8 TH Edition.
	compartment			(Chapter 3, Page215-
	• Map the outline of Median Nerve, Radial Artery and Ulnar	Should know	P	234,236,240)
	Artery of forearm in a simulated patient or Model	2.5		https://teachmeanatomy
	• focus on provision of curative and preventive health care	Must know	C3	.info/upper-
-	measures	Nice to know	C2	limb/muscles/anterior-
	Practice principles of bioethics	Nice to know	C3	<u>forearm/</u>
-	Apply strategic use of AI in health care	Nice to know	C3	 USMLE Q Bank Step 1 (Volume
	Read a relevant research article	NICE to Know	C3	1) 2023-2034
				,
	Tabulate muscles of extensor compartment with origin,	Should know	C2	Clinical Oriented
Extensor	insertion, nerve supply and actions		5 2	Anatomy by Keith L.
compartment of the forearm	Correlate with clinical conditions associated with extensor	Must know	С3	Moore.8TH Edition.
the foreurn	compartment of forearm (Tennis elbow)			(Chapter 3, Page215- 234,236,240).
	• focus on provision of curative and preventive health care	Nice to know	С3	• USMLE Q Bank Step 1
_	measures	Nr. 4 1		(Volume 1) 2023-2034
	Practice principles of bioethics	Nice to know	C3	
	Apply strategic use of AI in health care	Nice to know Nice to know	C3	
	Read a relevant research article	Should know	C3	- 011 1 10 1 11
Neurovascular	 Describe nerves and vessels of forearm (formation, commencement, course, branches and relations) 	Should know	C2	 Clinical Oriented Anatomy by Keith L.
organization of	· · · · · · · · · · · · · · · · · · ·	Must know	C3	Moore.8TH Edition.
forearm	 Correlate with associated clinical conditions (Median nerve injury, pronator syndrome, cubital tunnel syndrome) 	Wiust Kilow	C3	(Chapter 3, Page215-234,236,240).
	Map the outline of Radial Nerve and Ulnar Nerve on a	Should know	P	https://teachmeanatomy.in
	simulated patient or model			fo/upper-
	Correlate with the clinical conditions	Must know	C3	limb/muscles/posterior-
	 focus on provision of curative and preventive health care measures 	Nice to know	C3	forearm/
	Practice principles of bioethics	Nice to know	С3	USMLE Q Bank
	Apply strategic use of AI in health care	Nice to know	СЗ	Step 1 (Volume
	Read relevant research article		СЗ	1) 2023-2034
	Describe the type of joint with its articular surfaces	Should know	C2	Clinical Oriented
Elboyricint	Discuss the capsule, synovial membrane and ligaments	Should know	C2	Anatomy by Keith L.
Elbow joint	of the joints	01 111		Moore.8TH Edition (Chapter 3, Page271-
	• Enumerate the related bursae,	Should know	C1	274).
	Describe axis and plane of movements	Should know	C2	h-ttm o.//1 1 1
	• Enumerate muscles producing movements at elbow joint.	Should know	C1	https://www.kenhub.com/en/library/anatomy/elbo
	 Correlate with the associated clinical conditions (Elbow joint dislocation and student's elbow) 	Must know	C3	<u>w-joint</u>
	focus on provision of curative and preventive health care measures	Nice to know	СЗ	USMLE Q Bank
	Practice principles of bioethics	Nice to know	С3	Step 1 (Volume 1) 2023-2034
	Apply strategic use of AI in health care	Nice to know		1, 2023 2037
	Read a relevant research article	Nice to know	C3	
D.,	Describe type of radioulnar joints, articular surfaces,	Should know	C2	Clinical Oriented
Proximal and distal radioulnar	Become of personal femos, were used continues,			Anatomy by Keith L.
	capsular attachments, synovial membrane and			
joints	capsular attachments, synovial membrane and ligaments.	Charl J I	~~	Moore.8TH Edition. (Chapter 3, Page274-
joints	capsular attachments, synovial membrane and ligaments. • Describe movements of supination and pronation with	Should know	C2	Moore.8TH Edition.
joints	capsular attachments, synovial membrane and ligaments. • Describe movements of supination and pronation with special reference to axes	Should know		Moore.8TH Edition. (Chapter 3, Page274-277).
joints .	capsular attachments, synovial membrane and ligaments. • Describe movements of supination and pronation with special reference to axes • Enumerate the muscles producing these movements	Should know	C1	Moore.8TH Edition. (Chapter 3, Page274- 277). https://www.kenhub. com/en/library/anato
joints .	capsular attachments, synovial membrane and ligaments. • Describe movements of supination and pronation with special reference to axes			Moore.8TH Edition. (Chapter 3, Page274- 277). https://www.kenhub.

	Practice principles of bioethics	Nice to know	C3	
	Apply strategic use of AI in health care	Nice to know	C3	https://www.kenhub.com
	Read a relevant research article	Nice to know	СЗ	en/library/anatomy/dista radioulnar-joint
				• USMLE Q Bank Step 1 (Volume 1) 2023-2034
	Understand the arrangement of carpal bones	Should know	C1	Clinical Oriented
	Identify the salient features of carpel bone.	Should know	C2	Anatomy by Keith L.
Hand	Discuss the special blood supply of scaphoid bone.	Should know	СЗ	Moore.8TH Edition.
Tana	Describe the mid carpal joint.	Should know	C2	Chapter 3, Page148- 151,278-283).
	Discuss the 1st carpometacarpal joint including the type of the joint capsule synovial membrane and ligaments with	Should know	C2	https://teachmeanatomy.
	axis of the movement and the muscles producing the			limb/muscles/hand/
	movements	Must know	C2	 USMLE Q Bank
	Correlate with the clinical conditions.	Nice to know	C3	Step 1 (Volume
	focus on provision of curative and preventive health care	NICE to know	C3	1) 2023-2034
	measures	Nice to know	C3	_
	Practice principles of bioethics A line of the control of	Nice to know	CS	-
	Apply strategic use of AI in health care	Nice to know	C3	_
	Read relevant research article Provide the true of interview in the article and the second article.	Should know		- 01: 10: 11
	Describe the type of joint with its articular surfaces	Should know	C2	 Clinical Oriented Anatomy by Keith L.
	Discuss the capsule, synovial membrane and ligaments of the joint	SHOULD KHOW	C2	Moore.8TH Edition.
	Enumerate the related bursae	Should know	C1	(Chapter 3,
Wrist joint		Should know		Page278). https://www.kenhub.com
J	Describe axis and plane of movements	Should know	C2	en/library/anatomy/the
	Enumerate muscles producing movements at joint Discourse of Pickers	Should know	C1	wrist-joint
	Discuss wrist fractures & Dislocations		C3	-
	• Correlate with the clinical conditions	Must know Nice to know	C3	USMLE Q Bank
	Focus on provision of curative and preventive health care measures Practice principles of bioethics	Nice to know	C3	Step 1 (Volume 1) 2023-2034
	Apply strategic use of AI in health care	Nice to know	C3	=
	Read a relevant research article	Nice to know	CJ	
	Discuss the blood vessels involved in the formation of	Should know	C2	Clinical Oriented
Anastomosis	anastomosis around the wrist joint		02	Anatomy by Keith L.
around wrist	Explain the importance of anastomosis.	Should know	C2	Moore.8TH Edition.
joint	Correlate with the clinical conditions	Must know	C3	(Chapter 3, Page278).
	Focus on provision of curative and preventive health care measures Able to focus on provision of curative and	Nice to know	C3	https://www.kenhub.cor en/library/anatomy/arter
	preventive health care measures			-anastomoses-of-the-
	Practice principles of bioethics	Nice to know	СЗ	upper-extremity
	Apply strategic use of AI in health care	Nice to know	СЗ	
	Read a relevant research article	Nice to know		
Dorsum of	Describe the muscles of dorsum of hand	Should know	C2	Clinical Oriented
Hand, Flexor	Discuss the Dorsal digital expansion	Should know	C2	Anatomy by
retinaculum Extensor retinaculum	Describe the attachment of flexor retinaculum with structures related to it.	Should know	C2	Keith L. Moore.8TH Edition. (Chapter 3, Page159,224-226).
	Map the outline of flexor and extensor retinacula on a	Should know	P	
	simulated patient or a model.			https://teachmeanatomy
	Describe the Guyon's canal.	Should know	C2	<u>fo/upper-</u> limb/muscles/hand/
	Describe the formation of the carpel tunnel and its applied	Should know	C3	mino/muscics/flatiu/
	anatomy. Describe the attachment of extensor retinaculum and	Should know	C2	USMLE Q Ban Step 1 (Volume
	its various compartments with structures passing			1) 2023-2034
	through it.	GI 111		_
	Discuss the De Quervain's disease.	Should know	C3	4
	 Correlate with the clinical conditions. Focus on provision of curative and preventive health care 	Must know Nice to know	C3	
	measures • Propries ratios of his othics	Nice to know	C2	\dashv
	Practice principles of bioethics Application of AL in booth constitutions.	Nice to know	C3	
	Apply strategic use of AI in health care	Nice to know		4
	Read a relevant research article Third to the great of families that the great discuss the state of the	Should know	C3	- CI' : 10 : :
	Tabulate the muscles forming the thenar and hypothenar minance	SHOULD KHOW	C2	• Clinical Oriented Anatomy by Keith L.
Palm of hand-I	Discuss Lumbricals, Palmar and dorsal interossei with their attachments and actions.	Should know	C2	Moore.8TH Edition. (Chapter 3, Pag243-
	1	1		256).
Muscles &	Discuss the formation of superficial and deep	Should know	C2	,

organization	Map the outline of superficial and deep arterial arches on a simulated patient or model.	Should know	P	https://teachmeanatomy. info/upper-
	Correlate with the clinical conditions.	Must know	C3	limb/muscles/hand/
	Focus on provision of curative and preventive health care measures	Nice to know	C3	USMLE Q Bank Step
	Practice principles of bioethics	Nice to know	С3	1 (Volume 1) 2023-
	Apply strategic use of AI in health care	Nice to know	C3	2034
	Read a relevant research article	Nice to know	C3	=
	Discuss the formation and attachments of palmar aponeurosis.	Should know	C2	
Palm of hand-II	Describe the formation of palmar spaces and its divisions	Should know	C2	Clinical Oriented
Fascial spaces of	Describe the thenar and mid palmar spaces.	Should know	C2	Anatomy by Keith L. Moore.8TH Edition.
hand	Define pulp spaces	Should know	C1	(Chapter 3, Page241-
Grip	Relate anatomy of pulp space with its common clinical conditions	Should know	C3	243,258-262).
	Describe dorsal subcutaneous spaces	Should know	C2	https://boneandspine.com/ spaces-of-hand/
	Demonstrate surgical incisions.	Must know	C3	spaces of nanay
	Describe different types of grips	Must know	C2	 USMLE Q Bank Step
	• Correlate with the clinical conditions.	Must know	C3	1 (Volume 1) 2023-
	Focus on provision of curative and preventive health care measures	Nice to know	C3	2034
	Practice principles of bioethics	Nice to know	C3	1
	Apply strategic use of AI in health care	Nice to know	C3	
	Read a relevant research article	Nice to know	С3	
	Correlate with the clinical conditions	Must know	C3	
	Read a relevant research article	Nice to know	C3	
	Apply strategic use of AI in health care	Nice to know	C3	
	Classify synovial joints	Should know	C2	
	 Explain movements around synovial joints 	Should know	C2	
	• Enlist Degenerative joint diseases	Should know	C3	
	• Describe the involvement of anatomical structure of the	Should know	С3	
	articular cartilage in Degenerative joint disease			
	• Correlate with the clinical conditions.	Must know	C3	
	Focus on provision of curative and preventive health care measures	Nice to know	C3	
	Practice principles of bioethics	Nice to know	C3	1
	Apply strategic use of AI in health care	Nice to know	С3	1
	• read relevant research article	Nice to know	C3	1

Practicals Skill Laboratory (SKL)

Торіс	At The End Of The Practical The Students Should Be Able To	Calgary Gauge	Learning Domain	Learning Resources
	Histology	-		
Connective Tissue-I	Identify mucoid connective tissue under microscope	Should know	P	DiFiore's Atlas of histology with
• Embryonic connective tissue / mucoid	Illustrate histological structure of mucoid connective tissue	Must know	C2	clinical correlation, 11 th edition, chapter 3
Connective Tissue	Write two points of identification	Must know	C1	edition, chapter 3
 Loose areolar connective tissue Reticular Connective 	Identify reticular and adipose connective tissue under microscope		C2	
Tissue • Adipose Connective	Illustrate histological structure of reticular and adipose connective tissue	Must know	C2	
Tissue	Write two points of identification	Must know	C1	
	Focus the slide	Should know	P	
Connective Tissue-II	Identify dense regular and irregular connective tissue under microscope	Should know	P	DiFiore's Atlas of histology with
 Dense regular connective tissue 	Illustrate histological structure of dense regular and irregular connective tissue	Must know	C2	clinical correlation, 11 th edition, chapter 3
Dense irregular connective tissue	Write two points of identification	Must know	C1	cultion, enapter 3
connective tissue	Differentiate between dense regular and irregular connective tissue microscopically	Must know	C2	
	Focus the slide	Should know	P	
Cartilage	Identify all three types of cartilages under microscope	Should know	P	DiFiore's Atlas of histology with
Hyaline cartilageElastic cartilage	Illustrate microscopic structure of all three cartilages	Must know	C2	clinical correlation, 11 th edition, chapter 3
Fibrocartilage	Discuss the structure of perichondrium	Must know	C1	cultion, enapter 3
C	Write two points of identification	Must know	C1	
	Enlist sites of hyaline, fibro and elastic cartilage	Must know	C1	
	Focus the slide	Should know	P	
Bone	Identify compact and spongy bone under microscope	Should know	P	DiFiore's Atlas of histology with
Compact BoneSpongy Bone	Illustrate microscopic structure of compact bone and spongy bone	Must know	C2	clinical correlation, 11 th edition, chapter 3
Spone, Soile	Write two points of identification	Must know	C1	cuition, enapter 3
	Focus the slide	Should know	P	

TOS for LMS Assessment of MSK-I Module of First Year MBBS, Batch -52 (Session 2024-25)

 1^{ST} LMS Assessment for the first year MBBS for the MSK 1 Module will be held on ------ from 7:00pm to 7:30pm. Detail of topics are mentioned in the table below:

S No.	Domain of Teaching	· ·	No.of MCQs	Cognitive Domain			
110.	Activity		MCQs	C1	C2	C3	
1.	LGIS	Embryology 2 nd week of development 3 rd week of development (gastrulation) 3 rd week (notochord formation and differentiation of somites)	05	1	2	2	
		General Anatomy Bone I (General Features) Bone II (Classification & blood supply)	02	1	1		
		Histology Connective Tissue I (Cells of Connective Tissue) Connective Tissue II (Extracellular Matrix and Cells of CT)	05	1	2	2	
2.	SGD	Shoulder Joint Flexor Compartment and Neurovascular Organization of arm Extensor compartment and Neurovascular Organization of arm (wrist drop) Bones of Forearm Flexor Compartment Of forearm (Muscles) Extensor Compartment of Forearm (Muscles)	13	3	4	6	
3.	Practical	Connective Tissue I	05	1	2	2	
4.		Total		3	30		

Learning Resources:

- Embryology :- KLM Embryology Developing Human 11th Edition
- Histology:-Junqueira's Basic Histology 18th Edition
- Gross Anatomy:- KLM clinically oriented anatomy edition 10
- USMLE Q Bank Step 1 (Volume 1) 2023-2034 UWORLD Step 1 (Volume 3) 2023-2024

Dr. Ayesha Yousaf Head / Prof. of Anatomy Dean Basic Sciences Rawalpindi Medical University Rawalpindi

TOS for LMS Assessment of MSK-I Module of First Year MBBS, Batch -52 (Session 2024-25)

 2^{nd} LMS Assessment for the first year MBBS for the MSK 1 Module will be held on -----(Monday) from 7:00pm to 7:30pm. Details of topics are mentioned in the table below:

S No.	Domain of Teaching Activity	Торіс	No.of MCQs	Cognitive Domain			
			MICQS	C 1	C2	С3	
1.	LGIS	Embryology 3 rd week (Neurulation) 4 th to 8 th week of development and early development of CVS Folding of embryo	05	1	2	2	
		General Anatomy Bone I (Cells and types)	02	1	1	-	
		Histology Connective Tissue III (Types of CT) Cartilage	05	1	2	2	
2.	SGD/Dissection	Neurovascular Organization of forearm Elbow joint and anastomosis around elbow joint Proximal and distal radioulnar joint Bones of hand	13	3	4	6	
3.	Practical	Connective Tissue II Cartilage	05	1	2	2	
4.		TOTAL		•	30	•	

Learning Resources:

- Embryology :- KLM Embryology Developing Human 11th Edition
- Histology:-Junqueira's Basic Histology 18th Edition
- Gross Anatomy:- KLM clinically oriented anatomy edition 10
- USMLE Q Bank Step 1 (Volume 1) 2023-2034 UWORLD Step 1 (Volume 3) 2023-2024

Dr. Ayesha Yousaf Head / Prof. of Anatomy Dean Basic Sciences Rawalpindi Medical University Rawalpindi

Module Wise Learning Objectives

Musculoskeletal Module II (MSK-II) Large Group Interactive Session (LGIS)

Topic	Learning Objectives At The End Of Lecture Students Should Be Able To:	Calgary Gauge	Learning Domain	Learning Resources
	Able 10: General Anatom	ıy		
	Classify muscles with examples	Must know	C1	Junqueira's Basic
	Describe the general features of skeletal	Must know	C3	Histology 18th
	muscle.			Edition
	Differentiate between Red white and	Must know	C3	USMLE Q Bank St. 1 (V. 1)
Muscle I	intermediate fibers.Describe blood supply and nerve supply	Must know	C3	Step 1 (Volume 1) 2023-2034
	of skeletal muscles.			1) 2025 205 .
	Correlate the clinical conditions	Should know Should know	C3 C3	
	Understand the preventive and curative	Should know	C3	
	health care measuresPractice the principles of Bioethics	Nice to know	C3	
	Apply strategic use of AI in health care	Nice to know	C3	
	Read relevant research article	Nice to know	C3	
	Discuss connective tissue associated with	Must know	C2	Junqueira's Basic
	skeletal muscle.			Histology 18th
Muscle II	Discuss parts of skeletal muscles.	Must know Must know	C2 C1	EditionUSMLE Q Bank
	Give classification of skeletal muscles. Simple the partiage of a prime mayor or an arrangement of the continuous of the prime mayor or an arrangement of the continuous of the prime mayor or an arrangement of the continuous of the prime mayor or an arrangement of the continuous of the prime mayor of the prime	Must know	C2	USMLE Q Bank Step 1 (Volume
	 Explain the actions of a prime mover or agonist Fixators 			1) 2023-2034
	 Synergist and antagonist with examples. 	Must know Should know	C3 C3	
	Correlate the clinical conditions	Should know	C3	
	Understand the preventive and curative	Nice to know	C3	
	health care measures	377	C3	
	Practice the principles of BioethicsApply strategic use of AI in health care	Nice to know Nice to know	C3 C3	
	Read relevant research article	TVICE to Know	CS	
	Enlist functions of skin	Must know	C1	Junqueira's Basic
	Discuss types of skin	Must know Must know	C2 C2	Histology 18th Edition
	Compare between thick and thin skinClassify skin lines	Must know	C1	USMLE Q Bank
Skin	 Describe the significance of skin lines 	Must know	C2	Step 1 (Volume
	Discuss burns of skin	Must know	C3	1) 2023-2034
	Correlate the clinical conditions	Should know Should know	C3 C3	
	Understand the preventive and curative health agra many res	Nice to know	C3	
	 health care measures Practice the principles of Bioethics 	Nice to know	C3	
	Apply strategic use of AI in health care	Nice to know	C3	
	Histology			
	Classify muscle on histological basis.	Must know	C1	Junqueira's Basic
	Describe histological structure of skeletal	Must know	C2	Histology 18th
Skeletal Muscle	muscles	Must know	C2	Edition
	Discuss ultrastructure of skeletal muscles Understand the contraction mechanisim	Should know	C2	USMLE Q Bank Step 1 (Volume
	Correlate the clinical conditions	Should know	C3	1) 2023-2034
	Understand the preventive and curative	Nice to know	C3	
	health care measures	Nice to know	C3	
	Practice the principles of BioethicsApply strategic use of AI in health care	Nice to know	C3	
	Read relevant research article	Nice to know	C3	
	Describe histological structure of cardiac	Nice to know Must know	C2	Junqueira's Basic
	and smooth muscles			Histology 18th
0 1: 00 1	Describe ultrastructure of smooth and	Must know	C2	Edition
Cardiac & Smooth Muscles	cardiac muscles.	Must know	C2	• USMLE Q Bank Step 1 (Volume
Muscles	Differentiate between skeletal smooth and cardiac muscles	Must know	C2	1) 2023-2034
	and cardiac muscles.Discuss regeneration of muscle fibers			
	Correlate the clinical conditions	Should know Should know	C3 C3	
		Nice to know	C3	
	 Understand the preventive and curative 			1
	health care measures			
	health care measuresPractice the principles of Bioethics	Nice to know	C3	
	 health care measures Practice the principles of Bioethics Apply strategic use of AI in health care 	Nice to know Nice to know	C3	Inngueirale Pecie
	 health care measures Practice the principles of Bioethics Apply strategic use of AI in health care Enlist components of integumentary 	Nice to know		Junqueira's Basic Histology 18th
	 health care measures Practice the principles of Bioethics Apply strategic use of AI in health care Enlist components of integumentary system Describe histological structure of skin 	Nice to know Nice to know Must know Must know	C3 C1 C2	Histology 18th Edition
Skin	health care measures Practice the principles of Bioethics Apply strategic use of AI in health care Enlist components of integumentary system	Nice to know Nice to know Must know	C3 C1	Histology 18th

	 Describe histologica 	l features of thick	Should know	C3	
	and thin skin		Should know	C3	
	• Differentiate between	n thick and thin skin	Nice to know	C3	
	• Correlate the clinical	conditions		C3	
	Understand the prevent	entive and curative	Nice to know	C3	
	health care measures		Nice to know	C3	
	 Practice the principle 	es of Bioethics			
	 Apply strategic use of 	of AI in health care			
	• Describe appendages	s of skin	Must know	C2	Junqueira's Basic
	• Discuss histological	structure of hair	Must know	C2	Histology 18th
	• Discuss histological	structure of nail	Must know	C2	Edition
Skin Appendages	•	structure of glands of	Must know	C2	USMLE Q Bank
	skin	Suraciano di Sianian di			Step 1 (Volume
	Correlate the clinical	conditions	Should know	C3	1) 2023-2034
	Understand the prevent		Should know	C3	
	health care measures				
	Practice the principle		Nice to know	C3	
	 Apply strategic use of 		Nice to know	C3	
	Appry strategie use c	of Al III licartif care	Nice to know	C3	
		Embryology	y		
	Discuss the cartilage	nous stage of	Must know	C2	
Development Of Axial	vertebral column	nous stage of	Widst Kilow	C2	 KLM Embryology
Skeleton	Discuss the bony star	ge of westebrol	Must know	C2	Developing
Skeleton	column	ge of verteoral	Must know	C2	Human 11 th
			Should know	C3	Edition
	Describe development	nt of ribs and	Should know		 USMLE Q Bank
	sternum.	11.7	Should know	C3	Step 1 (Volume 1)
	Correlate the clinical		Nice to know	C3	2023-2024
	Understand the prevent		Nice to know	C3	
	health care measures		Nice to know	C3	
	 Practice the principle 		NICC to Know		
	 Apply strategic use of 				
	 Read relevant research 	ch article			
	 Enlist different stage 	s of limb	Must know	C1	• Davidanina
	development		Must know	C2	 Developing Human 11th
	 Discuss early and lat 	e stage of limb			
	development		Should know	C3	Edition
Development of limbs	Correlate congenital	anomalies of limb	Should know	C3	USMLE Q Bank Control (V. 1)
_	development		Should know	C3	Step 1 (Volume 1)
	Correlate the clinical	conditions			2023-2024
	Understand the prevent		Nice to know	C3	
	health care measures				
	Practice the principle		Nice to know	C3	
	Apply strategic use of the principle.				
	Discuss developmen		Must know	C2	
	with special reference		IVIUST KIIOW	C2	 Developing
Development Of Muscles		cles and limb muscle	Must know	C2	Human 11 th
Development Of Muscles	along with limb skel		IVIUST KIIOW	С3	Edition
					USMLE Q Bank
	Describe developmes cardiac muscles with		Should know	СЗ	Step 1 (Volume 1)
			Should know	C3	2023-2024
	Correlate the clinical		Nice to know	C3	
	Understand the prevent		Nice to know	C3	
	health care measures		Nice to know	C3	
	• Practice the principle		TAICE IO KIIOW		
	 Apply strategic use of 	of AI in health care		1	

Small Group Discussion (SGDs)

Topic	Learning Objectives Students Should Be Able To	Calgary Gauge	Learning Domain	Learning Resources
	Gross Anatomy			
	Demonstrate the anatomical position	Must know	P	Clinically
	Identify bony features of ilium.	Must know	C1	oriented
	Describe the muscular, ligamentous, and capsular	Must know	C2	anatomy
Hip Bone-I	attachments.	Wilder Kilo W		edition 10
Imp Bone I	Discuss the ventral and dorsal auricular surfaces,	Must know	C2	USMLE Q
	ossification.			Bank Step 1
	Correlate the clinical conditions	Should know	C3	(Volume 1)
	Understand the preventive and curative health care measures	Should know	C3	2023-2034
	Practice the principles of Bioethics	Nice to know	C3	
		Nice to know	C3	
		Nice to know	C3	
	Demonstrate the anatomical position	Must know	P	Clinically
	Identify bony features of pubis and ischium.	Must know	C1	oriented
	Describe the muscular, ligamentous, and capsular	Must know	C2	anatomy
	attachments.			edition 10
Hip Bone-II	Discuss the ventral and dorsal auricular surfaces,	Must know	C2	USMLE Q
	ossification.			Bank Step 1
	Correlate the clinical conditions	Should know	C3	(Volume 1)
	Understand the preventive and curative health care measures	Should know	C3	2023-2034
	Practice the principles of Bioethics	Nice to know	C3	
	Apply strategic use of AI in health care	Nice to know	C3	
	22.7	Nice to know	C3	
	Demonstrate the anatomical position of bone	Must know	P	Clinically
	Demonstrate different parts	Must know	C1	oriented
Femur	Describe proximal and distal articulations	Must know	C2	anatomy
	State angle of femoral torsion.	Should know	C1	edition 10
	Correlate the clinical conditions	Should know	C3	USMLE Q
	Understand the preventive and curative health care measures	Should know	C3	Bank Step 1
	Practice the principles of Bioethics	Nice to know	C3	(Volume 1)
	Apply strategic use of AI in health care	Nice to know	C3	2023-2034
	Read relevant research article	Nice to know	C3	
	Read relevant research article			
	D	Must know	P	Clinically
	Demonstrate the anatomical position of bones	Must know	C2	Clinically oriented
	Describe muscle attachment and ossification	Must know	C2 C2	
	Discuss fractures with special reference to the fracture of	Wiust Kilow	C2	anatomy
Femur and	neck of femur in old age.	Must know	C2	edition 10
Patella	Describe anatomy of patella and factors responsible for its	Wiust Kilow	C2	USMLE Q
ratella	stability.	Must know	C1	Bank Step 1
	Enumerate different bursae related to patella	Should know	C3	(Volume 1)
	Correlate the clinical conditions	Should know	C3	2023-2034
	Understand the preventive and curative health care measures	Nice to know	C3	
	Practice the principles of Bioethics	Nice to know	C3	
	Apply strategic use of AI in health care	Nice to know	C3	
		Nice to know	C3	
	Describe the origin and insertion of muscles in anterior	Must know		Clinically
	compartment of thigh.	11145 1115 11	C2	oriented
	Describe the origin and insertion of muscles in lateral	Must know		anatomy
Anterolateral	compartment of thigh.		C2	edition 10
Compartment of	Discuss the femoral triangle and adductor canal with	Must know		USMLE Q
Thigh (Muscles)	ontents			Bank Step 1
<u> </u>	Identify these muscles.	Must know	C2	(Volume 1)
	Correlate the clinical conditions	Should know	C1	2023-2034
		Should know	C3	2020 2001
	Understand the preventive and curative health care measures Proctice the principles of Direction	Nice to know	C3	
	Practice the principles of Bioethics	Nice to know	C3	
	Apply strategic use of AI in health care	Nice to know	C3	
	Read relevant research article		-	
	Describe the nerves and vessels of anterolateral	Must know	C2	Clinically
	compartment of thigh			oriented
Anterolateral	Discuss various relation of vessels and nerves in	Must know	C2	anatomy
compartment of	- Discuss various relation of vessels and nerves III	1		edition 10
	anterplateral compartment of thigh			
thigh	anterolateral compartment of thigh	Must know	C1	USMLE Q
thigh (Neurovascular	Identify these structures	Must know	C1	O DIVIDE Q
	 Identify these structures Map the outline of femoral artery in a simulated patient / 	Must know Must know	C1 P	Bank Step 1
(Neurovascular	 Identify these structures Map the outline of femoral artery in a simulated patient / model 			
(Neurovascular	 Identify these structures Map the outline of femoral artery in a simulated patient / model Correlate the clinical conditions 			Bank Step 1 (Volume 1)
(Neurovascular	 Identify these structures Map the outline of femoral artery in a simulated patient / model Correlate the clinical conditions Understand the preventive and curative health care measures 	Must know		Bank Step 1 (Volume 1)
(Neurovascular	 Identify these structures Map the outline of femoral artery in a simulated patient / model Correlate the clinical conditions Understand the preventive and curative health care measures Practice the principles of Bioethics 	Must know Should know	P	Bank Step 1 (Volume 1)
(Neurovascular	 Identify these structures Map the outline of femoral artery in a simulated patient / model Correlate the clinical conditions Understand the preventive and curative health care measures Practice the principles of Bioethics Apply strategic use of AI in health care 	Must know Should know Should know	P C3	Bank Step 1 (Volume 1)
(Neurovascular	 Identify these structures Map the outline of femoral artery in a simulated patient / model Correlate the clinical conditions Understand the preventive and curative health care measures Practice the principles of Bioethics 	Must know Should know Should know Nice to know	P C3 C3	Bank Step 1 (Volume 1)
(Neurovascular	 Identify these structures Map the outline of femoral artery in a simulated patient / model Correlate the clinical conditions Understand the preventive and curative health care measures Practice the principles of Bioethics Apply strategic use of AI in health care 	Must know Should know Should know Nice to know Nice to know	P C3 C3 C3 C3	Bank Step 1 (Volume 1)
(Neurovascular	 Identify these structures Map the outline of femoral artery in a simulated patient / model Correlate the clinical conditions Understand the preventive and curative health care measures Practice the principles of Bioethics Apply strategic use of AI in health care Read relevant research article 	Must know Should know Should know Nice to know Nice to know Nice to know	P C3 C3 C3 C3	Bank Step 1 (Volume 1)
(Neurovascular	 Identify these structures Map the outline of femoral artery in a simulated patient / model Correlate the clinical conditions Understand the preventive and curative health care measures Practice the principles of Bioethics Apply strategic use of AI in health care 	Must know Should know Should know Nice to know Nice to know	P C3 C3 C3 C3 C3	Bank Step 1 (Volume 1)
(Neurovascular	 Identify these structures Map the outline of femoral artery in a simulated patient / model Correlate the clinical conditions Understand the preventive and curative health care measures Practice the principles of Bioethics Apply strategic use of AI in health care Read relevant research article 	Must know Should know Should know Nice to know Nice to know Nice to know	P C3 C3 C3 C3 C3	Bank Step 1 (Volume 1) 2023-2034
(Neurovascular	 Identify these structures Map the outline of femoral artery in a simulated patient / model Correlate the clinical conditions Understand the preventive and curative health care measures Practice the principles of Bioethics Apply strategic use of AI in health care Read relevant research article Describe the muscles of medial compartment of thigh 	Must know Should know Should know Nice to know Nice to know Nice to know Must know Must know	P C3 C3 C3 C3 C3 C2 C2	Bank Step 1 (Volume 1) 2023-2034
(Neurovascular	 Identify these structures Map the outline of femoral artery in a simulated patient / model Correlate the clinical conditions Understand the preventive and curative health care measures Practice the principles of Bioethics Apply strategic use of AI in health care Read relevant research article Describe the muscles of medial compartment of thigh Discuss origin, insertion and nerve supply of medial 	Must know Should know Should know Nice to know Nice to know Nice to know	P C3 C3 C3 C3 C3	Bank Step 1 (Volume 1) 2023-2034 Clinically oriented

Medial	Correlate the clinical conditions	Should know	C3	•	USMLE Q
Compartment of	Understand the preventive and curative health care measures	Should know	C3	•	Bank Step 1
thigh	Practice the principles of Bioethics	Nice to know	C3		(Volume 1)
ung.		Nice to know	C3		2023-2034
	Apply strategic use of AI in health care	Nice to know	C3		2023 203 1
	Read relevant research article	Must know	C2		61' ' 11
	Tabulate the he various muscles of gluteal region with origin,	Must know	C2	•	Clinically
	insertion, action nerve supply.	Must know	C1		oriented
Gluteal Region	Enlist various structures undercover of gluteal maximus i.e.	Widst Kilow			anatomy edition 10
(Muscles)	muscles, vessels, nerves, bones and joints, ligaments, bursae.	Should know	C3		USMLE Q
(Widscies)	Understand the preventive and curative health care measures Output Description:	Nice to know	C3	•	
	Practice the principles of Bioethics	Nice to know	C3		Bank Step 1 (Volume 1)
	Apply strategic use of AI in health care	Nice to know	C3		2023-2034
	Read relevant research article				
	Describe trochancteric anastomosis and cruciate	Must know	C2	•	Clinically
	anastomosis.	Must know	C1		oriented
Gluteal Region	Enumerate the structures passing through greater sciatic foraman.	Must know	CI		anatomy edition 10
(Neurovascular	Discuss the formation course relations, branches, distribution	Should know	C2		USMLE Q
organization)	of sciatic nerve with applied anatomy	Should know	02	•	Bank Step 1
8	Correlate the clinical conditions	Should know	C3		(Volume 1)
	Understand the preventive and curative health care measures	Nice to know	C3		2023-2034
	Practice the principles of Bioethics	Nice to know	C3		2023 203 .
	l	Nice to know	C3		
	_ **	Nice to know	C3		
	Read relevant research article			L	
	Enlist the Hamstring muscles	Must know	C1	•	Clinically
	Discuss origin insertion, nerve supply and actions	Must know	C2		oriented
Posterior	Identify the muscles	Must know	C1		anatomy
Compartment of	Correlate the clinical conditions	Should know	C3		edition 10
Thigh		Should know	C3	•	USMLE Q
(Muscles)	Understand the preventive and curative health care measures Propries the principles of Diopthics Output Diopthics Dispthics	Nice to know	C3		Bank Step 1
, ,	Practice the principles of Bioethics A line of Aline of A	Nice to know	C3		(Volume 1)
	Apply strategic use of AI in health care	Nice to know	C3		2023-2034
	Read relevant research article				
	• Describe the newses and vessels of nesterior compartment of	Must know	C2	_	Clinically
Posterior	Describe the nerves and vessels of posterior compartment of thigh	MINST KIIOM	C2	•	Clinically oriented
Compartment of		Must know	C2		
thigh	Discuss course, relations, distribution and branches of	Must know	C2		anatomy edition 10
	neurovascular structures of posterior compartment	Must know	C1		
(Neurovascular	Identify these structures	Should know	C3	•	USMLE Q
Organization)	Correlate the clinical conditions		C3		Bank Step 1
	Understand the preventive and curative health care measures	Should know Nice to know			(Volume 1)
	Practice the principles of Bioethics		C3		2023-2034
	Apply strategic use of AI in health care	Nice to know Nice to know	C3 C3		
	Read relevant research article	Nice to know	C3		
	Describe the type of joint	Must know	C2	•	Clinically
	Describe articular surfaces,	Must know	C2		oriented
	Describe capsular attachments.	Must know	C2		anatomy
	Discuss synovial membrane and its folding.	Must know	C2		edition 10
	Enlist ligaments and their attachments	Must know	C1		USMLE Q
Hip Joint	Discuss movements possible at hip joint and muscles	Must know	C2		Bank Step 1
	producing them				(Volume 1)
	Describe blood supply and nerve supply.	Must know	C2		2023-2034
	 Describe blood supply and herve supply. Correlate the clinical conditions 	Should know	C3		
	Understand the preventive and curative health care measures	Should know	C3		
		Nice to know	C3		
		Nice to know	C3		
	Apply strategic use of AI in health care Read relevant research article	Nice to know	C3		
	- Read relevant research article		1		Clinically
	Identify hone	Must know	C1	-	Cinneally
	Identify bone Demonstrate its side.	Must know	C1 P	•	oriented
Tibia	Demonstrate its side.	Must know	P	•	oriented
Tibia	Demonstrate its side.Demonstrate its normal anatomical position.	Must know Must know	P P	•	anatomy
Tibia	 Demonstrate its side. Demonstrate its normal anatomical position. Describe bony features. 	Must know Must know Must know	P P C2		anatomy edition 10
Tibia	 Demonstrate its side. Demonstrate its normal anatomical position. Describe bony features. Discuss attachment of muscle and ligament 	Must know Must know Must know Must know	P P C2 C2	•	anatomy edition 10 USMLE Q
Tibia	 Demonstrate its side. Demonstrate its normal anatomical position. Describe bony features. Discuss attachment of muscle and ligament Describe articular surfaces 	Must know Must know Must know	P P C2 C2 C2		anatomy edition 10 USMLE Q Bank Step 1
Tibia	 Demonstrate its side. Demonstrate its normal anatomical position. Describe bony features. Discuss attachment of muscle and ligament Describe articular surfaces Identify nutrient foramen 	Must know Must know Must know Must know Must know	P P C2 C2 C2 C2		anatomy edition 10 USMLE Q Bank Step 1 (Volume 1)
Tibia	 Demonstrate its side. Demonstrate its normal anatomical position. Describe bony features. Discuss attachment of muscle and ligament Describe articular surfaces Identify nutrient foramen Describe its ossification 	Must know Must know Must know Must know Must know Must know	P P C2 C2 C2		anatomy edition 10 USMLE Q Bank Step 1
Tibia	 Demonstrate its side. Demonstrate its normal anatomical position. Describe bony features. Discuss attachment of muscle and ligament Describe articular surfaces Identify nutrient foramen Describe its ossification Correlate the clinical conditions 	Must know	P P C2 C2 C2 C2 C1		anatomy edition 10 USMLE Q Bank Step 1 (Volume 1)
Tibia	 Demonstrate its side. Demonstrate its normal anatomical position. Describe bony features. Discuss attachment of muscle and ligament Describe articular surfaces Identify nutrient foramen Describe its ossification Correlate the clinical conditions Understand the preventive and curative health care measures 	Must know Should know	P P C2 C2 C2 C1 C2 C3 C3 C3 C3		anatomy edition 10 USMLE Q Bank Step 1 (Volume 1)
Tibia	 Demonstrate its side. Demonstrate its normal anatomical position. Describe bony features. Discuss attachment of muscle and ligament Describe articular surfaces Identify nutrient foramen Describe its ossification Correlate the clinical conditions Understand the preventive and curative health care measures Practice the principles of Bioethics 	Must know Should know Should know	P P C2 C2 C2 C1 C2 C3 C3 C3 C3 C3		anatomy edition 10 USMLE Q Bank Step 1 (Volume 1)
Tibia	 Demonstrate its side. Demonstrate its normal anatomical position. Describe bony features. Discuss attachment of muscle and ligament Describe articular surfaces Identify nutrient foramen Describe its ossification Correlate the clinical conditions Understand the preventive and curative health care measures Practice the principles of Bioethics Apply strategic use of AI in health care 	Must know Must know Must know Must know Must know Must know Should know Should know Nice to know	P P C2 C2 C2 C1 C2 C3 C3 C3 C3 C3 C3 C3		anatomy edition 10 USMLE Q Bank Step 1 (Volume 1) 2023-2034
Tibia	 Demonstrate its side. Demonstrate its normal anatomical position. Describe bony features. Discuss attachment of muscle and ligament Describe articular surfaces Identify nutrient foramen Describe its ossification Correlate the clinical conditions Understand the preventive and curative health care measures Practice the principles of Bioethics 	Must know Must know Must know Must know Must know Must know Should know Should know Nice to know Nice to know Nice to know Must know	P P P C2 C2 C2 C1 C2 C3 C3 C3 C3 C3 C1 C1		anatomy edition 10 USMLE Q Bank Step 1 (Volume 1) 2023-2034
Tibia	 Demonstrate its side. Demonstrate its normal anatomical position. Describe bony features. Discuss attachment of muscle and ligament Describe articular surfaces Identify nutrient foramen Describe its ossification Correlate the clinical conditions Understand the preventive and curative health care measures Practice the principles of Bioethics Apply strategic use of AI in health care 	Must know Must know Must know Must know Must know Must know Should know Should know Nice to know Nice to know Nice to know Must know Must know	P P P C2 C2 C2 C1 C2 C3 C3 C3 C3 C3 C7 P	•	anatomy edition 10 USMLE Q Bank Step 1 (Volume 1) 2023-2034
Tibia	 Demonstrate its side. Demonstrate its normal anatomical position. Describe bony features. Discuss attachment of muscle and ligament Describe articular surfaces Identify nutrient foramen Describe its ossification Correlate the clinical conditions Understand the preventive and curative health care measures Practice the principles of Bioethics Apply strategic use of AI in health care Identify bone 	Must know Must know Must know Must know Must know Must know Should know Should know Nice to know Nice to know Must know Must know Must know Must know Must know Must know	P P C2 C2 C2 C1 C2 C3 C3 C3 C3 C7 C1 P P	•	anatomy edition 10 USMLE Q Bank Step 1 (Volume 1) 2023-2034 Clinically oriented anatomy
	 Demonstrate its side. Demonstrate its normal anatomical position. Describe bony features. Discuss attachment of muscle and ligament Describe articular surfaces Identify nutrient foramen Describe its ossification Correlate the clinical conditions Understand the preventive and curative health care measures Practice the principles of Bioethics Apply strategic use of AI in health care Identify bone Demonstrate its side. 	Must know Should know Should know Nice to know Nice to know Must know	P P C2 C2 C2 C1 C2 C3 C3 C3 C3 C3 P P C2	•	anatomy edition 10 USMLE Q Bank Step 1 (Volume 1) 2023-2034
Tibia Fibula	 Demonstrate its side. Demonstrate its normal anatomical position. Describe bony features. Discuss attachment of muscle and ligament Describe articular surfaces Identify nutrient foramen Describe its ossification Correlate the clinical conditions Understand the preventive and curative health care measures Practice the principles of Bioethics Apply strategic use of AI in health care Identify bone Demonstrate its side. Demonstrate its normal anatomical position. 	Must know Must know Must know Must know Must know Must know Should know Should know Nice to know Nice to know Must know	P P C2 C2 C2 C1 C2 C3 C3 C3 C3 C3 P P C2 C2 C2 C1 C2 C3 C3 C3 C3 C3 C3 C3	•	anatomy edition 10 USMLE Q Bank Step 1 (Volume 1) 2023-2034 Clinically oriented anatomy edition 10 USMLE Q
	 Demonstrate its side. Demonstrate its normal anatomical position. Describe bony features. Discuss attachment of muscle and ligament Describe articular surfaces Identify nutrient foramen Describe its ossification Correlate the clinical conditions Understand the preventive and curative health care measures Practice the principles of Bioethics Apply strategic use of AI in health care Identify bone Demonstrate its side. Demonstrate its normal anatomical position. Describe bony features. 	Must know Must know Must know Must know Must know Must know Should know Should know Nice to know Nice to know Must know	P P C2 C2 C2 C1 C2 C3 C3 C3 C3 C3 C3 C2 C1 P C2	•	anatomy edition 10 USMLE Q Bank Step 1 (Volume 1) 2023-2034 Clinically oriented anatomy edition 10 USMLE Q Bank Step 1
	 Demonstrate its side. Demonstrate its normal anatomical position. Describe bony features. Discuss attachment of muscle and ligament Describe articular surfaces Identify nutrient foramen Describe its ossification Correlate the clinical conditions Understand the preventive and curative health care measures Practice the principles of Bioethics Apply strategic use of AI in health care Identify bone Demonstrate its side. Demonstrate its normal anatomical position. Describe bony features. Discuss attachment of muscles and ligaments Describe articular surfaces 	Must know Should know Should know Nice to know Nice to know Must know	P P C2 C2 C2 C1 C2 C3 C3 C3 C3 C3 C3 C2 C1 P P C2 C2 C2 C2 C1	•	anatomy edition 10 USMLE Q Bank Step 1 (Volume 1) 2023-2034 Clinically oriented anatomy edition 10 USMLE Q Bank Step 1 (Volume 1)
	 Demonstrate its side. Demonstrate its normal anatomical position. Describe bony features. Discuss attachment of muscle and ligament Describe articular surfaces Identify nutrient foramen Describe its ossification Correlate the clinical conditions Understand the preventive and curative health care measures Practice the principles of Bioethics Apply strategic use of AI in health care Identify bone Demonstrate its side. Demonstrate its normal anatomical position. Describe bony features. Discuss attachment of muscles and ligaments Describe articular surfaces Identify nutrient foramen 	Must know Must know Must know Must know Must know Must know Should know Should know Nice to know Nice to know Must know	P P C2 C2 C2 C1 C2 C3 C3 C3 C3 C3 C3 C2 C1 P P C2 C2 C2 C1 C2 C2 C1 C2 C2 C2 C1 C2	•	anatomy edition 10 USMLE Q Bank Step 1 (Volume 1) 2023-2034 Clinically oriented anatomy edition 10 USMLE Q Bank Step 1
	 Demonstrate its side. Demonstrate its normal anatomical position. Describe bony features. Discuss attachment of muscle and ligament Describe articular surfaces Identify nutrient foramen Describe its ossification Correlate the clinical conditions Understand the preventive and curative health care measures Practice the principles of Bioethics Apply strategic use of AI in health care Identify bone Demonstrate its side. Demonstrate its normal anatomical position. Describe bony features. Discuss attachment of muscles and ligaments Describe articular surfaces Identify nutrient foramen 	Must know Must know Must know Must know Must know Must know Should know Should know Nice to know Nice to know Must know Should know	P P C2 C2 C2 C1 C2 C3 C3 C3 C3 C3 C3 C3 C1 P P C2 C2 C2 C2 C1 C2 C3	•	anatomy edition 10 USMLE Q Bank Step 1 (Volume 1) 2023-2034 Clinically oriented anatomy edition 10 USMLE Q Bank Step 1 (Volume 1)
	 Demonstrate its side. Demonstrate its normal anatomical position. Describe bony features. Discuss attachment of muscle and ligament Describe articular surfaces Identify nutrient foramen Describe its ossification Correlate the clinical conditions Understand the preventive and curative health care measures Practice the principles of Bioethics Apply strategic use of AI in health care Identify bone Demonstrate its side. Demonstrate its normal anatomical position. Describe bony features. Discuss attachment of muscles and ligaments Describe articular surfaces Identify nutrient foramen Describe its ossification Correlate the clinical conditions 	Must know Must know Must know Must know Must know Must know Should know Should know Nice to know Nice to know Must know Should know Should know	P P C2 C2 C2 C1 C2 C3 C3 C3 C3 C3 C3 C1 P P C2 C2 C2 C1 C2 C3	•	anatomy edition 10 USMLE Q Bank Step 1 (Volume 1) 2023-2034 Clinically oriented anatomy edition 10 USMLE Q Bank Step 1 (Volume 1)
	 Demonstrate its side. Demonstrate its normal anatomical position. Describe bony features. Discuss attachment of muscle and ligament Describe articular surfaces Identify nutrient foramen Describe its ossification Correlate the clinical conditions Understand the preventive and curative health care measures Practice the principles of Bioethics Apply strategic use of AI in health care Identify bone Demonstrate its side. Demonstrate its normal anatomical position. Describe bony features. Discuss attachment of muscles and ligaments Describe articular surfaces Identify nutrient foramen Describe its ossification Correlate the clinical conditions Understand the preventive and curative health care measures 	Must know Must know Must know Must know Must know Must know Should know Should know Nice to know Nice to know Must know Should know Nice to know	P P C2 C2 C2 C1 C2 C3 C3 C3 C3 C3 C3 C1 P P C2 C2 C2 C1 C2 C3	•	anatomy edition 10 USMLE Q Bank Step 1 (Volume 1) 2023-2034 Clinically oriented anatomy edition 10 USMLE Q Bank Step 1 (Volume 1)
	 Demonstrate its side. Demonstrate its normal anatomical position. Describe bony features. Discuss attachment of muscle and ligament Describe articular surfaces Identify nutrient foramen Describe its ossification Correlate the clinical conditions Understand the preventive and curative health care measures Practice the principles of Bioethics Apply strategic use of AI in health care Identify bone Demonstrate its side. Demonstrate its normal anatomical position. Describe bony features. Discuss attachment of muscles and ligaments Describe articular surfaces Identify nutrient foramen Describe its ossification Correlate the clinical conditions 	Must know Must know Must know Must know Must know Must know Should know Should know Nice to know Nice to know Must know Should know Should know	P P C2 C2 C2 C1 C2 C3 C3 C3 C3 C3 C3 C1 P P C2 C2 C2 C1 C2 C3	•	anatomy edition 10 USMLE Q Bank Step 1 (Volume 1) 2023-2034 Clinically oriented anatomy edition 10 USMLE Q Bank Step 1 (Volume 1)

Popliteal Fossa	 Identify surface landmarks Enlist contents Discuss boundaries, roof and floor Map the outline of popliteal artery in a simulated patient / model Correlate the clinical conditions Understand the preventive and curative health care measures Practice the principles of Bioethics Apply strategic use of AI in health care Read relevant research article 	Must know Must know Must know Must know Should know Should know Nice to know Nice to know Nice to know	C1 C1 C2 P C3 C3 C3 C3 C3	Clinically oriented anatomy edition 10 USMLE Q Bank Step 1 (Volume 1) 2023-2034
Knee Joint	 State type of joint Describe its articular surfaces Demonstrate capsular attachments, Enlist extra capsular and intracapsular ligaments and their attachments Demonstrate the movements possible at knee joint and muscles producing them. Describe the concept of locking and unlocking of knee joint Describe blood supply and nerve supply of joint Correlate the clinical conditions Understand the preventive and curative health care measures Practice the principles of Bioethics Apply strategic use of AI in health care Read relevant research article 	Must know Should know Should know Nice to know Nice to know	C1 C2 P C1 P C2 C2 C3 C3 C3 C3	 Clinically oriented anatomy edition 10 USMLE Q Bank Step 1 (Volume 1) 2023-2034
Anterior Compartment of Leg (Muscles and Neurovascular Organization)	 Demonstrate surface landmarks Discuss superficial fascia & deep fascia, their contents including retinecula Describe Origin, insertion, nerve supply and action of all muscles of anterior compartment of leg Identify different structures in compartment Correlate the clinical conditions Understand the preventive and curative health care measures Practice the principles of Bioethics Apply strategic use of AI in health care Read relevant research article 	Must know Must know Must know Should know Should know Nice to know Nice to know	P C2 C1 C3 C3 C3 C3 C3 C3 C3	Clinically oriented anatomy edition 10 USMLE Q Bank Step 1 (Volume 1) 2023-2034
Radiology / Cross Sectional Anatomy	 Demonstrate major landmarks of thigh and anterior compartment of leg on radiographs Identify the structures present at different levels of cross sections Upper 3rd of thigh Mid shaft of femur Lower 3rd of thigh Upper part of patella Distal part of patella Through tibial condyles Correlate the clinical conditions 	Must know Must know Should know	P C2 C3	Clinically oriented anatomy edition 10 USMLE Q Bank Step 1 (Volume 1) 2023-2034

HISTOLOGY SKILL LABORATORY (SKL)

Торіс	At The End Of The Practical The Students Should Be Able To	Calgary Gauge	Learning Domain	Learning Resources
	Histology			
Skeletal muscles	Identify slide under microscope	Should know	P	DiFiore's Atlas of histology
	Illustrate histological structure of skeletal muscle	Must know	C2	with clinical correlation,
	Write two points of identification	Must know	C1	11 th edition,
	Write two points of identification	Must know	C1	chapter 6
	Focus the slide	Should know	P	1
Cardiac and	Identify slide under microscope	Should know	P	DiFiore's Atlas
smooth muscles	Illustrate histological structure of cardiac and smooth muscles	Must know	C2	of histology 11 th edition, chapter 6
	Write two points of identification	Must know	C1	
	Differentiate between cardiac and smooth muscles	Must know	C2	
	Focus the slide	Should know	P]
Thick skin	Identify slide under microscope	Should know	P	DiFiore's Atlas
	Illustrate microscopic structure of thick skin	Must know	C2	of histology 11 th edition, chapter 10
	Discuss the structure of thick skin	Must know	C1	- Chapter 10
	Write two points of identification	Must know	C1	1
	Focus the slide	Should know	P]
Thin skin	Identify slide under microscope	Should know	P	DiFiore's Atlas
	Illustrate microscopic structure of thin skin	Must know	C2	of histology 11 th edition, chapter 10
	Write two points of identification	Must know	C1	
	Focus the slide	Should know	P	

TOS for LMS Assessment of MSK-II Module of First Year MBBS, Batch -52 (Session 2024-25)

1ST LMS Assessment for the first year MBBS for the MSK-II Module will be held on -----(Monday) from 7:00pm to 7:30pm. Details of topics are mentioned in the table below:

S No.	Domain of Teaching	r	No.of MCQs	Cog	gnitive Do	main
	Activity		Meds	C1	C2	C3
1.	LGIS	Embryology Development of Axial Skeleton Development of limbs General Anatomy General Anatomy of Skin Histology Histology of Skin Skin appendages	05	1	2	2
		Anterolateral compartment of thigh (Neurovascular organization) Medial Compartment of thigh Gluteal Region	02	1	1	-
		Skin	05	1	2	2
2.	SGD/Dissection	Embryology Development of Axial Skeleton Development of limbs General Anatomy General Anatomy of Skin Histology Histology of Skin Skin appendages	13	3	4	6
3.	Practical	Anterolateral compartment of thigh (Neurovascular organization) Medial Compartment of thigh Gluteal Region	05	1	2	2
4.		TOTAL			30	•

Learning Resources:

- Embryology :- KLM Embryology Developing Human 11th Edition
- Histology:-Junqueira's Basic Histology 18th Edition
- Gross Anatomy:- KLM clinically oriented anatomy edition 10
- USMLE Q Bank Step 1 (Volume 1) 2023-2034
 UWORLD Step 1 (Volume 3) 2023-2024

TOS for LMS Assessment of MSK-I1 Module Of First Year MBBS, Batch -52 (Session 2024-25)

2ND LMS Assessment for the first year MBBS for the Foundation Module will be held on -----(Monday) from 7:00pm to 7:30pm. Details of topics are mentioned in the table below:

S No.	Domain of Teaching	1 1	No. of MCQs	, ,		
	Activity		1120 QU	C1	C2	C3
1.	LGIS	Genera Anatomy Muscles (general Anatomy)	05	1	2	2
		Histology Histology of Muscles	05	1	1	-
2.	SGD/Dissection	Hip Bone Femur / Patella Anterolateral compartment of thigh(Muscles)	15	3	4	6
3.	Practical	Skeletal Muscles	05	1	2	2
4.	4. TOTAL 30					

Learning Resources:

- **Embryology** :- KLM Embryology Developing Human 11th Edition
- Histology:-Junqueira's Basic Histology 18th Edition
- Gross Anatomy:- KLM clinically oriented anatomy edition 10
- USMLE Q Bank Step 1 (Volume 1) 2023-2034 UWORLD Step 1 (Volume 3) 2023-2024

Hematology and Immunity Module – I Learning Objectives Large Group Interactive Session (LGIS)

Topic	At the End of The Session Students Should Be Able	Calgary	Learning	Learning
	To:	Gauge	Domain	Resources
	Histology			
	Classify lymphoid tissue	Must know	C2	Junqueira's Basic
	Define diffuse lymphoid tissue, nodular lymphoid tissue and lymphoid organs	Must know	C1	Histology 18th Edition chapter
	Discuss the histological features of lymph node	Must know	C2	14
Lymph node	Enlist functions of lymph node	Must know	C1	USMLE Q Bank
	• Understand the supporting elements of lymph node	Must know	C2	Step 1 (Volume 1)
	Describe filtration through lymph node	Must know	C2	2023-2034
	Discuss importance of high endothelial venule in lymph node	Must know	C2	
	Discuss the clinical correlation of lymph node	Should know	С3	
	Correlate the clinical conditions	Should know	C3	1
	Understand the preventive and curative health care measures	Should know	С3	
	Practice the principles of Bioethics	Nice to know	С3	1
	Apply strategic use of AI in health care	Nice to know	C3	1
	Read a research article	Nice to know	C3	1
	Describe the location and functions of thymus	Must know	C1	Junqueira's Basic
	• Enumerate different types of reticulo-epithelial cells	Must know	C1	Histology 18th
	Describe microscopic structure of thymus	Must know	C2	Edition chapter 14
Thymus & Tonsil	Compare the histological structure of thymus and other lymphoid organs	Must know	C2	USMLE Q Bank
	Discuss blood thymus barrier	Must know	C2	Step 1 (Volume 1)
	Describe general histological structure of tonsils	Must know	C2	2023-2034
	Differentiate palatine, lingual, and pharyngeal tonsils histologically	Must know	C2	
	Discuss the clinical correlation of thymus	Should know	С3	
	Correlate the clinical conditions	Should know	C3	
	Understand the preventive and curative health care measures	Should know	СЗ	
	Practice the principles of Bioethics	Nice to know	C3	
	Read a research article	Nice to know	С3	7

	Describe the location and functions of spleen	Should know	C2	•	Junqueira's
	Describe microscopic structure of spleen	Should know	C2		Basic Histology
Spleen	Differentiate between red and white pulp of spleen	Should know	C2		18th Edition
	Discuss blood circulation through spleen	Should know	C2		chapter 14
	Discuss the clinical correlation of spleen	Must know	С3	•	USMLE Q Bank
	Correlate the clinical conditions	Must know	С3		Step 1 (Volume
	Understand the preventive and curative health care	Must know	С3		1) 2023-2034
	measures				
	Practice the principles of Bioethics	Nice to know	C3		
	Read a research article	Nice to know	C3		
	Embryology				
	Define pharyngeal arches and pouches	Must know	C1	•	Junqueira's
Development of Pharyngeal arches & pouches	• Discuss the components of pharyngeal arches and pouches	Must know	C2		Basic Histology 18th Edition
pouches	Describe the development and fate of each pharyngeal arch and pouches	Must know	C2		chapter 14
	Discuss the clinical correlation of pharyngeal arches and pouches	Should know	СЗ		USMLE Q Bank Step 1 (Volume 1) 2023-2034
	Correlate the clinical conditions	Must know	C3		·
	Understand the preventive and curative health care measures	Should know	СЗ		
	Practice the principles of Bioethics	Nice to know	С3		
	Read a research article	Nice to know	С3		

Small Group Discussion (SGDs)

Topic	At the End Of The Session Students Should Be Able To:	Calgary Gauge	Learning Domains	Learning Resources
	Gross Anatomy			
	Illustrate cutaneous innervation	Must know	C2	Clinically oriented
	Describe superficial fascia & deep fascia.	Must know	C2	anatomy edition
Posterior Compartment of Leg (muscles) and flexor retinaculum	Discuss superficial and deep muscle groups in posterior compartment	Must know	C2	10 USMLE Q Bank
nexor remacurum	Tabulate origin, insertion, nerve supply and action of all muscles of posterior compartment of leg	Must know	C2	Step 1 (Volume 1) 2023-2034
	Discuss ruptured calcaneal tendon, calcaneal bursitis and accessory soleus muscle	Should know	C3	
	Correlate the clinical conditions	Should know	C3	
	• Understand the preventive and curative health care measures	Should know	C3	
	Practice the principles of Bioethics	Nice to know	C3	
	Apply strategic use of AI in health care	Nice to know	C3	
	Read a research article	Nice to know	C3	
Posterior	Describe origin, course relations, branches and tributaries of neurovascular bundle	Must know	C2	Clinically oriented anatomy edition
Compartment of Leg (Neurovascular	Discuss superficial veins i.e long and short saphenous veins	Must know	C2	10 USMLE Q Bank
organization)	Palpate the posterior tibial pulse	Must know	C3	Step 1 (Volume 1)
	Correlate the clinical conditions	Should know	C3	2023-2034
	Understand the preventive and curative health care measures	Should know	СЗ	
	Practice the principles of Bioethics	Nice to know	C3	
	Apply strategic use of AI in health care	Nice to know	C3	
	Read a research article	Nice to know	C3	
	• Enumerate the bones of foot	Must know	C1	 Clinically oriented
	Identify different bones of foot	Must know	C1	anatomy edition
Bones of Foot	Discuss bony features and muscle attachment	Must know	C2	10 USMLE Q Bank
	Discuss fracture of metatarsals and os trigonum, avascular necrosis of head of talus	Should know	C3	Step 1 (Volume 1) 2023-2034
	Correlate the clinical conditions	Should know	C3	
	Understand the preventive and curative health care measures	Should know	СЗ	
	Practice the principles of Bioethics	Nice to know	C3	

	Apply strategic use of AI in health care	Nice to know	C3	Clinically oriented
	Read a research article	Nice to know	C3	anatomy edition
Dorsum of foot		Must know	C2	10
Dollari of 1000	 Tabulate muscle on the dorsal aspect of foot Describe blood supply and nerve supply 	Must know	C2	USMLE Q Bank
		Must know	C2	Step 1 (Volume 1) 2023-2034
	Discuss cutaneous innervation of dorsum of foot	Should know	C3	2023-2034
	Palpate the dorsalis pedis artery on dorsum of foot	Should know	C3	_
	• Discuss other clinical related to the dorsum of the foot			
	Correlate the clinical conditions	Should know	C3	
	Understand the preventive and curative health care measures	Should know	С3	
	Practice the principles of Bioethics	Nice to know	С3	
	Apply strategic use of AI in health care	Nice to know	С3	
	Read a research article	Nice to know	СЗ	1
	Describe the articular surfaces of ankle joint	Must know	C2	Clinically oriented
Ankle Joint	Describe the attachment of capsule	Must know	C2	anatomy edition
	• Enumerate the ligaments	Must know	C1	10
	Discuss the movements possible at ankle joint and muscles producing them	Must know	C2	 USMLE Q Bank Step 1 (Volume 1) 2023-2034
	Discuss ankle sprain	Should know	С3	
	Discuss different types of ankle injuries	Should know	C3	1
	Correlate the clinical conditions	Should know	C3	1
	Understand the preventive and curative health care measures	Should know	С3	-
	Practice the principles of Bioethics	Nice to know	С3	1
	Apply strategic use of AI in health care	Nice to know	C3	1
	Read a research article	Nice to know	C3	-
	Classify the joints of foot	Must know	C2	Clinically oriented
Joints of Foot	Discuss the articular surfaces, joint capsules, ligaments, movements and muscles producing movements	Must know	C2	anatomy edition 10 USMLE Q Bank
	Discuss major ligaments in detail	Must know	C2	Step 1 (Volume 1) 2023-2034
	Discuss tibial nerve entrapment	Should know	СЗ	2023-2034
	Discuss club foot, claw foot and other clinical conditions	Should know	С3	
	Correlate the clinical conditions	Should know	C3	_
	Understand the preventive and curative health care measures	Should know	C3	-
	Practice the principles of Bioethics	Nice to know	С3	1
	Apply strategic use of AI in health care	Nice to know	С3	1
	Read a research article	Nice to know	C3	

	Identify Surface landmarks	Should know	C1	Clinically oriented
	Describe cutaneous innervation of sole of foot	Must know	C2	anatomy edition
Sole of foot	Describe Plantar aponeurosis its attachments	Must know	C2	10
(Muscles)	Discuss flexor retinaculum	Must know	C2	 USMLE Q Bank Step 1 (Volume 1)
	Discuss muscles in different layers of foot with origin, insertion, nerve supply and actions	Must know	C2	2023-2034
	Correlate the clinical conditions	Should know	C3	
	Understand the preventive and curative health care measures	Should know	С3	
	Practice the principles of Bioethics	Should know	C3	
	Apply strategic use of AI in health care	Nice to know	C3	
	Read a research article	Nice to know	C3	
	Enlist nerves and arteries present in sole of foot	Must know	C1	
Sole of foot	Discuss route and relations of neurovascular bundle in sole of foot	Must know	C2	Clinically oriented
(Neurovascular Organization)	Describe the formation of vascular arches of foot along with clinical	Should know	C2, C3	anatomy edition 10
	Discuss plantar fasciitis	Should know	C3	 USMLE Q Bank Step 1 (Volume 1)
	Correlate the clinical conditions	Should know	C3	2023-2034
	Understand the preventive and curative health care measures	Should know	СЗ	
	Practice the principles of Bioethics	Must know	C3	
	Apply strategic use of AI in health care	Must know	C3	
	Read a research article	Must know	С3	
	Classify the arches of foot	Must know	C2	 Clinically oriented
A 1 CE 4 1C 4	Describe different components of arches of foot	Must know	C2	anatomy edition
Arches of Foot and Gait Cycle	Discuss stability factors of arches of foot	Must know	C2	10 ■ USMLE Q Bank
Cycle	Discuss pes planus (flat foot), club foot and other clinical	Should know	C3	Step 1 (Volume 1) 2023-2034
	Discuss gait cycle and its stages	Must know	C2	
	Correlate the clinical conditions	Should know	С3	
	Understand the preventive and curative health care measures	Should know	C3	
	Practice the principles of Bioethics	Nice to know	С3	
	Apply strategic use of AI in health care	Nice to know	C3	
	Read a research article	Nice to know	С3	
Thymus, Tonsils	Describe location of thymus and tonsils	Must know	C2	 Clinically oriented
	Describe blood supply, venous drainage and lymphatic drainage of thymus and tonsils	Must know	C2	anatomy edition 10
	Enumerate functions of thymus and tonsils	Must know	C1	
	Correlate the clinical conditions	Should know	C3	

	Understand the preventive and curative health care measures	Should know	C3	• USMLE Q Bank Step 1 (Volume 1)
	Practice the principles of Bioethics	Nice to know	С3	2023-2034
	Apply strategic use of AI in health care	Nice to know	С3	
	Read a research article	Nice to know	С3	
	Discuss the location of spleen	Must know	C2	
	• Enumerate anatomical relations of spleen	Must know	C1	• Clinically oriented
Spleen	Discuss blood supply, venous drainage and lymphatic drainage of spleen	Must know	C2	anatomy edition 10 USMLE Q Bank
	Correlate the clinical conditions	Should know	C3	Step 1 (Volume 1)
	Understand the preventive and curative health care measures	Should know	C3	2023-2034
	Practice the principles of Bioethics	Nice to know	С3	
	Apply strategic use of AI in health care	Nice to know	С3	
	Read a research article	Nice to know	С3	
	Identify different structures on radiographs	Should know	С3	Clinically oriented
Radiology, Surface Anatomy & Cross Sectional Anatomy	 Demonstrate the surface anatomy of various structures present in posterior compartment of leg and foot 	Should know	P	anatomy edition 10 USMLE Q Bank
	• Demonstrate the surface anatomy of spleen, thymus and tonsils	Should know	P	Step 1 (Volume 1) 2023-2034
	• Discuss the Cross-Sectional anatomy at the level of leg & foot	Should know	C2	
	Correlate the clinical conditions	Should know	С3	
	Understand the preventive and curative health care measures	Should know	C3	
	Practice the principles of Bioethics	Nice to know	С3]
	Apply strategic use of AI in health care	Nice to know	С3]
	Read a research article	Nice to know	С3	

Histology Skill Laboratory (SKL)

Topic	At the End of The Session Students Should Be Able To:	Calgary Gauge	Learning Domains	Learning Resources
	Histology		<u> </u>	
	Identify lymph node under microscope	Should know	P	DiFiore's Atlas of
Lymph node	Focus the slide	Should know	P	histology 11 th
	Draw the histological structure of lymph node	Must know	C2	edition, chapter 9 USMLE Q Bank
	Enlist two identification points of lymph node	Must know	C1	Step 1 (Volume 1) 2023-2034
	Identify the slide of thymus under light microscope	Should know	P	DiFiore's Atlas of
	• Focus the slide	Should know	P	histology 11 th
Thymus	Draw the histological structure of thymus	Must know	C2	edition, chapter 9 USMLE Q Bank
	Enlist two identifications points of thymus	Must know	C1	Step 1 (Volume 1) 2023-2034
	Identify the slide of spleen under light microscope	Should know	P	
Spleen	Focus the slide	Should know	P	DiFiore's Atlas of
	Draw histological structure of spleen,	Must know	C2	histology 11 th edition, chapter 9
	Enlist two identification points of spleen	Must know	C1	• USMLE Q Bank Step 1 (Volume 1) 2023-2034
	Identify the slide of tonsils under light microscope	Should know	P	DiFiore's Atlas of
Tonsils	Focus the slide	Should know	P	histology 11 th
	Draw histological structure of tonsils	Must know	C2	edition, chapter 9 USMLE Q Bank
	Write two identification points of tonsils	Must know	C1	Step 1 (Volume 1) 2023-2034

TOS for LMS Assessment of Hematology & Immunity Module-I First Year MBBS, Batch-52 (Session 2024-25)

1st LMS Assessment for the first year MBBS for the Blood & Immunity Module will be held on ------ from 7:00pm to 7:30pm. Detail of topics are mentioned in the table below:

S No.		· · · · · · · · · · · · · · · · · · ·	No.of MCQs	Cognitive Domain			
110.		Wices	C1	C2	С3		
1.	LGIS	Embryology Development of lymph node	05	1	2	2	
		Histology Lymph node	05	1	2	2	
2.	SGD	Ankle Joint (Ankle Sprain) Joints of Foot	15	5	4	6	
3.	Practical	Lymph Node	05	1	2	2	
4.			30)			

Learning Resources:

- Embryology:- KLM Embryology Developing Human 11th Edition
- **Histology**:-Junqueira's Basic Histology 18th Edition
- Gross Anatomy:- KLM clinically oriented anatomy edition 10
- USMLE Q Bank Step 1 (Volume 1) 2023-2034 UWORLD Step 1 (Volume 3) 2023-2024

TOS For LMS Assessment of Hematology & Immunity Module-I First Year MBBS, Batch -52 (Session 2024-25)

2nd LMS Assessment for the first year MBBS for the Blood & Immunity Module will be held on ------from 7:00pm to 7:30pm. Detail of topics are mentioned in the table below:

S No.	Domain of Teaching	•	No.of MCQs	Cognitive Domain		
NO.	Activity		IVICQS	C1	C2	C3
5.	LGIS	Embryology Development of pharyngeal arches	05	1	2	2
		Histology Tonsils	05	1	2	2
6.	SGD	Posterior Compartment of Leg Flexor Retinaculum Bones of the foot	15	5	4	6
7.	Practical	Lymph Node	05	1	2	2
8.	3. Total			30	0	

Learning Resources:

- Embryology :- KLM Embryology Developing Human 11th Edition
- Histology:-Junqueira's Basic Histology 18th Edition
- Gross Anatomy:- KLM clinically oriented anatomy edition 10
- USMLE Q Bank Step 1 (Volume 1) 2023-2034 UWORLD Step 1 (Volume 3) 2023-2024

Cardiovascular System Module -I Learning Objectives Large Group Interactive Session (LGIS)

Topic	Learning Objectives	Calgary	Learning	Learning
	At The End Of Lecture Students Should Be Able To	Gauge	Domain	Resource
	General Anatomy			
	Describe general organization of cardiovascular system	Must know	C2	Clinically
	Describe different types of circulations	Must know	C2	oriented
General Organization	Discuss general structural patterns of arteries and veins	Must know	C2	anatomy
	Classify capillaries	Must know	C1	edition 10
	Explain bio - functional importance and location of	Must know	C2	chapter 1
	continuous, fenestrated and sinusoidal capillaries			USMLE Q Bank Step 1
	Discuss related clinicals		C3	(Volume 1)
	To understand the Biophysiological aspects	Nice to Know	С3	2023-2034
	Able to focus on provision of curative and preventive	Nice to Know	C3	7
	health care measures			
	Practice the principles of Bioethics	Nice to Know	C3	
	Apply strategic use of AI in health care	Nice to Know	C3	
	How to read relevant research article	Nice to Know	С3	7
	Classify arteries on the basis of function and size	Must know	C1	Clinically
	Classify veins on the basis of function and size	Must know	C1	oriented
Classification of	Describe differences between arteries and veins	Must know	C2	anatomy
vessels	Define anastomosis and discuss different types of	Must know	C2	edition 10
	Differentiate between anatomic end arteries and	Must know	C2	chapter 1
	functional end arteries giving example			USMLE Q Dank Stan 1
	Discuss related clincals	Should know	C3	Bank Step 1 (Volume 1)
	To understand the Biophysiological aspects	Must know	C3	2023-2034
	Able to focus on provision of curative and preventive	Nice to Know	C3	_
	health care measures			
	Practice the principles of Bioethics	Nice to Know	C3	
	Apply strategic use of AI in health care	Nice to Know	C3	
	How to read relevant research article	Nice to Know	C3	
	Histology			
	Describe general histological structure of arteries and	Must know	C2	Junqueira's
Arteries and Veins	veins			Basic
	Tabulate histological differences between arterioles,	Must know	C2	Histology
	medium sized arteries, and large arteries			18th Edition
	Discuss related clinicals	Must know	C3	chapter 11
	To understand the Biophysiological aspects	Should know	C3	USMLE Q Dank Stan 1
	Able to focus on provision of curative and preventive	Nice to Know	C3	Bank Step 1 (Volume 1)
	health care measures			2023-2034
	Practice the principles of Bioethics	Nice to Know	C3	
	Apply strategic use of AI in health care	Nice to Know	C3	

	How to read relevant research article	Nice to Know	С3		
Comillonias	Differentiate between continuous, fenestrated and	Must know	C2	•	Junqueira's Basic
Capillaries	sinusoidal capillaries • Enlist bio functions of endothelium	Must know	C2	_	Histology
	Enlist bio functions of endothellum Discuss related clinicals	Should know	C2	_	18th Edition
		Must know	C2	_	chapter 11
	To understand the Biophysiological aspects	Nice to Know	C3	┦.	USMLE Q
	Able to focus on provision of curative and preventive health care measures				Bank Step 1 (Volume 1)
	Practice the principles of Bioethics	Nice to Know	C3		2023-2034
	Apply strategic use of AI in health care	Nice to Know	C3		2023 203 1
	How to Read How to read relevant research article	Nice to Know	C3		
	Describe histological details of endocardium, myocardium and epicardium	Must know	С3	•	Junqueira's Basic
Tunics of Heart & Lymphatic System	Tabulate differences between blood capillaries and lymphatic capillaries	Must know	C2		Histology 18th Edition
	Discuss biophysiological aspects of Heart & Lymphatic System	Must know	C2	•	chapter 11 USMLE Q
	To understand the Biophysiological aspects	Must know	C3	\dashv	Bank Step 1
	Able to focus on provision of curative and preventive	Nice to Know	СЗ		(Volume 1) 2023-2034
	health care measures	Ni. 4 IZ	C2	_	
	Practice the principles of Bioethics	Nice to Know	C3		
	Apply strategic use of AI in health care	Nice to Know	C3	_	
	How to Read How to read relevant research article	Nice to Know	C3		
	Embryology				
	Recall the process of vasculogenesis	Must know	C2	•	The
	Describe venous drainage of embryo	Must know	C2		Developing
Development of Veins					2 C. Croping
Development of veins	Enlist derivatives of vitelline veins	Must know	C1		Human 8 th
1 2		Must know Must know	C1 C2		Human 8 th edition,
1	Enlist derivatives of vitelline veins Discuss role cardinal veins				Human 8 th edition, chapter 13
1	Enlist derivatives of vitelline veins	Must know	C2	-	Human 8 th edition, chapter 13 USMLE Q Bank Step 1
1	Enlist derivatives of vitelline veins Discuss role cardinal veins Describe Development of inferior vena cava Discuss related Congenital abnormalities	Must know Must know	C2 C2 C3	•	Human 8 th edition, chapter 13 USMLE Q Bank Step 1 (Volume 1)
,	 Enlist derivatives of vitelline veins Discuss role cardinal veins Describe Development of inferior vena cava Discuss related Congenital abnormalities To understand the Biophysiological aspects Able to focus on provision of curative and preventive 	Must know Must know Should know	C2 C2	•	Human 8 th edition, chapter 13 USMLE Q Bank Step 1
	 Enlist derivatives of vitelline veins Discuss role cardinal veins Describe Development of inferior vena cava Discuss related Congenital abnormalities To understand the Biophysiological aspects Able to focus on provision of curative and preventive health care measures 	Must know Must know Should know Must know Nice to Know	C2 C2 C3 C3 C3	•	Human 8 th edition, chapter 13 USMLE Q Bank Step 1 (Volume 1)
,	 Enlist derivatives of vitelline veins Discuss role cardinal veins Describe Development of inferior vena cava Discuss related Congenital abnormalities To understand the Biophysiological aspects Able to focus on provision of curative and preventive health care measures Practice the principles of Bioethics 	Must know Must know Should know Must know Nice to Know Nice to Know	C2 C2 C3 C3 C3	•	Human 8 th edition, chapter 13 USMLE Q Bank Step 1 (Volume 1)
,	 Enlist derivatives of vitelline veins Discuss role cardinal veins Describe Development of inferior vena cava Discuss related Congenital abnormalities To understand the Biophysiological aspects Able to focus on provision of curative and preventive health care measures Practice the principles of Bioethics Apply strategic use of AI in health care 	Must know Must know Should know Must know Nice to Know Nice to Know Nice to Know	C2 C2 C3 C3 C3 C3	•	Human 8 th edition, chapter 13 USMLE Q Bank Step 1 (Volume 1)
1	 Enlist derivatives of vitelline veins Discuss role cardinal veins Describe Development of inferior vena cava Discuss related Congenital abnormalities To understand the Biophysiological aspects Able to focus on provision of curative and preventive health care measures Practice the principles of Bioethics Apply strategic use of AI in health care How to read relevant research article 	Must know Must know Should know Must know Nice to Know Nice to Know Nice to Know Nice to Know	C2 C2 C3 C3 C3 C3 C3 C3	•	Human 8 th edition, chapter 13 USMLE Q Bank Step 1 (Volume 1) 2023-2034
	 Enlist derivatives of vitelline veins Discuss role cardinal veins Describe Development of inferior vena cava Discuss related Congenital abnormalities To understand the Biophysiological aspects Able to focus on provision of curative and preventive health care measures Practice the principles of Bioethics Apply strategic use of AI in health care How to read relevant research article Describe development and transformation of aortic arches 	Must know Must know Should know Must know Nice to Know	C2 C2 C3 C3 C3 C3 C3 C3 C2	•	Human 8 th edition, chapter 13 USMLE Q Bank Step 1 (Volume 1) 2023-2034 The Developing
Aortic Arches and	 Enlist derivatives of vitelline veins Discuss role cardinal veins Describe Development of inferior vena cava Discuss related Congenital abnormalities To understand the Biophysiological aspects Able to focus on provision of curative and preventive health care measures Practice the principles of Bioethics Apply strategic use of AI in health care How to read relevant research article Describe development and transformation of aortic 	Must know Must know Should know Must know Nice to Know Nice to Know Nice to Know Nice to Know	C2 C2 C3 C3 C3 C3 C3 C3	•	Human 8 th edition, chapter 13 USMLE Q Bank Step 1 (Volume 1) 2023-2034 The Developing Human 8 th
	 Enlist derivatives of vitelline veins Discuss role cardinal veins Describe Development of inferior vena cava Discuss related Congenital abnormalities To understand the Biophysiological aspects Able to focus on provision of curative and preventive health care measures Practice the principles of Bioethics Apply strategic use of AI in health care How to read relevant research article Describe development and transformation of aortic arches 	Must know Must know Should know Must know Nice to Know	C2 C2 C3 C3 C3 C3 C3 C3 C2	•	Human 8 th edition, chapter 13 USMLE Q Bank Step 1 (Volume 1) 2023-2034 The Developing Human 8 th edition,
Aortic Arches and	 Enlist derivatives of vitelline veins Discuss role cardinal veins Describe Development of inferior vena cava Discuss related Congenital abnormalities To understand the Biophysiological aspects Able to focus on provision of curative and preventive health care measures Practice the principles of Bioethics Apply strategic use of AI in health care How to read relevant research article Describe development and transformation of aortic arches Enlist derivatives of 1-6th aortic arches 	Must know Must know Should know Must know Nice to Know Nice to Know Nice to Know Nice to Know Must know Must know Must know	C2 C2 C3 C3 C3 C3 C3 C3 C2 C1		Human 8 th edition, chapter 13 USMLE Q Bank Step 1 (Volume 1) 2023-2034 The Developing Human 8 th edition, chapter 13
Aortic Arches and	 Enlist derivatives of vitelline veins Discuss role cardinal veins Describe Development of inferior vena cava Discuss related Congenital abnormalities To understand the Biophysiological aspects Able to focus on provision of curative and preventive health care measures Practice the principles of Bioethics Apply strategic use of AI in health care How to read relevant research article Describe development and transformation of aortic arches Enlist derivatives of 1-6th aortic arches Discuss formation of intersegmental arteries 	Must know Must know Should know Must know Nice to Know Nice to Know Nice to Know Nice to Know Must know Must know Must know Must know	C2 C2 C3 C3 C3 C3 C3 C3 C3 C2 C1 C2	•	Human 8 th edition, chapter 13 USMLE Q Bank Step 1 (Volume 1) 2023-2034 The Developing Human 8 th edition,

	Able to focus on provision of curative and preventive health care measures	Nice to Know	C3		2023-2034
	Practice the principles of Bioethics	Nice to Know	C3		
	Apply strategic use of AI in health care	Nice to Know	C3		
	How to read relevant research article	Nice to Know	C3		
	Discuss establishment of cardiogenin field	Must know	C2	•	The
Formation, Position	Describe formation and position of heart tube in developing embryo	Must know	C2		Developing Human 8 th
and Partitioning of	Discuss formation of cardiac loop	Must know	C2		edition,
heart tube	Describe development of sinus venosus	Must know	C2		chapter 13
	Explain importance of septum spurium	Must know	C2	•	USMLE Q
	Describe development of cardiac septa	Must know	C2	7	Bank Step 1
	Discuss different methods of septum formation	Must know	C2		(Volume 1)
	• Explain septum formation in right atrium	Must know	C2	\dashv	2023-2034
	Describe development and differentiation of atria	Must know	C2	+	
	Discuss related congenital abnormalities	Should know	C3	\dashv	
	To understand the Biophysiological aspects	Must know	C3	\dashv	
	Able to focus on provision of curative and preventive health care measures	Nice to Know	C3		
	Practice the principles of Bioethics	Nice to Know	С3	+	
	Apply strategic use of AI in health care	Nice to Know	C3	\dashv	
	How to read relevant research article	Nice to Know	C3	4	
	Discuss formation of septum in atrioventricular canal	Must know	C2	•	The
	Discuss formation of septum in atrioventricular canal Describe formation of atrioventricular valves	Must know	C2	⊢•	Developing
Formation and		Must know	C2	4	Human 8 th
partitioning of Ventricles	Explain septum formation in truncusarteriosis & conuscordis				edition,
ventricles	• Describe septum formation in ventricles Discuss formation of semilunar valves	Must know	C2	•	chapter 13 USMLE Q
	Discuss development of conducting system of heart	Must know	C2		Bank Step 1
	Discuss related Congenital abnormalities	Should know	C3		(Volume 1)
	To understand the Biophysiological aspects	Must know	C3	7	2023-2034
	Able to focus on provision of curative and preventive health care measures	Nice to Know	C3		
	Practice the principles of Bioethics	Nice to Know	C3	7	
	Apply strategic use of AI in health care	Nice to Know	СЗ	=	
	How to read relevant research article	Nice to Know	СЗ	┪	
	Describe fetal circulation in detail	Must know	C2	\dashv	
Fetal circulation	Discuss role of foramen ovale, ductus arteriosis and	Must know	C2	•	The
	ductus venosis in fetal circulation and their fate				Developing Human 8 th
	Differentiate between fetal and postnatal circulation	Must know	C2	_	
	Discuss related Congenital abnormalities	Should know	C3	4	edition, chapter 13
	To understand the Biophysiological aspects	Must know	C3	_	chapter 13
	• Able to focus on provision of curative and preventive health care measures	Nice to Know	C3		
	Practice the principles of Bioethics	Nice to Know	C3		
	Apply strategic use of AI in health care	Nice to Know	C3		

Small Group Discussion (SGDS)

Topic	Learning Objectives At the end of lecture students should be able to	Calgary Gauge	Lear ning	Learning Resources					
			Dom ain						
General Anatomy									
	Define thorax	Must know	C1	Clinically oriented					
	Discuss components and shape of thoracic cavity.	Must know	C2	anatomy edition 10					
	Discuss the applied and the related clinical anatomy	Must know	C2	USMLE Q Bank Step 1					
Thoracic Wall /	Classify Ribs	Must know	C1	(Volume 1) 2023-2034					
Thoracic	Describe ribs (side determination, features,	Must know	C2						
Vertebra	attachments, relations, types and ossification.								
	Correlate the clinical conditions	Should know	СЗ						
	To understand the Biophysiological aspects of	Must know	С3						
	Thoracic wall								
	Able to focus on provision of curative and	Nice to Know	C3						
	preventive health care measures								
	Practice the principles of Bioethics	Nice to Know	C3						
	Apply strategic use of AI in health care	Nice to Know	C3						
	Read relevant research article	Nice to Know	C3						
	Discuss the boundaries and division of mediastinum	Must know	C2	Clinically oriented					
	• Enumerate the contents of anterior mediastinum.	Must know	C1	anatomy edition 10					
Madiagtinum	Correlate the clinical conditions	Should know	C3	USMLE Q Bank Step 1 Output Description:					
Mediastinum	To understand the Biophysiological aspects of Mediastinum	Must know	C3	(Volume 1) 2023-2034					
	Able to focus on provision of curative and preventive health care measures	Must know	СЗ						
	Map Arch of Aorta, Bracheocephalic artery on SP/Model	Should know	P						
	Practice the principles of Bioethics	Nice to Know	С3						
	Apply strategic use of AI in health care	Nice to Know	C3						
	Read relevant research article	Nice to Know	С3						
	Describe the gross features of fibrous pericardium with its blood and nerve supply	Must know	C2	Clinically oriented anatomy edition 10					
	Describe the gross features of serous pericardium with its blood and nerve supply	Must know	C2	• USMLE Q Bank Step 1 (Volume 1) 2023-2034					
Pericardium	Describe transverse and oblique pericardial sinus	Must know	C2	<u> </u>					
	Describe the Clinical Significance of the Transverse Pericardial Sinus	Must know	СЗ						
	Define Pericarditis and Pericardial Effusion	Must know	C1						
	Correlate the clinical conditions	Should know	СЗ						

		1			
	• To understand the Biophysiological aspects of Pericardium	Nice to Know	C3		
	Able to focus on provision of curative and	Nice to Know	С3	1	
	preventive health care measures	Title to Thie W	03		
	Map Pericardium on SP/Model	Nice to Know	С3		
	Practice the principles of Bioethics	Nice to Know	С3	1	
	Apply strategic use of AI in health care	Nice to Know	C3	1	
	Read relevant research article	Nice to Know	С3		
	Demonstrate Position and orientation of heart.	Should know	P	•	Clinically oriented
Heart	Describe borders and surfaces of the heart.	Must know	C2	1	anatomy edition 10
(External	Demonstrate the external features of the heart	Must know	C2	•	USMLE Q Bank Step 1
features)	Correlate the clinical conditions	Should know	C3	1	(Volume 1) 2023-2034
	To understand the Biophysiological aspects of	Must know	C3	1	
	Heart(External Feature)	Widst Kilo W	03		
	Able to focus on provision of curative and	Nice to Know	С3	1	
	preventive health care measures				
	Practice the principles of Bioethics	Nice to Know	С3		
	Apply strategic use of AI in health care	Nice to Know	СЗ		
	Read relevant research article	Nice to Know	С3		
	Use HEC digital library	Nice to Know	С3		
	Differentiate between muscular and smooth part.	Nice to Know	C2	•	Clinically oriented anatomy edition 10
	• Identify the various openings, important features in inter-atrial septum.	Must know	C2	•	USMLE Q Bank Step 1
II4	Identify S.A node	Must know	C1	1	(Volume 1) 2023-2034
Heart (Internal	• Discuss internal features of left atrium, inter atrial	Must know	C2	1	
(internal features)	septum, mitral valve and pulmonary veins.	Widst Kilow	C2		
reatures)	Discuss importance of modulator band.	Must know	C2	1	
	-	Must know	C3	1	
	• Identify mitral valve, intervetntricular septum, aortic vestibule, arotic valve.	Wiust Kilow	C3		
	Correlate the clinical conditions	Should know	С3		
	To understand the Biophysiological aspects of	Must know	С3	1	
	Heart (Internal features)				
	Able to focus on provision of curative and	Must know	С3	1	
	preventive health care measures				
	Map Cardiac valves on SP/Model	Should know	P	1	
	Practice the principles of Bioethics	Nice to Know	C3	1	
	Apply strategic use of AI in health care	Nice to Know	C3	1	
	Read relevant research article	Nice to Know	C3	1	
	Use HEC digital library	Nice to Know	C3	1	
		Must know	C1	-	Clinically oriented
Heart	Coronary Atherosclerosis			•	
neart	Myocardial Infarction	Must know	C1		anatomy edition 10
	Angina Pectoris	Must know	C1		

(Clinical	Coronary Angioplasty	Must know	C1	•	USMLE Q Bank Step 1
Correlations)	Correlate the clinical conditions	Should know	C2	1	(Volume 1) 2023-2034
	To understand the Biophysiological aspects of	Must know	C3	1	
	Heart (Clinical Correlations)				
	Able to focus on provision of curative and	Nice to Know	С3	1	
	preventive health care measures				
	Practice the principles of Bioethics	Nice to Know	C3		
	Apply strategic use of AI in health care	Nice to Know	C3		
	Read relevant research article	Nice to Know	C3		
	Describe the origin of coronary arteries	Must know	C2	•	Clinically oriented
	Identify course branches and distribution of right	Must know	C1	1	anatomy edition 10
	coronary arteries and left coronary artery,			•	USMLE Q Bank Step 1
37 1 4 C	• Discuss the concept of right and left dominance.	Must know	C2		(Volume 1) 2023-2034
Vasculature of heart	Describe the venous drainage of heart.	Must know	C2		
neart	Correlate the clinical conditions	Should know	C3		
	To understand the Biophysiological aspects of	Must know	C3		
	Vasculature of heart			_	
	Able to focus on provision of curative and	Nice to Know	C3		
	preventive health care measures			_	
	Practice the principles of Bioethics	Nice to Know	C3	4	
	Apply strategic use of AI in health care	Nice to Know	C3		
	Read relevant research article	Nice to Know	С3		
	Describe the formation of sympatical and door	Must know	C2	•	Clinically oriented
Innervation of	Describe the formation of superficial and deep cardiac plexus.	Widst Kilow	CZ	•	anatomy edition 10
Heart	Correlate the clinical conditions	Should know	C3	┥.	USMLE Q Bank Step 1
	To understand the Biophysiological aspects of	Must know	C3	+	(Volume 1) 2023-2034
	Innervation of Heart	1,10,50 11116			
	Able to focus on provision of curative and	Nice to Know	С3	1	
	preventive health care measures				
	Practice the principles of Bioethics	Nice to Know	С3	1	
	Apply strategic use of AI in health care	Nice to Know	С3	1	
	Read relevant research article	Nice to Know	С3	1	
	Enumerate the structure of superior mediastinum	Must know	C1	•	Clinically oriented
Superior	Describe great vessels in superior mediastinum	Must know	C2	+	anatomy edition 10
mediastinum	Correlate the clinical conditions	Should know	C3	┥.	USMLE Q Bank Step 1
(Trachea,	Correlate the chinical conditions	Should know	CJ		(Volume 1) 2023-2034
Esophagus,	To understand the Biophysiological aspects of	Must know	С3	1	
Ascending	Superior Mediastinum				
Aorta)		1	~^	4	
	Able to focus on provision of curative and	Must know	C3		
	preventive health care measures				
	Map Ascending Aorta on SP/Model	Should know	P	┨	
	The first of of the order	11110	-		
	Practice the principles of Bioethics	Nice to Know	С3	+	
	The same principles of Biochines		20		

	Apply strategic use of AI in health care	Nice to Know	СЗ		
	Read relevant research article	Nice to Know	СЗ		
	Identify structures in posterior mediastinum	Must know	C1	• Clini	cally oriented
Posterior mediastinum	Describe anatomy of structure in Posterior mediastinum	Must know	C2		omy edition 10 MLE Q Bank Step 1
(Boundaries and Structures)	Identify course, relations and branches of descending aorta.	Must know	C2	(Vol	ume 1) 2023-2034
	Correlate the clinical conditions	Should know	C2		
	To understand the Biophysiological aspects of Posteror mediastinum	Must know	СЗ		
	Able to focus on provision of curative and preventive health care measures	Must know	СЗ		
•	Map Descending Thoracic Aorta on SP/Model	Should know	P		
	Practice the principles of Bioethics	Nice to Know	C3		
	Apply strategic use of AI in health care	Nice to Know	С3		
	Read relevant research article	Nice to Know	СЗ		
Posterior	Describe formation, course and clinical importance of azygos system of veins	Must know	СЗ		cally oriented omy edition 10
mediastinum (Azygos system)	Describe formation and importance of hemiazygos vein	Must know	C1		MLE Q Bank Step 1 ame 1) 2023-2034
	Correlate the clinical conditions	Should know	СЗ		
	To understand the Biophysiological aspects of Posterior mediastinum	Must know	СЗ		
	Able to focus on provision of curative and preventive health care measures	Nice to Know	СЗ		
	Practice the principles of Bioethics	Nice to Know	С3		
	Apply strategic use of AI in health care	Nice to Know	СЗ		
	Read relevant research article	Nice to Know	С3		
Cross sectional Anatomy/	Identify the surfaces present at different levels of cross sections	Should know	P		cally oriented omy edition 10
Radiology	Manubriosternal Joint/Angle of Louis	Should know	P	• USN	ALE Q Bank Step 1
	Upper body of Sternum	Should know	P	(Vol	ume 1) 2023-2034
	Section between T 7 , T 8 Thoracic vertebrae	Should know	P		
	Section between T 8 , T 9 Thoracic vertebrae	Should know	P		
	Section between T 9 , T 10 Thoracic vertebrae	Should know	P		
	How to access HEC digital library	Nice to Know	C3		
	Correlate the clinical conditions	Should know	C2		
	Able to focus on provision of curative and	Nice to Know	C3		
	preventive health care measures				
	Practice the principles of Bioethics	Nice to Know	C3		
	Apply strategic use of AI in health care	Nice to Know	C3		
	Read relevant research article	Nice to Know	C3		

Histology Skill Laboratory (SKL)

Topic	Learning Objectives At The End Of Practical Students Should Be	Calgary Guage	Learning Domain		Learning Resource
	Able To Histology				
	identify characteristic histological features of tunica intima, tunica media and tunica adventitia of elastic arteries under microscope	Should know	P1	•	DiFiore's Atlas of histology 11 th
Elastic Arteries	Illustrate histological structure of elastic artery	Must know	C1	1	edition, chapter
	Write two points of identification	Must know	C1	1	
	To read relevant research article	Nice to Know	С3	1	
Muscular Arteries	identify characteristic histological features of tunica intima, tunica media and tunica adventitia of muscular and small sized arteries arteries under microscope	Should know	P1	•	DiFiore's Atlas of histology 11 th edition, chapter
Small Arteries	Illustrate histological structure of Muscular and small sized artery	Must know	C1		
	Write two points of identification	Must know	C1		
	Differentiate between three types of arteries on histology slides	Must know	C1		
	To read relevant research article	Nice to Know	С3	1	
Large Vein	Identify characteristic histological features of tunica intima, tunica media and tunica adventitia of large vein under microscope	Should know	P1	•	DiFiore's Atlas of histology
	Illustrate histological structure of large vein	Must know	C1	1	11 th edition, chapter
	Write two points of identification	Must know	C1	1	chapter
	To read relevant research article	Must know	C3	1	
Medium and small sized vein	Identify characteristic histological features of tunica intima, tunica media and tunica adventitia of medium and small sized vein under microscope	Should know	P1	•	DiFiore's Atlas of histology 11 th edition, chapter
	Illustrate histological structure of medium and small sized vein	Must know	C1		
	Write two points of identification Differentiate between three types of veins on histology slides	Must know	C1		
	To read relevant research article	Nice to Know	C3		
Capillaries	Classify capillaries on the basis of histological structure and function	Must know	C1	•	DiFiore's Atlas of histology
	Enlist sites of continuous, fenestrated and sinusoidal capillaries	Must know	C1		11 th edition, chapter
	Elaborate characteristic histological features of tunica intima, tunica media and tunica adventitia of capillaries	Must know	C1		onapoi
	Draw and label histological structure of each type of capillaries	Must know	C1		
	Write two points of identification	Must know	C1	1	
	To read relevant research article	Nice to Know	С3		

TOS for LMS Assessment of Cardiovascular Module-I First Year MBBS, Batch -52 (Session 2024-25)

1ST LMS Assessment for the first year MBBS for the CVS Module will be held on ------ from 7:00pm to 7:30pm. Detail of topics are mentioned in the table below:

S	Domain of		No.of	Cog	gnitive Domain		
No.	Teaching Activity		MCQs	C1	C2	С3	
1.	LGIS	Embryology Development of Venous System Aortic Arches and derivatives	05	1	2	2	
		General Anatomy General Organization of CVS Classification of vessels	05	1	2	2	
2.	SGD	Thoracic Wall / Thoracic Vertebra Mediastinum Pericardium / Cardiac tamponade Heart (External Features)	15	5	4	6	
3.	Practical	Elastic arteries	05	1	2	2	
4.		Total		30)		

Learning Resources:

- Embryology :- KLM Embryology Developing Human 11th Edition
- Histology:-Junqueira's Basic Histology 18th Edition
- Gross Anatomy:- KLM clinically oriented anatomy edition 10
- USMLE Q Bank Step 1 (Volume 1) 2023-2034 UWORLD Step 1 (Volume 3) 2023-2024

TOS for LMS Assessment of Cardiovascular Module-I First Year MBBS, Batch -52 (Session 2024-25)

2nd LMS Assessment for the first year MBBS for the CVS Module will be held on ------ from 7:00pm to 7:30pm. Detail of topics are mentioned in the table below:

S No.	Domain of	Topic	No.of	Cog	Cognitive Domain			
NO.	Teaching Activity		MCQs	C1	C2	С3		
1.	LGIS	Embryology Formation, Position and Partitioning of heart tube Formation and partitioning of Ventricles Fetal Circulation	05	1	2	2		
		Histology Arteries and Veins Capillaries Tunics of heart & Lymphatic System	05	1	2	2		
2.	SGD	Heart (Internal Features) Vasculature of Heart (Coarctation of Aorta) Innervation of Heart Superior Mediastinum (Trachea, Esophagus Ascending Aorta)	15	5	4	6		
3.	Practical	Medium & Small Sized Arteries	05	1	2	2		
4.		Total		3	0			

Learning Resources:

- Embryology :- KLM Embryology Developing Human 11th Edition
- Histology:-Junqueira's Basic Histology 18th Edition
- Gross Anatomy :- KLM clinically oriented anatomy edition 10
- USMLE Q Bank Step 1 (Volume 1) 2023-2034 UWORLD Step 1 (Volume 3) 2023-2024

Respiration Module-1 Learning Objectives

Large Group Interactive Session (LGIS)

Topic	Learning Objectives	Importance	Learning	Learning Resource
•	At the end of lecture students should be able to	•	Domain	8
	Histology			1
	Explain division of the respiratory system	Should know	C2	
	Describe different functions of respiratory system.	Should know	C2	Junqueira's
Nasal and	Describe different functions of respiratory system. Describe details of respiratory epithelium	Should know	C2	Basic Histology
Olfactory Mucosa	Discuss microscopic structure of vestibule	Should know	C2	18th Edition
•	Describe structural specialization in mucosa of nasal	Should know	C2	chapter 17
	cavity proper	Should know	CZ	USMLE Q Bank
	Appreciate differences between respiratory mucosa and olfactory mucosa	Should know	C1	Step 1 (Volume 1) 2023-2034
	Describe the features of olfactory mucosa	Should know	C2	
	Discuss clinical correlation	Must know	C3	_
	Understand the curative and preventive health care measures	Nice to know	C3	_
	Practice the principles of bioethics	Nice to know	C3	_
	Apply the strategic use of artificial intelligence in healthcare	Nice to know	С3	=
	Read relevant research article	Nice to know	С3	_
	Use HEC digital library	Nice to know	С3	_
	Describe microscopic structure of paranasal sinuses	Nice to know	C2	Junqueira's
	Describe general histological organization of	Should know	C2	Basic Histology
	respiratory system			18th Edition
Larynx and	Appreciate different histological layers of nasopharynx	Should know	C1	chapter 17
Trachea	Describe histological structure of laryngeal cartilages	Should know	C2	• USMLE Q Bank
	Discuss components of tracheal wall	Should know	C2	Step 1 (Volume
	Describe the related clinicals	Must know	С3	1) 2023-2034
	Understand the curative and preventive health care measures.	Nice to know	С3	•
	Practice the principles of bioethics	Nice to know	С3	_
	Apply the strategic use of artificial intelligence in healthcare	Nice to know	С3	
	Read relevant research article	Nice to know	C3	
	Use HEC digital library	Nice to know	С3	
	Describe division of bronchial tree	Should know	C2	
Tracheobronchial	Discuss microscopic structure of extra and intra pulmonary bronchi	Should know	C2	
tree	Describe histological structure of bronchioles	Should know	C2	
	Appreciate differences between bronchi and bronchioles Discuss microscopic structure of terminal bronchioles	Should know	C1	

	. A '. 4 1 '.'C' CO1 11 -'41 41.'	Chauld Imarr	C2	
	• Appreciate the significance of Clara cells with their functions	Should know	C2	
	Discuss other cells present in terminal bronchioles	Should know	C2	
	Describe the microscopic structure of respiratory bronchioles	Should know	C2	
	Describe differences between respiratory and terminal bronchioles Describe characteristics of alveolar ducts	Should know	C2	
	Describe related clinicals	Must know	С3	
	Understand the curative and preventive health care measures.	Nice to know	С3	
	Practice the principles of bioethics	Nice to know	C3	
	Apply the strategic use of artificial intelligence in healthcare	Nice to know	С3	
	Read relevant research article	Nice to know	С3	
	Use HEC digital library	Nice to know	C3	
	Describe histological structure of alveolar ducts and their functions	Should know	C2	Junqueira's Basic Histology
Lungs	Identify type 1 and type II alveolar cells	Should know	C1	18th Edition
	Describe histological structure of interalveolar septum	Should know	C2	chapter 17
	Discuss role of alveolar macrophages	Should know	C2	• USMLE Q Bank
	Describe Blood – Air barrier in detail	Should know	C2	Step 1 (Volume
	Discuss histology of pleura in detail	Should know	C2	1) 2023-2034
	Describe related clinicals	Must know	C3	_
	Understand the curative and preventive health care measures.	Nice to know	C3	
	Practice the principles of bioethics	Nice to know	C3	\dashv
	Apply the strategic use of artificial intelligence in healthcare	Nice to know	C3	
	Read relevant research article	Nice to know	C3	
	Use HEC digital library	Nice to know	C3	
	Embryology			
Nose and	Describe role of pharyngeal arches in development of nose	Should know	C2	Developing Human 11 th
Paranasal sinuses	Describe development of nose and paranasal sinuses	Should know	C2	Edition
	Describe the Congenital anomalies of nose and paranasal sinuses	Must know	C2	USMLE Q Bank Step 1 (Volume 1)
	Understand the curative and preventive health care measures.	Nice to know	С3	2023-2024
	Practice the principles of bioethics	Nice to know	C3	
	Apply the strategic use of artificial intelligence in healthcare	Nice to know	С3	
	Read relevant research article	Nice to know	С3	
	Use HEC digital library	Nice to know	СЗ	
	Describe formation of respiratory primordium	Should know	C2	

Larynx & Trachea	Describe the role of pharyngeal arches in development of larynx	Should know	C2	• Developing Human 11 th
	Discuss formation of laryngotracheal diverticulum	Should know	C2	Edition
	Describe formation of trachea esophageal septum and its importance	Should know	C2	• USMLE Q Bank Step 1
	Describe Congenital defects associated with development of Trachea	Must know	С3	(Volume 1) 2023-2024
	Describe formation and division of respiratory buds	Should know	C2	2023 2021
	Understand the curative and preventive health care	Nice to know	C3	-
	measures.			
	Practice the principles of bioethics	Nice to know	C3	=
	Apply the strategic use of artificial intelligence in	Nice to know	C3	7
	healthcare			
	Read relevant research article	Nice to know	С3	7
	Use HEC digital library	Nice to know	C3	=
	Discuss development of bronchi and bronchopulmonary	Should know	C2	D 1 :
	segments			Developing Human 11 th
	Describe development of pleural cavities	Should know	C2	Edition
Lungs	Discuss process of maturation of lungs	Should know	C2	• USMLE Q
	Enlist different stages of lung maturation	Should know	C1	Bank Step 1
	Explain the production and significance of Surfactant	Should know	C2	(Volume 1)
	Describe role of fetal breathing movements in	Should know	C2	2023-2024
	maturation of lungs	Should know	CZ	
	Discuss postnatal development of lungs	Should know	C2	+
	Describe congenital anomalies associated with lungs	Must know	C3	-
		Nice to know	C3	+
	 Understand the curative and preventive health care measures. 	Tyree to know	CS	
	Practice the principles of bioethics	Nice to know	C3	
	Apply the strategic use of artificial intelligence in healthcare	Nice to know	C3	
	Read relevant research article	Nice to know	C3	
	Use HEC digital library	Nice to know	C3	
	Describe the development of diaphragm	Should know	C2	• Davidanina
Diaphragm	Elaborate formation of septum transversum and its role	Should know	C2	Developing Human 11 th
	in development of diaphragm			Edition
	Discuss congenital defects associated with diaphragm	Should know	С3	• USMLE Q
	Understand the curative and preventive health care	Nice to know	С3	Bank Step 1
	measures.			(Volume 1)
	Practice the principles of bioethics	Nice to know	C3	2023-2024
	Apply the strategic use of artificial intelligence in	Nice to know	C3	
	healthcare			
	Read relevant research article	Nice to know	C3	-
	Use HEC digital library	Nice to know	C3	+

Small Group Discussion (SGDs)

Topic	Learning Objectives	Importance	Learning	Learning Resource
	At the end of lecture students should be able to		Domain	
	Gross Anatomy			
	Describe anatomy of nasal cavity	Must know	C2	
,	Describe the blood supply and the site of anastomosis	Must know	C2	Clinical
	in the nose.			Oriented
Nose & Paranasal	Discuss the nerve supply of nose	Must know	C2	Anatomy by
Sinuses	Discuss the applied and the related clinical.	Must know	СЗ	Keith L.
	Define and enumerate para nasal sinuses.	Must know	C1	Moore.8 TH
	Discuss the shape, location and their point of	Must know	C2	Edition.
	openings.			Clavicle
	Clinical significance with surgical interventions.	Should know	C3	- (Chapter 3,
	Understand the curative and preventive health care	Nice to know	СЗ	Page143,153,1
	measures.			54). https://www.youtube.co
	Practice the principles of bioethics	Nice to know	СЗ	m/watch?v=Ykfzt-olaYs
	Apply the strategic use of artificial intelligence in	Nice to know	СЗ	
	healthcare			USMLE Q Bank
	Read relevant research article	Nice to know	С3	Step 1 (Volume 1)
	Use HEC digital library	Nice to know	СЗ	2023-2024
	Enumerate the components of larynx	Must know	C1	
	Describe paired and unpaired cartilages of larynx	Must know	C2	
	Describe Intrinsic and extrinsic muscles of larynx			
	(origin, insertion nerve supply and action).			• Clinical
Larynx &	Describe Intrinsic and extrinsic membrane	Must know	C2	Oriented
Trachea	(attachments and structure piercing the membranes).			Anatomy by
	Discuss the movements of vocal cords and their	Must know	C2	Keith L.
	effects on the voice and respiration.			Moore.8 TH
	• Discuss the blood supply and nerve supply of larynx.	Must know	C2	Edition.
	Discuss the applied and the related clinical.	Must know	C3	Clavicle
	Describe the level of commencement of trachea, its	Must know	C2	(Chapter 3, Page 143, 153, 1
	termination and the tracheal cartilages.			54).
	State the level of division of trachea	Must know	C1	https://www.youtube.co
	Describe in detail the nerve supply and blood supply	Must know	C2	m/watch?v=Ykfzt-olaYs
	of trachea.			
	Discuss the applied and the related clinicals.	Must know	C3	I LIGHTE O.D. 1
	Map outline of trachea on simulated patient/model	Must know	P+A	USMLE Q Bank Stan 1 (Valuma 1)
	Map outline of larynx on simulated patient/model	Must know	P+A	Step 1 (Volume 1) 2023-2024
	Map outline of right and left bronchus on simulated	Should know	P+A	
	patient/model			
	Understand the curative and preventive health care	Nice to know	C3	
	measures.			
	Practice the principles of bioethics	Nice to know	C3	
			<u> </u>	

	Apply the strategic use of artificial intelligence in healthcare	Nice to know	С3	
	Read relevant research article	Nice to know	С3	
	Use HEC digital library	Nice to know	С3	
	• Enumerate the bones of the thorax.	Must know	C1	
Overview of Thoracic wall	Describe and classify the typical ribs (side determination, features, attachments, relations, types and ossification.	Must know	C2	Clinical Oriented Anatomy by Keith L. Moore.8 TH
	Discuss the applied and the related clinical.	Should know	С3	Edition. Clavicle
	Understand the curative and preventive health care measures.	Nice to know	С3	(Chapter 3, Page143,153,154).
	Practice the principles of bioethics	Nice to know	С3	https://www.youtube.co
	Apply the strategic use of artificial intelligence in healthcare	Nice to know	С3	m/watch?v=Ykfzt- olaYs
	Read relevant research article	Nice to know	С3	USMLE Q Bank
	Use HEC digital library	Nice to know	С3	Step 1 (Volume 1) 2023-2024
Skeleton of	Describe and classify the atypical ribs (side determination, features, attachments, relations, types and ossification.	Must know	C2	Clinical Oriented Anatomy by Keith
thoracic wall	Differentiate between typical and atypical ribs.	Must know	C2	L. Moore.8 TH
(Ribs)	Discuss costal cartilages and their attachments.	Must know	C2	Edition. Clavicle
	Discuss the applied and the related clinicals.	Should know	С3	(Chapter 3,
	Understand the curative and preventive health care measures.	Nice to know	С3	Page143,153,154). https://www.youtube.co
	Practice the principles of bioethics	Nice to know	C3	m/watch?v=Ykfzt-
	Apply the strategic use of artificial intelligence in healthcare	Nice to know	С3	<u>olaYs</u>
	Read relevant research article	Nice to know	С3	USMLE Q Bank
	Use HEC digital library	Nice to know	С3	Step 1 (Volume 1) 2023-2024
	Identify different parts of sternum.	Must know	C1	
Skeleton of thoracic wall	Describe the bony features, attachments ossification of sternum	Must know	C2	Clinical Oriented Anatomy by Keith
(Sternum)	Discuss the related applied and clinicals.	Should know	С3	L. Moore.8 TH
	Understand the curative and preventive health care measures.	Nice to know	С3	Edition. Clavicle (Chapter 3,
	Practice the principles of bioethics	Nice to know	С3	Page143,153,154).
	Apply the strategic use of artificial intelligence in healthcare	Nice to know	C3	https://www.youtube.co m/watch?v=Ykfzt-
	Read relevant research article	Nice to know	С3	<u>olaYs</u>
	Use HEC digital library	Nice to know	С3	• USMLE Q Bank Step 1 (Volume 1) 2023-2024
	Classify the joints of the thorax.	Must know	C2	
	Discuss the type, ligaments and relations of the joints of the thorax (Manubriosternal, xiphisternal,	Must know	C2	Clinical Oriented Anatomy by Keith

Joints of thoracic	costoverterbal, costotransverse, costochondral,			L. Moore.8 TH
wall	chondrosternal, interchondral and intervertebral			Edition. Clavicle
	joints).			(Chapter 3,
	Discuss the components functions of the	Must know	C2	Page143,153,154).
	intervertebral disc.			https://www.youtube.co
	Discuss the related applied and clinicals.	Should know	C3	m/watch?v=Ykfzt-
	 Understand the curative and preventive health care measures. 	Nice to know	C3	<u>olaYs</u>
	Practice the principles of bioethics	Nice to know	С3	
	Apply the strategic use of artificial intelligence in healthcare	Nice to know	С3	
	Read relevant research article	Nice to know	C3	
	Use HEC digital library	Nice to know	C3	
Thoracic apertures	Discuss the boundaries, shape and structure passing through superior thoracic aperture (viscera, blood vessels, nerve and muscles)	Must know	C2	Clinical Oriented Anatomy by Keith
	Describe the thoracic inlet syndrome.	Must know	С3	L. Moore.8 TH
	Describe related clinicals	Must know	С3	Edition. Clavicle
	• Discuss the boundaries, shape and structures passing through the inferior thoracic aperture.	Must know	C2	(Chapter 3, Page143,153,154).
	Understand the curative and preventive health care measures.	Should know	С3	https://www.youtube.co m/watch?v=Ykfzt-
	Practice the principles of bioethics	Nice to know	С3	<u>olaYs</u>
	Apply the strategic use of artificial intelligence in healthcare	Nice to know	С3	
	Read relevant research article	Nice to know	С3	USMLE Q Bank
	Use HEC digital library	Nice to know	С3	Step 1 (Volume 1) 2023-2024
	Discuss the thoracic wall.	Nice to know	C2	Clinical Oriented
Intercostal spaces / Movements of	Describe the intercostals muscles (origin, insertion, direction of fibers, nerve supply and actions.	Must know	C2	Anatomy by Keith L. Moore.8 TH
thoracic wall	• Discuss in detail the formation, branches, distribution and the related clinical of the intercostals nerves.	Must know	С3	Edition. Clavicle (Chapter 3,
	Map outline of internal thoracic artery on simulated patient/model	Must know	P+A	Page143,153,154). https://www.youtube.co
	• Explain the formation, course, relations, distribution and branches of the thoracic sympathetic trunk.	Must know	C2	m/watch?v=Ykfzt- olaYs
	Differentiate between the typical and atypical intercostals space.	Must know	C1	USMLE Q Bank
	Compare the typical and atypical intercostals space.	Must know	C2	Step 1 (Volume 1)
	Describe the types and axis of movements of vertebral column (flexion, extension, lateral flexion and rotation).	Must know	C2	2023-2024
	Define the respiratory movements on the basis of principles, factors and the different types (pump handle, bucket handle and piston).	Must know	C1	
	Discuss the related physiological and pathological changes occurring (related to age movement etc).	Must know	C2	

	Understand the curative and preventive health care measures.	Nice to know	С3	
	Practice the principles of bioethics	Nice to know	C3	
	Apply the strategic use of artificial intelligence in healthcare	Nice to know	С3	
	Read relevant research article	Nice to know	С3	
	Use HEC digital library	Nice to know	C3	
Diaphragm	Describe the small and large openings in the diaphragm (vertebral level, location, formation, structures passing through and effects on the openings and structures by the diaphragmatic contraction).	Must know	C2	Clinical Oriented Anatomy by Keith L. Moore.8 TH Edition. Clavicle
	Discuss related clinical aspects	Should know	С3	(Chapter 3,
	Understand the curative and preventive health care measures.	Nice to know	С3	Page143,153,154). https://www.youtube.co
	Practice the principles of bioethics	Nice to know	С3	m/watch?v=Ykfzt-
	Apply the strategic use of artificial intelligence in healthcare	Nice to know	С3	<u>olaYs</u>
	Read relevant research article	Nice to know	C3	
	Use HEC digital library	Nice to know	С3	
	• Explain the arterial supply of intercostals space (anterior / posterior, parent vessels, branches, course, relations and termination).	Must know	C2	Clinical Oriented Anatomy by Keith L. Moore.8 TH
Vessels and lymphatics of	Differentiate between the arterial supply of typical and atypical intercostal space with the related clinicals.	Must know	С3	Edition. Clavicle (Chapter 3, Page143,153,154).
thoracic wall	• Explain the venous drainage of the inercostal spaces (anterior / posterior, parent vessels, tributaries, course, relations and termination).	Must know	C2	https://www.youtube.co m/watch?v=Ykfzt- olaYs
	Differentiate between the venous drainage of typical and atypical intercostal space with the related clinicals	Must know	С3	USMLE Q Bank Step 1 (Volume 1)
	Map outline of pulmonary trunk on simulated patient/model	Must know	P+A	2023-2024
	Map the outline of thoracic duct on simulated patient/model	Should know	P+A	
	Understand the curative and preventive health care measures.	Nice to know	С3	
	Practice the principles of bioethics	Nice to know	С3	
	Apply the strategic use of artificial intelligence in healthcare	Nice to know	С3	
	Read relevant research article	Nice to know	С3	
	Use HEC digital library	Nice to know	С3	
	Discuss the origin of intercostal nerves.	Must know	C2	Clinical Oriented
	Discuss course of nerves.	Must know	C2	Anatomy by Keith
Innervation of Thoracic Wall	Discuss branches and related area suplied by these nerves	Must know	C2	L. Moore.8 TH Edition. Clavicle
	Discuss related clinical	Should know	С3	

	Understand the curative and preventive health care	Nice to know	C3	(Chapter 3,
	measures.			Page143,153,154).
	Practice the principles of bioethics	Nice to know	C3	https://www.youtube.co
	 Apply the strategic use of artificial intelligence in healthcare 	Nice to know	C3	m/watch?v=Ykfzt- olaYs
	Read relevant research article	Nice to know	С3	
	Use HEC digital library	Nice to know	С3	• USMLE Q Bank Step 1 (Volume 1) 2023-2024
	Discuss visceral and parietal pleura	Must know	C2	Clinical Oriented
	Discuss the pleural recesses and pleural cavity.	Must know	C2	Anatomy by Keith
	Describe the nerve and blood supply of pleura.	Must know	C2	L. Moore.8 TH
Pleura	Discuss the applied and the related clinicals.	Must know	C3	Edition. Clavicle
	Map outline of parietal pleura on simulated patient/model	Should know	P+A	(Chapter 3, Page143,153,154).
	Understand the curative and preventive health care measures.	Nice to know	С3	https://www.youtube.co m/watch?v=Ykfzt-
	Practice the principles of bioethics	Nice to know	С3	<u>olaYs</u>
	Apply the strategic use of artificial intelligence in healthcare	Nice to know	С3	USMLE Q Bank
	Read relevant research article	Nice to know	C3	Step 1 (Volume 1)
	Use HEC digital library	Nice to know	С3	2023-2024
	Identify the features of right and left lung.	Must know	C1	Clinical Oriented
	Discuss the bronchopulmonary segments and their clinical significance	Must know	С3	Anatomy by Keith L. Moore.8 TH
Lungs	• Discuss and differentiate between the root of lung and the hilum of lung.	Must know	C2	Edition. Clavicle (Chapter 3,
	Describe the nerve plexuses related to the lungs.	Must know	C2	Page143,153,154).
	Explain the blood supply of lungs	Must know	C2	https://www.youtube.co
	Discuss the applied and the related clinicals.	Must know	С3	m/watch?v=Ykfzt-
	Map the outline of lungs on simulated patient/model	Should know	P+A	<u>olaYs</u>
	Understand the curative and preventive health care measures.	Nice to know	С3	USMLE Q Bank
	Practice the principles of bioethics	Nice to know	С3	Step 1 (Volume 1)
	Apply the strategic use of artificial intelligence in healthcare	Nice to know	C3	2023-2024
	Read relevant research article	Nice to know	C3	
	Use HEC digital library	Nice to know	C3	
	Identify heart borders	Must know	P1	Clinical Oriented
	aortic knuckle,	Must know	P1	Anatomy by Keith
	costophrenic angles,	Must know	P1	L. Moore.8 TH
Surface	cardio phrenic angles,	Must know	P1	Edition. Clavicle
Marking/Cross	domes of diaphragm,	Must know	P1	(Chapter 3,
sectional Anatomy	• counting of ribs	Must know	P1	Page143,153,154).
	Oesophagus	Should know	P1	https://www.youtube.co m/watch?v=Ykfzt-
	Understand the curative and preventive health care measures.	Nice to know	С3	olaYs

Practice the principles of bioethics	Nice to know	СЗ
Apply the strategic use of artificial intelligence in healthcare	Nice to know	C3
Read relevant research article	Nice to know	С3
Use HEC digital library	Nice to know	СЗ

Histology Skill Laboratory (SKL)

Торіс	Learning Objectives At The End Of Practical Students Should Be Able To	importance	Learning Domain	Learning Resources
	Histology	Y		
	Identify microscopic structure of respiratory and nasal mucosa under microscope.	Should know	P1	DiFiore's Atlas Shistalage 11th
Olfactory /Nasal mucosa	Illustrate histological structures of olfactory / nasal mucosa	Should know	C1	of histology 11 th edition, chapter 8
	Write two points of identification	Should know	C1	
	Read relevant research article	Should know	C3	
•	Use HEC digital library	Should know		
	Identify types of cells and epithelium of epiglottis under microscope	Should know	P1	DiFiore's Atlas of histology 11 th
	Illustrate histological structures of epiglottis.	Should know	C1	edition, chapter 8
Epiglottis	Write two points of identification	Should know	C1	= curron, enapter o
	Relevant research articles	Should know	C3	
	Use HEC digital library	Should know	C3	
	Identify microscopic structures of trachea.	Should know	P1	DiFiore's Atlas
	Illustrate microscopic structure of trachea.	Should know	C1	of histology
Trachea	Write two points of identification	Should know	C1	11 th edition,
	Relevant research articles	Should know	С3	chapter 8
	Use HEC digital library	Should know	С3	• USMLE Q Bank Step 1 (Volume 1) 2023-2024
Lungs	 Identify microscopic structure of, bronchi, terminal bronchiole, respiratory bronchiole, alveoli, alveolar duct of the respiratory tract on the basis of Types of epithelial cells present Relative amount of gland, cartilage, smooth muscles and connective tissue fibers present in wall of the tubes. 	Should know	P1	DiFiore's Atlas of histology 11 th edition, chapter 8
	Illustrate microscopic structure of different layers of respiratory passages.	Should know	C1	
	Write points of identification of each part	Should know	C1	
	Relevant research articles	Should know	C3	
	Use HEC digital library	Should know	C3	

TOS for LMS Assessment of Respiration Module-I First Year MBBS, Batch -52 (Session 2024-25)

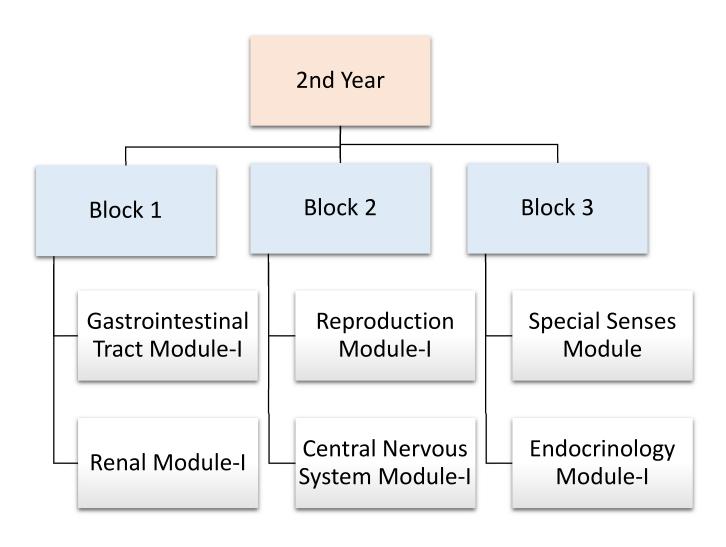
1st LMS Assessment for the first year MBBS for the Respiration Module will be held on -----(Monday) from 7:00pm to 7:30pm. Details of topics are mentioned in the table below:

S	Domain of	Topic	No.of	Cognitive Domain		
No.	Teaching Activity		MCQs	C1	C2	С3
1.	LGIS	Embryology Development of Nose & Paranasal Sinuses Development of Trachea & Larynx	05	1	2	2
		Histology Histology of Respiratory System I Histology of Respiratory System II	05	1	2	2
2.	SGD/Dissection	Nose & Paranasal Sinuses Larynx & Trachea Overview of Thoracic wall Skeleton Of Thoracic Wall(Ribs) Joints Of Thoracic Wall Thoracic Apertures	15	5	4	6
3.	Practical	Olfactory nasal mucosa/Epiglottis	05	1	2	2
4.		TOTAL		3	30	

Learning Resources:

- Embryology :- KLM Embryology Developing Human 11th Edition
- **Histology**:-Junqueira's Basic Histology 18th Edition
- Gross Anatomy:- KLM clinically oriented anatomy edition 10
- USMLE Q Bank Step 1 (Volume 1) 2023-2034 UWORLD Step 1 (Volume 3) 2023-2024

2nd Year Module Breakdown



Gastrointestinal Tract Module-I

Learning Objectives Large Group Interactive Session (LGIS)

Toule	I coming Ohiosian	CalcomaCour	Laguring	Dafaman
Topic	Learning Objectives At the end of lecture students should be able to	Calgary Gauge	Learning Domain	References
	Embryol	ogy		
	Describe the development of pharyngeal apparatus	Must know	C2	Embryology :- KLM Embryology Developing
	Enlist the sources for development of different parts of tongue.	Must know	C1	Human 11th Edition • USMLE Q Bank Step 1
	Explain the development of tongue along with its nerve supply.	Must know	C2	(Volume 1) 2023-2034
Tongue	Describe the congenital anomalies associated with tongue	Should know	C2	UWORLD Step 1 (Volume 3) 2023-2024
	Describe the developmental basis of physiological and biochemical mechanisms involved in perception and transmission of taste sensation	Should know	C2	
	Correlate with the clinical conditions	Should know	C3	
	Understand curative and preventive health care measures	Nice to know	C3	
	Practice the principles of bioethics	Nice to know	C3	
	Apply strategic use of A.I in health care	Nice to know	С3	
	Read relevant research articles	Nice to know	С3	_
	Use HEC digital library	Nice to know	С3	
	Enumerate different body cavities	Must know	C1	
	Describe division of embryonic body cavity	Must know	C2	• Embryology :- KLM
Body cavities I & II	Discuss formation and significance of pleuropericardial membranes and pleuroperitoneal membranes	Must know	C2	Embryology Developing Human 11 th Edition • USMLE Q Bank Step 1 (Volume 1) 2023-2034
	Describe muscular ingrowth from Lateral body walls	Must know	C2	• UWORLD Step 1
	Correlate with the clinical conditions	Should know	С3	(Volume 3) 2023-2024
	Understand curative and preventive health care measures	Nice to know	С3	
	Practice the principles of bioethics	Nice to know	C3	
	Apply strategic use of A.I in health care measures.	Nice to know	C3	
	Read relevant research articles.	Nice to know	С3	
	Use HEC digital library	Nice to know	С3	
	Explain different stages of development of salivary glands	Must know	C2	• Embryology :- KLM
Salivary glands	Enlist the source for development of different type of salivary gland	Must know	C1	Embryology Developing Human 11 th Edition
	Explain development of its nerve supply	Must know	C2	• USMLE Q Bank Step 1
	Describe the congenital anomalies associated with salivary glands	Should know	C2	(Volume 1) 2023-2034 UWORLD Step 1 (Volume 3) 2023-2024
	Correlate with the clinical conditions	Should know	СЗ	(. 5.5 5) 2025 2021

	Understand curative and preventive health care measures	Nice to know	С3	Embryology :- KLM Embryology Developing
	Practice the principles of bioethics	Nice to know	С3	Human 11 th Edition • USMLE Q Bank Step 1
	Apply strategic use of A.I in health care	Nice to know	СЗ	(Volume 1) 2023-2034
	Read relevant research articles	Nice to know	С3	
	Use HEC digital library	Nice to know	С3	
	Discuss the formation of tracheoesophageal septum and its importance	Must know	C2	Embryology :- KLM Embryology Developing
	Describe salient features of esophageal development	Must know	C2	 Human 11th Edition USMLE Q Bank Step 1
	Describe congenital anomalies of esophagus	Must know	C2	(Volume 1) 2023-2034
Esophagus	Describe the developmental basis for the physiological and biochemical mechanisms involved in the process of swallowing	Must know	C2	WORLD Step 1 (Volume 3) 2023-2024
	Correlate with the clinical conditions	Should know	СЗ	
	Understand curative and preventive health care measures	Nice to know	С3	
	Practice the principles of bioethics	Nice to know	C3	
	Apply strategic use of A.I in health care	Nice to know	C3	
	Read relevant research articles	Nice to know	С3	
	Use of HEC digital library	Nice to know	С3	
	Explain the development of stomach	Must know	C2	• Embryology :- KLM
Stomach	Discuss rotations and positional shifts of stomach & their effect on nerve supply and peritoneal attachments	Must know	C2	Embryology Developing Human 11 th Edition USMLE Q Bank Step 1
	Explain formation of omental bursa.	Must know	C2	(Volume 1) 2023-2034
	Describe congenital anomalies of stomach	Must know	C2	UWORLD Step 1
	Describe the developmental basis for the physiological and biochemical mechanisms involved in the process of digestion in the stomach	Must know	C2	(Volume 3) 2023-2024
	Discuss pernicious anemia	Should know		
	Correlate with the clinical conditions	Should know	C3	
	Understand curative and preventive health care measures	Nice to know	СЗ	
	Practice the principles of bioethics	Nice to know	С3	
	Apply strategic use of A.I in health care	Nice to know	СЗ	
	Read relevant research articles	Nice to know	СЗ	
	Use of HEC digital library	Nice to know	С3	
<u> </u>	Describe formation of hepatic diverticulum	Must know	C2	• Embryology :- KLM
.	Describe histogenesis of liver during intrauterine life	Must know	C2	Embryology Developing Human 11 th Edition
Liver	Describe formation of various ligaments of liver.	Must know	C2	• USMLE Q Bank Step 1
	Discuss congenital abnormalities of liver	Should know	C3	(Volume 1) 2023-2034

	- Dil4hdl	Should know	C2	1 -
	Describe the developmental basis for the physiological and biochemical mechanisms involved	Should know	C2	IJWODI D Stop 1
	in the process of detoxification in the liver			UWORLD Step 1 (Volume 3) 2023-2024
	Correlate with the clinical conditions	Should know	C3	(volume 3) 2023-2024
	Understand curative and preventive health	Nice to know	C3	
	care measures	11100 00 11110 11		
	Practice the principles of bioethics	Nice to know	C3	
	Apply strategic use of A.I in health care	Nice to know	С3	
	Read relevant research articles	Nice to know	С3	
	Use of HEC digital library	Nice to know	С3	
	Discuss development of Gall bladder	Must know	C2	Embryology :- KLM
	Describe /congenital anomalies of gall bladder	Must know	C2	Embryology Developing
Gall bladder,	Discuss development and congenital anomalies of pancreas	Must know	C2	 Human 11th Edition USMLE Q Bank Step 1
pancreas and Biliary apparatus	Describe development of extrahepatic biliary apparatus and its parts with abnormalities	Must know	C2	(Volume 1) 2023-2034 • UWORLD Step 1
apparacus	Describe the developmental basis for the physiological and biochemical mechanisms involved in the process of production of bile and pancreatic secretions	Must know	C2	(Volume 3) 2023-2024
	Correlate with the clinical conditions	Should know	C3	
	Understand curative and preventive health care measures	Nice to know	С3	
	Practice the principles of bioethics	Nice to know	С3	_
	Apply strategic use of A.I in health care	Nice to know	C3	
	Read relevant research articles	Nice to know	C3	
	Use of HEC digital library	Nice to know	C3	
	Describe development of mid gut, midgut loop and rotation of midgut loop.	Must know	C2	• Embryology :- KLM Embryology Developing
	Explain physiological umbilical hernia and return of mid gut to abdomen.	Must know	C2	Human 11th Edition • USMLE Q Bank Step 1
Small intestine	Describe fixation of intestines and transformations in peritoneal dispositions after mid gut loop return.	Must know	C2	(Volume 1) 2023-2034 • UWORLD Step 1
	Describe congenital anomalies and clinical correlation of mid gut development.	Must know	C2	(Volume 3) 2023-2024
	Correlate with the clinical conditions	Should know	C3	
	Understand curative and preventive health	Nice to know	С3	
	care measures.	Nice to know	C3	\dashv
	Practice the principles of bioethics. A distributed			_
	Apply strategic use of A.I in health care	Nice to know	C3	4
	Read relevant research articles	Nice to know	C3 C3	_
	Use HEC digital library	Nice to know		
Lamas inte di	Enlist parts of large intestine.	Must know	C1	• Embryology :- KLM
Large intestine	Describe partitioning of cloaca and cloacal membrane.	Must know	C2	Embryology Developing Human 11 th Edition
		3.6 . 1	CO	• USMLE Q Bank Step 1
	Describe development of anal canal.	Must know	C2	
	Describe development of anal canal. Describe congenital anomalies of large intestine.	Must know Must know	C3	(Volume 1) 2023-2034

	Understand curative and preventive health care measures.	Nice to know	С3	• UWORLD Step 1
	Practice the principles of bioethics	Nice to know	С3	(Volume 3) 2023-2024
	Apply strategic use of A.I in health care	Nice to know	C3	
	Read relevant research articles	Nice to know	C3	
	Use HEC digital library	Nice to know	С3	
	Histolo	gy		
	Discuss surfaces of tongue with their	Must know	C2	Histology :-Junqueira's
Tongue	histological features			Basic Histology 18th
	Describe different papillae of tongue with their location & features	Must know	C2	Edition USMLE Q Bank Step 1 (Volume 1) 2023-
	Explain histological features of taste buds	Must know	C2	2034
	Discuss leukoplakia and oral thrush	Should know	C2	• UWORLD Step 1
	Correlate with the clinical conditions	Should know	С3	(Volume 3) 2023-2024
	Understand curative and preventive health care measures.	Nice to know	С3	
	Practice the principles of bioethics	Nice to know	С3	
	Apply strategic use of A.I in health care	Nice to know	С3	
	Read relevant research articles	Nice to know	С3	
	Use HEC digital library	Nice to know	СЗ	
	Enlist major salivary glands	Must know	C1	Histology :-Junqueira's
	Explain histological structure of salivary glands	Must know	C2	Basic Histology 18th Edition USMLE Q Bank
	Discuss different cells forming parenchyma of salivary glands	Must know	C2	Step 1 (Volume 1) 2023- 2034
	Discuss histology of duct system	Must know	C2	UWORLD Step 1
Salivary glands	Differentiate between major salivary glands on histological basis	Must know	C2	(Volume 3) 2023-2024
	Discuss effects of viral infections on salivary glands	Should know	C3	
	Correlate with the clinical conditions	Should know	C3	
	Understand curative and preventive health care measures.	Nice to know	C3	
	Practice the principles of bioethics	Nice to know	C3	
	Apply strategic use of A.I in health care	Nice to know	C3	
	Read relevant research articles	Nice to know	C3	
	Use HEC digital library	Nice to know	C3	
	Describe the developmental basis of physiological and biochemical mechanisms involved in perception and transmission of taste sensation	Must know	C2	Histology:-Junqueira's Basic Histology 18th Edition USMLE Q Bank
General	Describe the histological characteristics of each layer with functional significance	Must know	C2	Step 1 (Volume 1) 2023- 2034
organization of	Discuss associated clinical (megacolon, chagas disease)	Should know	C3 C3	• UWORLD Step 1
GIT	Correlate with the clinical conditions	Should know	C3	(Volume 3) 2023-2024

	Understand curative and preventive health care measures.	Nice to know	С3	
	Practice the principles of bioethics	Nice to know	С3	
	Apply strategic use of A.I in health care	Nice to know	C3	
	Read relevant research articles	Nice to know	C3	
	Use HEC digital library	Nice to know	C3	
	Describe the histological layers of esophagus.	Must know	C2	Histology:-Junqueira's Basic Histology 18th
	Compare between various portions of esophagus histologically.	Must know	C2	Edition USMLE Q Bank Step 1 (Volume 1) 2023-
Esophagus	Discuss GERD	Should know	C2	2034
	Correlate with the clinical conditions	Should know	СЗ	• UWORLD Step 1 (Volume 3) 2023-2024
	Understand curative and preventive health care measures.	Nice to know	C3	
	Practice the principles of bioethics	Nice to know	С3	
	Apply strategic use of A.I in health care	Nice to know	C3	
	Read relevant research articles	Nice to know	С3	
	Use HEC digital library	Nice to know	C3	
	Describe the histological layers of different parts of stomach	Must know	C2	Histology:-Junqueira's Basic Histology 18th
Stomach	Describe histological differences of different parts of the gastric glands	Must know	C2	Edition USMLE Q Bank Step 1 (Volume 1) 2023-
	Describe the structure and function of different cells of gastric glands	Must know	C2	2034 • UWORLD Step 1
	Explain clinical conditions associated with stomach histologically	Must know	C2	(Volume 3) 2023-2024
	Discuss pernicious anemia	Should know	C2	
	Correlate with the clinical conditions	Should know	С3	
	Understand curative and preventive health care measures.	Nice to know	С3	
	Practice the principles of bioethics	Nice to know	C3	
	Apply strategic use of A.I in health care	Nice to know	C3	
	Read relevant research articles	Nice to know	C3	
	Use HEC digital library	Nice to know	C3	
	Discuss in detail the histological organization of liver	Must know	C2	Histology:-Junqueira's Basic Histology 18th
	Explain the structure of liver lobule, portal triads& hepatic acinus and its functional importance	Must know	C2	Edition USMLE Q Bank Step 1 (Volume 1) 2023-
	Discuss histological features of hepatocytes.	Must know	C2	2034
Liver	Explain Hepatic cords, central vein, portal triad, hepatic venules, hepatic arterioles, bile duct & liver sinusoids.	Must know	C2	UWORLD Step 1 (Volume 3) 2023-2024
	Discuss the blood supply of the liver.	Must know	C2	(voidine 3) 2023-2024
	Explain different cells of the liver tissue	Must know	C2	
	Describe clinical aspects of liver on histological grounds	Must know	С3	
	Discuss cirrhosis, fatty liver	Should know	C2	
	Discuss jaundice	Should know	C2	
	Correlate with the clinical conditions	Should know	C3	

	Understand curative and preventive health	Nice to know	СЗ	
	care measures.			
	Practice the principles of bioethics	Nice to know	C3	
	Apply strategic use of A.I in health care	Nice to know	C3	
	Read relevant research articles	Nice to know	C3	
	Use HEC digital library	Nice to know	C3	
	Differentiate between exocrine and endocrine pancreas.	Must know	C2	Histology :-Junqueira's Basic Histology 18th
	Discuss the cellular structure and function of exocrine pancreatic acinus and ducts.	Must know	C2	Edition USMLE Q Bank Step 1 (Volume 1) 2023-
Pancreas &	Discuss acute & chronic pancreatitis and pancreatic cancer	Must know	C2	2034
Gall Bladder	Explain the histological features of the gallbladder.	Must know	C2	UWORLD Step 1 (Volume 3) 2023-2024
	Discuss cholelithiasis	Should know	C2	
	Correlate with the clinical conditions	Should know	C2	
	Understand curative and preventive health care measures.	Nice to know	C3	
	Practice the principles of bioethics	Nice to know	C2	
	Apply strategic use of A.I in health care	Nice to know	C2	
	Read relevant research articles	Nice to know	C3	
	Use HEC digital library	Nice to know	С3	
	Differentiate the histological features of duodenum, jejunum and ileum	Must know	C2	Histology :-Junqueira's Basic Histology 18th
Small Intestine	Discuss the location and function of villi, crypts of Lieberkühn and microvilli in different parts of small intestine	Must know	C2	Edition USMLE Q Bank Step 1 (Volume 1) 2023- 2034
	Discuss different cells lining the epithelium of small intestine	Must know	C2	• UWORLD Step 1
	Discuss histological aspects of celiac disease and crohn disease	Must know	C2	(Volume 3) 2023-2024
	Correlate with the clinical conditions	Should know	C2	
	Understand curative and preventive health care measures.	Nice to know	С3	
	Practice the principles of bioethics	Nice to know	C2	
	Apply strategic use of A.I in health care	Nice to know	C2	
	Read relevant research articles	Nice to know	C3	
	Use HEC digital library	Nice to know	С3	
	Describe histological features of parts of large intestine.	Must know	C2	Histology :-Junqueira's Basic Histology 18th
Large Intestine	Discuss cells lining the epithelium	Must know	C2	Edition USMLE Q Bank
I	Explain concept of tenia coli.	Must know	C3	Step 1 (Volume 1) 2023-
	Differentiate histological structure of the large intestine from the small intestine.	Must know	C2	2034
	Correlate with the clinical conditions	Should know	C2	UWORLD Step 1
	Understand curative and preventive health care measures.	Nice to know	С3	(Volume 3) 2023-2024
	Practice the principles of bioethics	Nice to know	C2	
	Apply strategic use of A.I in health care	Nice to know	C2	
	Read relevant research articles	Nice to know	C3	
	Use HEC digital library	Nice to know	С3	
	Describe histological features of parts of large intestine.	Must know	C2	Histology :-Junqueira's Basic Histology 18th

Large Intestine II	Correlate with the clinical conditions	Should know	C2	Edition USMLE Q Bank
	Understand curative and preventive health care measures.	Nice to know	C3	Step 1 (Volume 1) 2023- 2034
	Practice the principles of bioethics	Nice to know	С3	• UWORLD Step 1
	Apply strategic use of A.I in health care	Nice to know	C3	(Volume 3) 2023-2024
	Read relevant research articles	Nice to know	С3	•
	Use HEC digital library	Nice to know	C3	

Small Group Discussion (SGD)

Topic	Learning Objectives	Importance	Learning	References
T 1: 1	At the end of lecture students should be able to	36 41	Domain	
Topographical organization of	Enlist components of gastrointestinal tract	Must know	C2	Gross Anatomy:- VI M alimically ariented.
Gastrointestinal	Mark the planes dividing the abdomen into nine quadrants	Must know	C2	KLM clinically oriented anatomy edition 10
tract	 Enumerate the parts of GIT lying in the various 	Must know	C1	USMLE Q Bank Step
	quadrants	Widst Kilow		1 (Volume 1) 2023-
	Correlate with the clinical conditions	Should know	СЗ	2034
	Understand curative and preventive	Nice to Know	C2	UWORLD Step 1
	health care measures.			(Volume 3) 2023-2024
	Practice the principles of bioethics	Nice to Know	C3	7
	Apply strategic use of A.I in health care	Nice to Know	С3	7
	Read relevant research articles	Nice to Know	С3	
	Use HEC digital library	Nice to Know	С3	
Oral Cavity,	Define the boundaries of oral cavity	Must know	C2	Gross Anatomy :-
tongue and	Tabulate the Extrinsic and Intrinsic muscles of	Must know	C2	KLM clinically oriented
salivary glands,	the tongue,			anatomy edition 10
	anatomical location and clinical importance of			• USMLE Q Bank Step
	tongue	M	C2	1 (Volume 1) 2023- 2034
	Brief Introduction of salivary glands with their	Must know	C2	UWORLD Step 1
	anatomical location			(Volume 3) 2023-2024
	Correlate with the clinical conditions	Should know	P	
	Understand curative and preventive health care measures.	Nice to Know	P	
	Practice the principles of bioethics	Nice to Know	C2	-
	Apply strategic use of A.I in health care	Nice to Know	C3	-
	Read relevant research articles	Nice to Know	C3	-
	Use HEC digital library	Nice to Know	C3	-
Anterolateral	Explain the layers of abdominal wall.	Must know	C2	Gross Anatomy :-
abdominal wall	Explain the fascia and muscles of abdominal	Must know	C2	KLM clinically oriented
	wall.			anatomy edition 10
	Describe nerve supply of anterior and lateral	Must know	C2	USMLE Q Bank Step
	abdominal wall.			1 (Volume 1) 2023-
	Explain the segmental sympathetic supplies	Must know	P	2034
	Correlate the Anatomical knowledge with	Must know	P	UWORLD Step 1 (Volume 3) 2023-2024
	Abdominal Hernias	G1 111	G.	(Volume 3) 2023-2024
	Correlate with the clinical conditions	Should know	C2	
	Understand curative and preventive	Nice to Know	C3	
	health care measures. • Practice the principles of bioethics	Nice to Know	C3	-
	Apply strategic use of A.I in health care	Nice to Know	C3	\dashv
	Read relevant research articles	Nice to Know	C3	-
	Use HEC digital library	Nice to Know	C3	+
Rectus sheath,	Describe Formation of rectus sheath	Must know	C2	Gross Anatomy :-
Terror bileatily	Enlist contents of rectus sheath	Must know	C2	KLM clinically oriented
	Correlate with the clinical conditions	Should know	C2	anatomy edition 10
	Understand curative and preventive	Nice to Know	C3	USMLE Q Bank Step
	health care measures.			1 (Volume 1) 2023-
	Practice the principles of bioethics	Nice to Know	С3	2034
	Apply strategic use of A.I in health care	Nice to Know	С3	UWORLD Step 1
	Read relevant research articles	Nice to Know	С3	(Volume 3) 2023-2024

	Use HEC digital library	Nice to Know	С3		
Inguinal Region	Describe Walls of Inguinal Canal	Must know	C2	•	Gross Anatomy :-
& Inguinal	Explain Deep & Superficial Inguinal Ring	Must know	C2		KLM clinically oriented
Hernias	Enumerate Structures passing through the inguinal canal	Must know	C2	•	anatomy edition 10 USMLE Q Bank Step
	Enlist Coverings of spermatic cord	Must know	C2		1 (Volume 1) 2023-
	Explain Mechanics of the inguinal Canal	Must know	C2		2034
	Describe boundaries of Hassalbach's triangle	Must know	C2		UWORLD Step 1 (Volume 3) 2023-2024
	Define hernia	Must know	C2		(Volume 3) 2023-2024
	Differentiate indirect from direct inguinal hernia	Must know	C2		
	Map outline of inguinal canal on simulated patient /model	Must know	C2		
	Correlate with the clinical conditions	Should know	С3	\dashv	
	Understand curative and preventive health care measures.	Nice to Know	С3		
	Practice the principles of bioethics	Nice to Know	C2		
	Apply strategic use of A.I in health care	Nice to Know	C3	\dashv	
	Read relevant research articles	Nice to Know	C3	\dashv	
	Use HEC digital library	Nice to Know	C3	\dashv	
Testes, scrotum	Define Anatomy of Testes and Scrotum	Must know	C2	•	Gross Anatomy:- KLM clinically oriented anatomy edition 10 USMLE Q Bank Step 1 (Volume 1) 2023- 2034 UWORLD Step 1 (Volume 3) 2023-2024
,	Differentiate between Protective Coverings of Testes & scrotum	Must know	C2		
	Enumerate Nerve & blood supply of these Structures	Must know	C2	•	
	Discuss the parts of epididymis	Must know	C2		
	Discuss Spermatocoele, Varicocoele,	Must know	C2		
	Hematocoele, hydrocoele, Testicular torsion	Must know	C2		
	Correlate with the clinical conditions	Must know	P		
	Understand curative and preventive health care measures.	Must know	P		
	Practice the principles of bioethics	Should know	C2		
	Apply strategic use of A.I in health care	Nice to Know	C3		
	Read relevant research articles	Nice to Know	C3		
	Use HEC digital library	Nice to Know	C3		
Peritoneum &	Define peritoneum	Must know	C2	•	Gross Anatomy :-
Peritoneal Cavity	Explain the different folds of peritoneum.	Must know	C2		KLM clinically oriented
	Describe greater and lesser sacs	Must know	C2		anatomy edition 10
	Discuss vertical tracings of peritoneum	Must know	C2	┥•	USMLE Q Bank Step
	Correlate with the clinical conditions	Must know	P		1 (Volume 1) 2023-
	Understand curative and preventive health care measures.	Must know	P		2034 UWORLD Step 1 (Volume 3) 2023-2024
	Practice the principles of bioethics	Should know	C2		(v Orunic 3) 2023-2024
	Apply strategic use of A.I in health care	Nice to Know	C3		
	Read relevant research articles	Nice to Know	С3		
Subdivisions of Peritoneal Cavity	Describe arrangement of peritoneum in transverse & Longitudinal section of abdomen	Must know	C2	•	Gross Anatomy:- KLM clinically oriented
	Describe arrangement of peritoneum in transverse section of male pelvis	Must know	C2		anatomy edition 10 USMLE Q Bank Step
	Explain arrangement of peritoneum in transverse section of female pelvis	Must know	C2		1 (Volume 1) 2023- 2034

	Explain the layers, folds, recesses and	Must know	C2	UWORLD Step 1
	compartments of peritoneum with their clinical importance			(Volume 3) 2023-2024
	Describe peritonitis	Must know	P	
	Enumerate the signs and symptoms of peritonitis	Must know	P	
	Treat peritonitis by antibiotics and peritoneal dialysis	Should know	C2	
	Correlate with the clinical conditions	Nice to Know	C3	
	Understand curative and preventive health care measures.	Nice to Know	С3	
	Practice the principles of bioethics	Nice to Know	C3	
	Apply strategic use of A.I in health care	Nice to Know	C3	
	Read relevant research articles	Nice to Know	С3	
Esophagus	Discuss gross features of abdominal part of esophagus	Must know	C2	• Gross Anatomy :- KLM clinically oriented
	Enumerate their peritoneal & visceral relations.	Must know	C2	anatomy edition 10
	Explain blood supply, lymphatic drainage & nerve supply of esophagus	Must know	C2	• USMLE Q Bank Step 1 (Volume 1) 2023-
	Discuss Esophageal varices	Must know	C2	2034
	Correlate with the clinical conditions	Must know	P	UWORLD Step 1
	Understand curative and preventive	Must know	P	(Volume 3) 2023-2024
	health care measures.			
	Practice the principles of bioethics			
	Apply strategic use of A.I in health care	Nice to Know	С3	
	Read relevant research articles	Nice to Know	С3	
Stomach	Explain gross features of stomach.	Must know	C2	Gross Anatomy :-
	Discuss blood supply, lymphatic drainage & nerve supply of stomach	Must know	C2	KLM clinically oriented anatomy edition 10
	Explain peritoneal & visceral relations of stomach	Must know	C2	• USMLE Q Bank Step 1 (Volume 1) 2023-
	Discuss greater and lesser omentum	Must know	C2	2034
	Describe formation and boundaries of epiploic foramen	Must know	P	UWORLD Step 1 (Volume 3) 2023-2024
	Map outline of stomach on simulated patient /model	Must know	P	
	Correlate with the clinical conditions	Should know	C2	
	Understand curative and preventive health care measures.	Nice to Know	C3	
	Practice the principles of bioethics	Nice to Know	C3	
	Apply strategic use of A.I in health care	Nice to Know	C3	-
	Read relevant research articles	Nice to Know	C3	1
Small Intestine (Duodenum)	Describe the different parts of duodenum with their anatomical differences	Must know	C2	Gross Anatomy :- KLM clinically oriented
, , ,	Enumerate the relations of different parts of duodenum	Must know	C2	anatomy edition 10 • USMLE Q Bank Step
	Discuss its clinical importance	Must know	C2	1 (Volume 1) 2023-
	Map outline of duodenum on simulated patient /model	Must know	C2	2034 UWORLD Step 1
	Correlate with the clinical conditions	Should know	C2	(Volume 3) 2023-2024
	Understand curative and preventive health care measures.	Nice to Know	C3	1
	Practice the principles of bioethics	Nice to Know	С3	⊣

	Apply strategic use of A.I in health care	Nice to Know	C3	
	Read relevant research articles	Nice to Know	С3	
Small Intestine (Jejunum and	Describe jejunum and ileum with their anatomical features	Must know	C2	Gross Anatomy :- KLM clinically oriented
Ileum)	Discuss mesentery and its attachment	Must know	C2	anatomy edition 10
	Discuss its clinical importance	Must know	C2	USMLE Q Bank Step
	Correlate with the clinical conditions	Must know	C2	1 (Volume 1) 2023-
	Understand curative and preventive	Should know	C2	2034
	health care measures.			UWORLD Step 1 (Volume 3) 2023-2024
	Practice the principles of bioethics	Nice to Know	C3	(Volume 3) 2023-2024
	Apply strategic use of A.I in health care	Nice to Know	C3	
	Read relevant research articles	Nice to Know	C3	
Large Intestine &	Enlist various parts of large intestine	Must know	C2	Gross Anatomy :-
Appendix	Demonstrate gross anatomical features of	Must know	C2	KLM clinically oriented
	different parts of large intestine			anatomy edition 10
	Enlist intra and retroperitoneal parts of large intestine	Must know	C2	• USMLE Q Bank Step 1 (Volume 1) 2023-
	Discuss gross features of caecum	Must know	C2	2034
	Describe gross anatomy of appendix	Must know	C2	UWORLD Step 1 (Volume 3) 2023-2024
	Enlist different anatomical positions of vermiform appendix.	Must know	C2	(volume 3) 2023-2024
	Mark McBurney's point	Should know	C2	
	Demonstrate McBurney's incision	Nice to Know	С3	
	Discuss common features, differential diagnosis of acute appendicitis and appendicectomy	Must know	C2	
	Map outline of Transverse and descending colon on simulated patient /model	Must know	C2	
	Correlate with the clinical conditions	Should know	C2	
	Understand curative and preventive health care measures.	Nice to Know	C2	
	Practice the principles of bioethics	Nice to Know	С3	
	Apply strategic use of A.I in health care	Nice to Know	С3	
	Read relevant research articles	Nice to Know	С3	
Liver, Portal	Describe the anatomical structure of liver.	Must know	C2	Gross Anatomy :-
hypertension, Portosystemic	Describe the lobes, surfaces and segments of liver	Must know	C2	KLM clinically oriented anatomy edition 10
Anastomosis	Describe peritoneal reflections, ligaments and bare area of liver.	Must know	C2	• USMLE Q Bank Step 1 (Volume 1) 2023-
	Enumerate visceral relations of liver.	Must know	C2	2034
	Enlist the structures in porta hepatis.	Must know	C2	UWORLD Step 1
	Discuss Sub hepatic abscess & Live Biopsy	Must know	C2	(Volume 3) 2023-2024
	Discuss formation, course and parts of portal vein	Must know	C2	
	Enumerate relations and tributaries of portal vein	Must know	С3	
	Define portal hypertension	Must know	C2	\neg
	Describe sites of the portocaval anastomosis and their clinical significance	Must know	C2	
	Explain role of portocaval shunts	Must know	C2	
	Map outline of liver on simulated patient /model	Should know	C2	_
	Correlate with the clinical conditions Understand asserting and properties.	Nice to Know	C2	-
	Understand curative and preventive health care measures.	INICE IO KIIOW	C2	

	Practice the principles of bioethics	Nice to Know	C3	
	Apply strategic use of A.I in health care	Nice to Know	C3	_
	Read relevant research articles	Nice to Know	C3	_
Gallbladder and	Describe location & size of gall bladder	Must know	C2	Gross Anatomy :-
Biliary apparatus	Enumerate relations of gallbladder.	Must know	C2	KLM clinically oriented
	Describe clinical conditions related to gallbladder	Must know	C2	anatomy edition 10USMLE Q Bank Step
	Enlist different components of Extra-hepatic biliary System	Must know	C2	1 (Volume 1) 2023- 2034
	Discuss the right & left hepatic ducts, common hepatic duct, cystic ducts, bile duct	Must know	C2	UWORLD Step 1 (Volume 3) 2023-2024
	Explain differences between Intra & Extra Hepatic Biliary Systems.	Must know	C2	
	Discuss clinical related with biliary apparatus	Should know	C2	_
	Discuss accessory hepatic ducts Map outline of gallbladder & Bile duct on simulated patient /model	Nice to Know	С3	
	Correlate with the clinical conditions	Should know	C2	7
	Understand curative and preventive health care measures.	Nice to Know	C2	
	Practice the principles of bioethics	Nice to Know	C3	7
	Apply strategic use of A.I in health care	Nice to Know	С3	7
	Read relevant research articles	Nice to Know	C3	7
Spleen	Discuss anatomical location and features of spleen with its blood supply, and lymphatic drainage	Must know	C2	Gross Anatomy :- KLM clinically oriented anatomy edition 10
	Explain Rupture of spleen & its effects	Must know	C2	USMLE Q Bank Step
	Map outline of spleen on simulated patient /model	Must know	C2	1 (Volume 1) 2023- 2034 UWORLD Step 1
	Correlate with the clinical conditions	Should know	C2	(Volume 3) 2023-2024
	Understand curative and preventive health care measures.	Nice to Know	C2	
	Practice the principles of bioethics	Nice to Know	C2	7
	Apply strategic use of A.I in health care	Nice to Know	C2	7
	Read relevant research articles	Nice to Know	C3	
Pancreas	Recall location, shape, dimensions and extent of pancreas	Must know	C2	• Gross Anatomy :- KLM clinically oriented
	Discuss parts, ducts and relations of pancreas	Must know	C2	anatomy edition 10
	Describe arterial supply of pancreas	Must know	C2	USMLE Q Bank Step
	Explain applied aspects of pancreas	Must know	C2	1 (Volume 1) 2023-
	Map outline of pancreas on simulated patient/ model	Must know	C2	2034 UWORLD Step 1 (Volume 3) 2023-2024
	Map outline of spleen on simulated patient /model	Must know	C2	(. s.amo 3) 2023 2024
	Correlate with the clinical conditions	Should know	C2	7
	Understand curative and preventive health care measures.	Nice to Know	C2	
	Practice the principles of bioethics	Nice to Know	C2	7
	Apply strategic use of A.I in health care	Nice to Know	C2	7
Vasculature of GIT	Describe the position and the vertebral levels of aorta in the abdomen.	Must know	C2	

	Enlist the main branches of the aorta and its territories.	Must know	C2	• Gross Anatomy :- KLM clinically oriented
	Explain the applied anatomy of the aorta	Must know	C2	anatomy edition 10
	Explain origin, course, branches and distribution of celiac trunk	Must know	C2	• USMLE Q Bank Step 1 (Volume 1) 2023-
	Map outline of abdominal aorta, coeliac trunk, superior &inferior mesenteric artery on simulated patient/ model	Must know	C2	2034 UWORLD Step 1 (Volume 3) 2023-2024
	Correlate with the clinical conditions	Should know	C2	
	Understand curative and preventive health care measures.	Nice to Know	C2	
	Practice the principles of bioethics	Nice to Know	C2	
	Apply strategic use of A.I in health care	Nice to Know	C2	
Nerve supply and Lymphatic	Discus enteric nervous system with formation of plexuses and its parasympathetic role	Must know	C2	• Gross Anatomy :- KLM clinically oriented
drainage of GIT	Enlist the types of lymph nodes draining the abdomen	Must know	C2	anatomy edition 10USMLE Q Bank Step
	Describe lymphatic drainage of GIT with special reference to lymphatic trunks, cisterna chyli & the thoracic duct	Must know	C2	1 (Volume 1) 2023- 2034 UWORLD Step 1
	Correlate with the clinical conditions	Should know	C2	(Volume 3) 2023-2024
	Understand curative and preventive health care measures.	Nice to Know	C2	
	Practice the principles of bioethics	Nice to Know	C2	
	Apply strategic use of A.I in health care	Nice to Know	C2	
Cross Sectional Anatomy	Identify different viscera located at different levels of vertebral column; T10, T11, T12, L1, L2	Must know	C2	Gross Anatomy:- KLM clinically oriented anatomy edition 10
	Correlate with the clinical conditions	Should know	C2	USMLE Q Bank Step
	Understand curative and preventive health care measures.	Nice to Know	C2	1 (Volume 1) 2023- 2034
	Practice the principles of bioethics	Nice to Know	C2	UWORLD Step 1
	Apply strategic use of A.I in health care	Nice to Know	C2	(Volume 3) 2023-2024
Rectum	Discuss the location and extent of rectum	Must know	C2	Gross Anatomy :-
	Describe the internal and external features of rectum	Must know	C2	KLM clinically oriented anatomy edition 10
	Discuss peritoneal reflections rectouterine, rectovesical fossae and their clinical significance	Must know	C2	• USMLE Q Bank Step 1 (Volume 1) 2023- 2034
	Enumerate relations of rectum	Must know	C2	UWORLD Step 1
	Discuss blood supply, nerve supply, venous and lymphatic drainage	Must know	C2	(Volume 3) 2023-2024
	Describe the basis and features of rectal prolapsed	Must know	C2	
	Correlate with the clinical conditions	Should know	C2	
	Understand curative and preventive health care measures.	Nice to Know	C2	
	Practice the principles of bioethics	Nice to Know	C2	
	Apply strategic use of A.I in health care	Nice to Know	C2	
Anal canal	Discuss location and extent of anal canal	Must know	C2	Gross Anatomy :-
	Describe external and internal features of Anal Canal	Must know	C2	KLM clinically oriented anatomy edition 10
	Discuss features of anal sphincters	Must know	C2	

	 Tabulate relations of the anal canal with the surrounding structures Describe the Blood supply, venous and 	Must know Must know	C2 C2	• USMLE Q Bank Step 1 (Volume 1) 2023- 2034
	 lymphatic drainage & innervations of anal canal Discuss anal continence Differentiate between internal and external hemorrhoids 	Must know Must know	C2 C2	UWORLD Step 1 (Volume 3) 2023-2024
	Correlate with the clinical conditions Understand curative and preventive health care measures.	Should know Nice to Know	C2 C2	
	 Practice the principles of bioethics Apply strategic use of A.I in health care 	Nice to Know Nice to Know	C2 C2	
Radiological Anatomy	 Identify structures on a normal X-ray abdomen Appreciate Air fluid shadows. Mark anatomical landmarks. 	Should know Should know Should know	C2 C2 C2	• Gross Anatomy :- KLM clinically oriented anatomy edition 10
	Correlate with the clinical conditions Understand curative and preventive health care measures.	Should know Nice to Know	C2 C2	• USMLE Q Bank Step 1 (Volume 1) 2023- 2034
	 Practice the principles of bioethics Apply strategic use of A.I in health care Read relevant research articles 	Nice to Know Nice to Know Nice to Know	C2 C2 C3	UWORLD Step 1 (Volume 3) 2023-2024

Practical/Skill Lab (SKL)

Topic	At the end of practical students	Calgary	Learning	Learning o
	should be able to	Gauge	Domain	
	• Focus & Identify slides of tongue	Must know	P	• Histology :-
Tongue &	& glands under microscope			Junqueira's Basic
salivary glands	• Illustrate histological structure of	Should know	C2	Histology 18th
	tongue & salivary glands			Edition USMLE Q
	Write two points of identification	Must know	C1	Bank Step 1
	• Focus & Identify slide of	Must know	P	(Volume 1) 2023- 2034
Esophagus	Esophagus under microscope			2034
	• Illustrate histological structure of Esophagus	Should know	C2	
	• Write two points of identification	Must know	C1	
	Focus & Identify slide of Stomach under microscope	Must know	Р	
Stomach	Illustrate histological structure of Stomach	Should know	C2	
	Write two points of identification	Must know	C1	
	Differentiate mucosa of cardiac, fundus, body and pyloric end of stomach	Should know	C2	
Liver, Gall bladder &	Focus & Identify slides of Liver, Gall bladder &Pancreas under microscope	Must know	P	
Pancreas	Illustrate histological structures of Liver, Gallbladder & Pancreas	Should know	C2	
	Write two points of identification	Must know	C1	
Small Intestine	Focus & Identify slide of small intestine under microscope	Must know	P	
	• Illustrate histological structure of small intestine	Should know	C2	
	Write two points of identification	Must know	C1	
Large Intestine	Focus & Identify slide of Large Intestine under microscope	Must know	Р	
	Illustrate histological structure of large intestine	Should know	C2	
	Write two points of identification	Must know	C1	

TOS for LMS Assessment of Gastrointestinal Tract Module-I 2nd Year MBBS, Batch -50 (Session 2023-24)

LMS based Assessment for GIT Module will be held on , Monday from 9:00pm to 9:30 pm. Detail of topics are mentioned in the table below:

S No.	Domain of	Topic	No. of	8		
	Teaching and Learning Activity		MCQs	C 1	C2	С3
5.	LGIS	Embryology	4	1	1	2
		Development of liver & biliary				
		apparatus				
		Development of small intestine	4	1	1	2
		Histology				
		Histology of liver				
		Histology of small intestine.				
6.	SGD	Small intestine (Duodenum)	20	5	5	10
		Small intestine (Jejunum &				
		ileum)				
		Liver -I CBL -Liver & portal				
		Hypertension				
		Liver II (Functional Segment)				
7.	Practical	Histology of liver & Gall	2	0	1	1
		bladder				

MCQS= 30

Learning Resources:

- Embryology :- KLM Embryology Developing Human 11th Edition
- **Histology :-**Junqueira's Basic Histology 18th Edition
- Gross Anatomy:- KLM clinically oriented anatomy edition 10
- USMLE Q Bank Step 1 (Volume 1) 2023-2034 UWORLD Step 1 (Volume 3) 2023-2024

TOS for LMS Assessment of Gastrointestinal Tract Module-I 2nd Year MBBS, BATCH -50 (SESSION 2023-24)

LMS based Assessment for GIT Module will be held on 23-03-2024, Monday from 9:00pm to 9:30 pm.

Detail of topics are mentioned in the table below:

S No.	Domain of	Topic	No. of	Cognitive Domain		
	Teaching and Learning Activity		MCQs	C1	C2	C3
1.	LGIS	Embryology Development of large intestine	4	1	1	2
		Histology Histology of Large intestine	4	1	1	2
2.	SGD	Spleen Pancreas Large intestine Vasculature of GIT (Blood supply ,Venous drainage	20	5	5	10
3.	Practical	Histology of Small intestine	2	0	1	1

MCQS= 30 MCQS

Learning Resources:

- Embryology :- KLM Embryology Developing Human 11th Edition
- **Histology :-**Junqueira's Basic Histology 18th Edition
- Gross Anatomy:- KLM clinically oriented anatomy edition 10
- USMLE Q Bank Step 1 (Volume 1) 2023-2034 UWORLD Step 1 (Volume 3) 2023-2024

Renal Module-I

Learning Objectives

Large Group Interactive Session (LGIS)

Topic	Learning Objectives At The End of The Lecture the Student Should Be Able To	Calgary gauge	Learning Domain	References
	EMBRYOLO	OGY		
Kidney & ureter	Enumerate the derivatives of intermediate mesoderm, urogenital and gonadal ridges.	Should know	C1	1.KLM Embryology Developing Human 11 th Edition
	Describe the stages of development of human kidneys	Must know	C2	2. USMLE Q Bank Step 1 (Volume 1) 2023-2034
	Describe the molecular regulation of kidney development.	Must know	C2	- 3.UWORLD Step 1 (Volume 3) 2023-2024
	Correlate positional changes of the kidney with its blood supply	Must know	C1	-
	Describe different stages of development of ureter from ureteric bud and metanephrogenicblastema.	Must know	C1	
	Understand the bio-physiological aspects of kidney & ureter development	Must know	C2	
	Enumerate Congenital anomalies of kidney and ureter.	Should know	СЗ	
	Correlate the clinical conditions(polycystic kidney, horseshoe shaped kidney)	Should know	СЗ	
	Understand the preventive and curative health care measures	Nice to know	СЗ	
	Practice the principles of Bioethics	Nice to know	C3	
	Apply strategic use of AI in health care	Nice to know	СЗ	
	Read relevant research article	Nice to know	СЗ	
Urinary bladder & urethra	Describe the development of urinary bladder	Must know	C2	1.Embryology: - KLM Embryology Developing Human 11 th Edition
urculla	Understand the bio-physiological aspects of bladder development	Should know	C2	2. USMLE Q Bank Step 1 (Volume 1) 2023-2034
	Discuss the parts of urethra in males and females	Must know	C2	3. UWORLD Step 1 (Volume 3) 2023-2024

	Describe development of male urethra	Must know	C2	
	Describe development of female urethra	Must know	C2	
	Discuss the anomalies related to urethra & bladder development	Should know	С3	
	HISTOLO	OGY		
kidney I (Cortex & Medulla)	• Discuss the structural components of the nephron.	Must know	C2	1.Histology:-Junqueira's Basic Histology 18th Edition
	Discuss the histology of filtration barrier.	Must know	C2	2.USMLE Q Bank Step 1 (Volume 1) 2023-2034
	Understand the bio-physiological aspects of filtration	Must know	C2	3.UWORLD Step 1 (Volume 3) 2023-2024
	Distinguish the key microscopic components of the renal cortex and medulla.	Must know	C2	
	Differentiate the histological appearance of proximal tubule, loop of Henley, distal convoluted tubule and collecting duct.	Must know	C2	
	Correlate the clinical conditions	Should know	С3	
	Understand the preventive and curative health care measures	Nice to know	C2	
	• Practice the principles of Bioethics	Nice to know	С3	
	• Apply strategic use of AI in health care	Nice to know	С3	
	Read relevant research article	Nice to know	С3	
kidney II (Collecting System)	• Enumerate the component cells of the juxta glomerular apparatus.	Must know	C1	1.Histology :-Junqueira's Basic Histology 18th Edition
, - J ,	Discuss the component cells of the juxtaglomerular apparatus	Must know	C1	2.USMLE Q Bank Step 1 (Volume 1) 2023-2034 3.UWORLD Step 1
	Discuss the effect of diabetes & hypertension on glomerular filtration rate	Should know	C2	(Volume 3) 2023-2024
	Understand the effect of hypertension on renin angiotensin release	Should know	С3	
Urinary Bladder	• Describe histological characteristics of urinary bladder.	Must know	C2	1.Histology :-Junqueira's Basic Histology 18th
	 Explain the concept of umbrella cells and Uroplakins. 	Must know	C2	Edition 2.USMLE Q Bank Step 1
	• Explain the concept of internalization	Must know	C2	(Volume 1) 2023-2034 3.UWORLD Step 1 (Volume 3) 2023-2024
	Understand the bio-physiological effects of urinary epithelium	Should know	C2	

	Compare the histological changes of empty and full bladder.	Must know	C2	
	Correlate the clinical conditions	Should know	C2	
	Understand the preventive and curative health care measures	Nice to Know	C2	
	Practice the principles of Bioethics	Nice to Know	C2	-
	Apply strategic use of AI in health care	Nice to Know	C2	-
	Read relevant research article	Nice to Know	C2	-
Ureter & urethra	Describe the microscopic structure of ureter	Must know	C2	1. Histology :-Junqueira's
	Discuss the histological features of urethra	Must know	C2	Basic Histology 18th Edition
	Distinguish the transition in epithelium in different types of urethra	Must know	C2	2.USMLE Q Bank Step 1 (Volume 1) 2023-2034 3.UWORLD Step 1
	Correlate the clinical conditions	Should know	С3	(Volume 3) 2023-2024
	Understand the preventive and curative health care measures	Nice to Know	С3	
	Practice the principles of Bioethics	Nice to Know	С3	
	Apply strategic use of AI in health care	Nice to Know	C3	
	Read relevant research article	Nice to Know	С3	

Anatomy Small Group Discussion (SGDs)

Topics	Learning Objectives Students Should Be Able To	Calgary gauge	Learning Domain	References
Posterior abdominal	Describe the fascia of posterior abdominal wall	Must know	C2	Clinical Oriented Anatomy by Keith L. Moore.8 TH Edition.
wall I (Fascia & Muscles)	Tabulate the muscles of posterior abdominal wall with reference to, origin, insertion, nerve supply and action.	Must know	C2	(Chapter 5, Page 537- 541). ★ <u>https://www.youtube.com</u> /watch?v=5ZnlcZrC-XY
	Describe the relations of Psoas major muscle.	Must know	C2	
	Correlate the clinical conditions (Psoas Abscess)	Should know	С3	
	Understand the preventive and curative health care measures	Nice to know	СЗ	_
	Map Root of mesentery on SP/Model	Nice to know	C3	
	Practice the principles of Bioethics	Nice to know	C3	
	Apply Strategic use of AI in health care	Nice to know	C3	
Posterior abdominal	Trace the nerves present on posterior abdominal wall	Must know	C2	 Clinical Oriented Anatomy by Keith L. Moore.8TH
wall II (Nerves)	DI Discuss the formation of nerves	Must know	C2	Edition. (Chapter 5, Page
(1101103)	Discuss the formation of lumbosacral plexus	Must know	C2	527-532). https://www.youtube.com/w
	Correlate the clinical conditions (Lumbar symphathectomy)	Should know	СЗ	atch?v=5ZnlcZrC-XY
	Understand the preventive and curative health care measures	Nice to Know	СЗ	
	Practice the principles of Bioethics	Nice to Know	C3	
	Apply Strategic use of AI in health care	Nice to Know	C3	
	Read relevant research articles	Nice to Know	C3	
Posterior abdominal wall III (vessels)	Enlist branches of Abdominal Aorta.	Must know	C1	❖ Clinical Oriented Anatomy
& Lumbar Vertebrae	Describe the tributaries of inferior vena cava.	Must know	C2	by Keith L. Moore.8TH Edition. (Chapter 5, Page 541-544, 544-547).
	Describe lymph nodes of posterior abdominal wall with emphasis on lumbar and intestinal trunk.	Must know	C2	https://www.youtube.com/watch
	Differentiate between typical and atypical lumbar vertebrae.	Must know	C2	?v=pSDYlPzNg4s
	Identify different parts of lumbar vertebrae.	Must know	C2	
	Discuss the attachments of lumbar vertebrae.	Must know	C2	
	Correlate the clinical conditions (abdominal aortic aneurysm)	Should know	СЗ	
	Understand the preventive and curative health care measures	Should know	С3	

	Map Abdominal aorta, Inferior Vena cava & Portal vein on simulated patient (SP)/Model	Should know	С3	
	Practice the principles of Bioethics	Nice to Know	С3	
	Apply Strategic use of AI in health care	Nice to Know	С3	
	Read relevant research articles	Nice to Know	С3	
Kidney	Discuss the site and extent of kidneys	Must know	C2	Clinical Oriented Anatomy
	Differentiate right from left kidney	Must know	C2	by Keith L. Moore.8TH Edition. (Chapter 5, Page
	Understand the bio-physiological aspects of kidney	Must know	C2	515-517,523-524).
	Discuss the renal capsule and its role in support of kidney.	Must know	C2	https://www.youtube.com/watch
	Describe the structure of cortex and medulla	Must know	C2	- <u>?v=ZVIVquVYGDo</u>
	Describe peritoneal relationship of both kidneys.	Must know	C2	
	Describe visceral relationship of both kidneys	Must know	C2	
	Explain blood supply of both kidneys with emphasis on renal artery.	Must know	C2	
	Discuss the venous drainage of both kidneys.	Must know	C2	
	Correlate the clinical conditions (perinephric abscess, nephroptosis, renal cysts and renal colic)	Should know	С3	
	Understand the preventive and curative health care measures	Nice to know	СЗ	
	Map the kidney on the back (Morrison's Parrallelogram) on SP/Model	Nice to know	СЗ	
	Practice the principles of Bioethics	Nice to know	С3	
	Apply Strategic use of AI in health care	Nice to know	С3	
	Read relevant research articles	Nice to know	C3	
Ureter	Discuss extent and course of ureter in abdomen and pelvis in males and females	Must know	C2	 Clinical Oriented Anatomy by Keith L. Moore.8TH Edition. (Chapter 5, Page
	Explain peritoneal reflections of ureter in both sexes.	Must know	C2	517-518,525).
	Describe relations of ureter.	Must know	C2	https://www.youtube.com/watch
	Describe the arterial, venous and lymphatic drainage of ureter.	Must know	C2	2v=1P0utMb5nkg
	Correlate the clinical conditions (ureteric colic)	Should know	С3	

	Understand the preventive and curative health care measures	Should know	С3	
	Map Ureter from the back on SP/Model	Nice to Know	C3	
	Practice the principles of Bioethics	Nice to Know	СЗ	
	Apply Strategic use of AI in health care	Nice to Know	C3	
	Read relevant research articles	Nice to Know	C3	
Supra renal gland	Describe the location & visceral relations of right and left supra renal glands	Must know	C2	❖ Clinical Oriented Anatomy by Keith L. Moore.8TH Edition. (Chapter 5, Page
	Understand the bio-physiological aspects of kidney	Should know	C2	519-523).
	Discuss supra renal cortex and medulla	Must know	C2	https://www.youtube.com/watch
	Discuss vessels and nerves of supra renal gland	Must know	C2	?v=iE8nCvLaGM4
	Correlate the clinical conditions	Should know	С3	
	Understand the preventive and curative health care measure	Nice to Know	С3	
	Practice the principles of Bioethics	Nice to Know	C3	
	Apply Strategic use of AI in health care	Nice to Know	С3	
	Read relevant research articles	Nice to Know	С3	
Urinary bladder	Interpret size and extent of urinary bladder in different ages and states.	Must know	C2	 Clinical Oriented Anatomy by Keith L. Moore.8TH Edition. (Chapter 6, Page
	Discuss the peritoneal and visceral relationships of urinary bladder(bladder bed)	Must know	C2	591-595).
	Understand the bio-physiological aspects of kidney	Should know	C2	https://www.youtube.com/watch ?v=tGouMldaQgU
	Discuss the trigone of urinary bladder	Must know	C2	
	Elaborate nerve supply of urinary bladder	Must know	C2	
	Correlate the clinical conditions (urinary incontinence, suprapubiccystotomy and atonic bladder	Should know	С3	
	Understand the preventive and curative health care measures	Nice to Know	С3	

	Practice the principles of Bioethics	Nice to know	C3	
	Apply Strategic use of AI in health care	Must know	C3	
	Read relevant research article	Nice to know	C3	
Urethra	Describe different parts of male and female urethra.	Must know	C2	 Clinical Oriented Anatomy by Keith L. Moore.8TH Edition. (Chapter 6, Page
	Explain blood supply, innervation and lymphatics of urethra in both sexes	Must know	C2	595). https://www.youtube.com/watch ?v=EQUdo392wg0
	Discuss the clinically significant differences between male and female urethra	Must know	C2	
	Correlate the clinical conditions	Should know	СЗ	
	Understand the preventive and curative health care measures	Should know	С3	
	Practice the principles of Bioethics	Nice to know	С3	
	Apply Strategic use of AI in health care	Nice to know	С3	
	Read relevant research articles	Nice to know	С3	
Cross Sectional Anatomy	Identify different structures at different levels of vertebral coloumn;L2,L3,L4,L5	Must know	C2	Gross Anatomy :- KLM clinically oriented anatomy edition 10
	Correlate the clinical conditions at the given level	Should know	С3	• USMLE Q Bank Step 1 (Volume 1) 2023-2034 UWORLD Step 1
	Understand the preventive and curative health care measures	Nice to Know	С3	(Volume 3) 2023-2024
	Practice the principles of Bioethics	Nice to Know	СЗ	
	Apply Strategic use of AI in health care	Nice to Know	С3	
	Read relevant research articles	Nice to Know	С3	
Radiology	Identify structures on a normal X-ray abdomen	Must know	C2	Gross Anatomy :- KLM clinically oriented anatomy edition 10
	Identify kidney and its associated structures on contrast studies.	Must know	C2	USMLE Q Bank Step 1
	Appreciate filling defects.	Should know	C2	(Volume 1) 2023-2034 UWORLD Step 1
	Mark anatomical landmarks.	Must know	C2	(Volume 3) 2023-2024

Understand the preventive and curative health care measures	Nice to know	СЗ	
Practice the principles of Bioethics	Nice to know	С3	
Apply Strategic use of AI in health care	Nice to Know	СЗ	
Read relevant research articles	Nice to know	С3	
Correlate the clinical conditions	Nice to know	СЗ	

Practical's Skill Laboratory (SKL)

Topic	At The End Of Practical Students	Calgary gauge	Learning	Teaching Assessment Tool
	Should Be Able To		Domain	Strategy
	Identify the histological slide of	Must know	С3	1.Histology Junqueira's Basic
Kidney	kidney.			Histology 18th Edition
	Illustrate the histological structure	Should know	C2	2.USMLE Q Bank Step 1
	of Kidney.			(Volume 1) 2023-2034
	Enlist two points of identification.	Must know	C2	3.UWORLD Step 1 (Volume 3)
	Focus the slide	Should know	C3	2023-2024
	Identify the histological slide of	Must know	C2	1.Histology Junqueira's Basic
Ureter	ureter			Histology 18th Edition
	Illustrate the histological structure	Should know	C2	2.USMLE Q Bank Step 1
	of ureter.			(Volume 1) 2023-2034
	Enlist two points of identification.	Must know	C1	3.UWORLD Step 1 (Volume 3)
	Focus the slide	Should know	C3	2023-2024
Urinary	Identify the histological slide of	Must know	P	Histology: -Junqueira's Basic
bladder	urinary bladder.			Histology 18th Edition
				2.USMLE Q Bank Step 1
				(Volume 1) 2023-2034
				3.UWORLD Step 1 (Volume 3)
				2023-2024

TOS for LMS Assessment of Renal Module-I 2nd Year MBBS, Batch -50 (Session 2023-24)

LMS based Assessment for Renal Module will be held on Monday from 9 pm to 9:30 pm Detail of topics are mentioned in the table below:

S No.	Domain of	Topic	No. of	Cognitive Domain		
	Teaching and		MCQs	C 1	C2	C3
	Learning Activity					
1.	LGIS	Embryology	04	1	1	2
		Development of Kidney &				
		Ureter				
		Development of Urinary bladder				
		& Urethra				
		Histology	04	1	1	2
		Kidney				
2.	SGD	Fascia, Muscles & Nerves of	14	4	4	6
		Posterior abdominal wall				
		Vessels of Posterior abdominal				
		wall, Lumbar Vertebrae				
		Kidney				
		Ureter				
		Urinary Bladder				
		Suprarenal gland & Urethra				
3.	Practical	Histology of Kidney	02	0	1	1
		Histology of Ureter				
4.	SDL	Posterior abdominal wall	02	0	1	1
		Ureter				
5.	CBL	Kidney failure	02	0	1	1
		Ureteric Stone				
6.	PBL	Road side accident leading to	02	0	1	1
		Acute Kidney injury (Failure)				

MCQS= 30 MCQS

Learning Resources:

- Embryology :- KLM Embryology Developing Human 11th Edition
- Histology:-Junqueira's Basic Histology 18th Edition
- Gross Anatomy:- KLM clinically oriented anatomy edition 10
- USMLE Q Bank Step 1 (Volume 1) 2023-2034 UWORLD Step 1 (Volume 3) 2023-2024

TOS for LMS Assessment of Renal Module-I 2nd Year MBBS, Batch -50 (Session 2023-24)

LMS based Assessment for Renal Module will be held on Monday from 9 pm to 9:30 pm. Detail of topics are mentioned in the table below:

S No.	Domain of	■	No. of	Cog	nitive Don	nain
	Teaching and Learning Activity		MCQs	C1	C2	С3
1.	LGIS	Histology Ureter, Urinary bladder & Urethra	08	2	2	4
2.	SGD	Suprarenal gland & Urethra Radiographs Lumbar Region Cross-sectional Anatomy	14	4	4	6
3.	Practical	Histology of Urinary Bladder	02	0	1	1
4.	SDL	Suprarenal gland & Urethra	02	0	1	1
5.	PBL	Renal colic	04	1	1	2

MCQS= 30 MCQS

Learning Resources:

- **Embryology**:- KLM Embryology Developing Human 11th Edition
- **Histology :-**Junqueira's Basic Histology 18th Edition
- Gross Anatomy:- KLM clinically oriented anatomy edition 10
- USMLE Q Bank Step 1 (Volume 1) 2023-2034 UWORLD Step 1 (Volume 3) 2023-2024

Reproduction Module-I

Learning Objectives

Large Group Interactive Session (LGIS)

Topic	Learning Objectives	Importance	Learning	References
	At the end of lecture students should be able to		Domain	
	Embryolog			
Testis	Recall the time of early sex differentiation and genes involved in it.	Must know	C2	• Embryology :- KLM Embryology
	• Explain the development of male gonads and formation of testis.	Must know	C2	Developing Human 11 th Edition
	Describe the descent of testis.	Must know	C2	USMLE Q Bank Step
	Describe the concepts of chromosomal determination of sex, primordial germ cells and indifferent gonads.	Must know	C2	1 (Volume 1) 2023- 2034 UWORLD Step 1
	Describe histogenesis of interstitial cells of leydig and seminiferous tubules.	Must know	C2	(Volume 3) 2023-2024
	Correlate with the clinical conditions	Must know	C2	7
	• Understand curative and preventive health care measures.	Must know	С3	
	Practice the principles of bioethics.	Should know	P	7
	Apply strategic use of A.I in health care.	Should know	C3	7
	Read relevant research article	Nice to know	C3]
Male external genitalia	Explain the different stages and further development of external genitalia.	Must know	C2	• Embryology :- KLM Embryology
	Discuss the related clinical like ambiguous genitalia, Androgen insensitivity syndrome, hypospadias, epispadias, bifid penis, micropenis	Must know	C2	Developing Human 11 th Edition • USMLE Q Bank Step 1 (Volume 1) 2023-
	• Understand curative and preventive health care measures.	Must know	C2	2034 UWORLD Step 1
	Practice the principles of bioethics.	Must know	C2	(Volume 3) 2023-2024
	• Apply strategic use of A.I in health care.	Must know	C2]
	Read relevant research article.	Must know	C2	
Uterus and uterine tubes	Describe role of paramesonephric ducts, uterovaginal primordium in development of uterine tubes	Must know	C2	• Embryology :- KLM Embryology Developing Human 11 th
	Discuss the role of paramesonephric ducts and uterovaginal primordium in the development of uterus.	Must know	C2	Edition • USMLE Q Bank Step
	Discuss the related clinicals like bicornuate uterus, unicornuate uterus, double uterus.	Must know	C2	1 (Volume 1) 2023- 2034
	Understand curative and preventive health care measures.	Must know	C2	UWORLD Step 1 (Volume 3) 2023-2024
	Practice the principles of bioethics.	Must know	C2	7 ` ′
	Apply strategic use of A.I in health care.	Must know	C2	
	Read relevant research article	Must know	C3	7
Ovary	Recall the process of oogenesis in female.	Must know C2	• Embryology :- KLM	
	Explain the different steps involved in early oogenesis.	Must know	C2	Embryology

	Explain the ovarian and menstrual cycle and phases.	Must know	C2		Developing Human 11 ^t Edition
	Explain the hormonal changes occurring during reproductive cycle.	Must know	C2	•	USMLE Q Bank Step
	Describe role of paramesonephric ducts, uterovaginal primordium in development of ovary	Must know	C2		1 (Volume 1) 2023- 2034 UWORLD Step 1
	Describe the descent of ovaries.	Must know	C2		(Volume 3) 2023-2024
	Understand curative and preventive health care measures	Must know	C3		
	Practice the principles of bioethics.	Should know	P		
	Apply strategic use of A.I in health care	Should know	C3		
	Read a relevant research article	Nice to know	C3		
Vagina	Discuss the developmental stages of vagina and female external genitalia	Must know	C2	•	Embryology :- KLM
	Enlist different congenital anomalies of female reproductive system.	Must know	C3		Embryology Developing Human 11 Edition
	Describe different syndromes and gene defects associated with congenital anomalies	Should know	C3		USMLE Q Bank Step
	Understand curative and preventive health care measures	Nice to know	С3		1 (Volume 1) 2023- 2034
	Practice the principles of bioethics.	Nice to know	C3		UWORLD Step 1
	Apply strategic use of A.I in health care	Nice to know	C3		(Volume 3) 2023-2024
	Read a relevant research article	Must know	C3		(* 0141110 0) 2020 202
	Histology				
Testis	Discuss germ cells at different steps of	Must know	C2	•	Histology :-Junqueira's
	spermatogenesis in the seminiferous tubule.				Basic Histology 18th Edition
	Describe histology of Sertoli cells and Leydig cells.			•	USMLE Q Bank Step 1 (Volume 1) 2023- 2034 UWORLD Step 1 (Volume 3) 2023-2024
	Explain their roles in the production of sperm and regulation of the male reproductive system.	Must know	C2		
	Understand the bio-physiological aspects of spermatogenesis.	Must know	C2		
	Discuss the related clinicals like orchitis, male infertility, testicular cancers, and cryptorchidism.	Must know	C2		
	Correlate with the clinical conditions	Must know	C2		
	Understand curative and preventive heath care measures.	Should know	С3		
	Practice the principles of bioethics.	Nice to know	P		
	Apply strategic use of A.I in health care.	Nice to know	С3		
	Read relevant research article	Nice to know	C3		
Male genital ducts	Describe the histological organization of epididymis, ductus deferens and ejaculatory ducts.	Must know	C2	•	Histology :- Junqueira' Basic Histology 18th Edition

	Describe the epithelium and microscopic features of epididymis, ductus deferens and ejaculatory ducts.	Must know	С3	•	USMLE Q Bank Step 1 (Volume 1) 2023- 2034
	Understand the bio-physiological aspects of epithelium of ducts.	Should know	P		UWORLD Step 1 (Volume 3) 2023-2024
	Discuss the related clinical like vasectomy, epididymitis.	Nice to know	СЗ		
	Understand curative and preventive health care measures.	Nice to know	СЗ		
	Practice the principles of bioethics.	Nice to know	СЗ		
	Apply strategic use of A.I in health care.	Nice to know	С3		
	Read relevant research article	Nice to know	С3		
Accessory male reproductive glands	Describe the histological organization of prostate gland, seminal vesicles and bulbourethral glands.	Must know	C2	•	Histology:-Junqueira's Basic Histology 18th Edition USMLE Q Bank Step
	Describe microscopic features of these glands.	Must know	C2	-	1 (Volume 1) 2023- 2034 UWORLD Step 1 (Volume 3) 2023-2024
	Discuss the related clinical like prostatitis.	Should know	С3		
	Understand curative and preventive health care measures.	Nice to know	C3		
	Practice the principles of bioethics.	Nice to know	С3		
	Apply strategic use of A.I in health care.	Nice to know	С3		
	Read relevant research article	Nice to know	С3		
Uterus and uterine tubes	Recollect knowledge of histological features of endometrium in various phases	Must know	C2	•	Histology:-Junqueira's Basic Histology 18th
	Discuss microanatomy of layers of uterus	Must know	C2	•	Edition USMLE Q Bank Step
	Describe parts of uterine tubes	Should know	С3		1 (Volume 1) 2023- 2034
	Explain microscopic features of all parts of uterine tubes.	Nice to know	C3		UWORLD Step 1 (Volume 3) 2023-2024
	Discuss the related clinicals like endometriosis, tubal ligation, salpingitis, and cervical cancers	Nice to know	С3		
	Understand curative and preventive health care measures.	Nice to know	СЗ		
	Practice the principles of bioethics.	Nice to know	С3		
	Apply strategic use of A.I in health care.	Nice to know	СЗ		
	Read relevant research article.	Nice to know	СЗ		
Ovary and Vagina	Discuss the stages of follicular growth (primordial, primary, secondary, tertiary), as	Must know	C2		

 well as the changes that occur in the follicular wall. Discuss ovarian cycle and menstrual cycle. 	Must know	C2	 Histology:-Junqueira's Basic Histology 18th Edition USMLE Q Bank Step (Volume 1) 2023
Describe the histological features of corpus luteum of mensuration and pregnancy.	Must know	C2	1 (Volume 1) 2023- 2034 UWORLD Step 1
 Discuss the related clinicals like PCOS, Follicular cyst, hemorrhagic cyst. 	Should know	C3	(Volume 3) 2023-2024
Discuss histological structure of vagina.	Must know	C2	
 Understand the bio-physiological aspects of vaginal epithelial cells. 	Nice to know	C3	
Discuss the related clinical like vaginitis, squamous cell carcinoma of vagina.	Nice to know	СЗ	
Understand curative and preventive health care measures.	Nice to know	C3	
• Practice the principles of bioethics.	Nice to know	C3	
• Apply strategic use of A.I in health care.	Nice to know	C3	
Read relevant research article	Nice to know	C3	

Small Group Discussion (SGD)

Topic	Learning Objectives At the end of lecture students should be able to	Importance	Learning Domain	References
	Embryolo	ogv		
Sacrum	Identify the bone	Must know	C2	Clinical Oriented
	Place the bone in anatomical position	Must know	C2	Anatomy by Keith L. Moore.6TH Edition.
	Demonstrate anatomical features on bone	Must know	C2	(Chapter 4, Page 451).
	Discuss attachments and relations on bone	Must know	C2	https://www.youtube.com/ watch?v=93c9nlxbMUw
	Discuss important clinical anatomy of bone	Should know	C2	https://www.youtube.com/ watch?v=PuOE-PI1eps
	Understand curative and preventive health care measures	Nice to Know	C3	watch:v=ruOE-r11eps
	Practice the principles of bioethics.	Nice to Know	С3	
	Apply strategic use of A.I in health care	Nice to Know	C3	
	Read a relevant research article	Nice to Know	C3	
Bony pelvis	Identify type of pelvis	Must know	C2	Clinical Oriented Anatomy by Keith L.
	Place pelvis in anatomical position	Must know	C2	Moore.6TH Edition.
	Demonstrate different diameters of each type	Must know	C2	(Chapter 4, Page 451). https://www.youtube.com/
	Differentiate bony features of each type	Must know	C2	watch?v=93c9nlxbMUw
	Clinical importance of each type	Should know	C2	https://www.youtube.com/ watch?v=PuOE-PI1eps
	Understand curative and preventive health care measures	Nice to Know	C3	watch: v=1 uOL-1 11cps
	Practice the principles of bioethics.	Nice to Know	C3	
	Apply strategic use of A.I in health care	Nice to Know	С3	
	Read a relevant research article	Nice to Know	C3	 Clinical Oriented
Pelvic Peritoneum and	Identify visceras present in pelvis	Must know	C2	Anatomy by Keith L. Moore.6TH Edition.
its contents	Demonstrate peritoneal reflections on pelvic visceras	Must know	C2	(Chapter 3, Page 338-349).
	Discuss pouches formed by peritoneum	Must know	C2	• https://www.youtube.com/ watch?v=F2-5tX CMIQ
	Discuss clinical anatomy of pelvic peritoneum and pelvic visceras	Must know	C3	https://www.youtube.com/ watch?v=3Z0XBCyXb3Y
	Understand curative and preventive health care measures	Should know	C2	
	Practice the principles of bioethics.	Nice to Know	С3	
	Apply strategic use of A.I in health care	Nice to Know	С3	
	Read a relevant research article	Nice to Know	С3	
Pelvic diaphragm	Identify the muscles forming pelvic diaphragm	Must know	C2	Clinical Oriented A note much of Weight I
	Demonstrate the attachments and nerve supply of muscles of pelvic diaphragm	Must know	C2	Anatomy by Keith L. Moore.6TH Edition. (Chapter 3, Page 338-
	Locate the structures piercing the pelvic diaphragm	Must know	C2	349).

		Must know	С3	https://www.youtube.com/
	Discuss clinical anatomy of pelvic diaphragm			watch?v=P3BBAMWm2
	Understand curative and preventive health care measures	Should know	C2	Eo https://www.youtube.com/
	Practice the principles of bioethics.	Nice to Know	С3	watch?v=3Z0XBCyXb3Y
	Apply strategic use of A.I in health care	Nice to Know	С3	
	Read a relevant research article	Nice to Know	C3	
Male external genitalia	Identify the anatomical structures of external genitalia	Must know	C2	Clinical Oriented Anatomy by Keith L.
	Demonstrate anatomical position of testis	Must know	C2	Moore.6TH Edition. (Chapter 3, Page 338-
	Enlist layers of scrotum with its neurovasculature	Must know	C2	349).
	Discuss clinical anatomy of scrotum	Must know	С3	• https://www.youtube.com/ watch?v=P3BBAMWm2
	Understand curative and preventive health care measures	Should know	C2	<u>Eo</u>
	Practice the principles of bioethics.	Nice to Know	С3	https://www.youtube.com/watch?v=3Z0XBCyXb3Y
	Apply strategic use of A.I in health care	Nice to Know	C3	
	Read a relevant research article	Nice to Know	С3	
Testis	Identify the structure	Must know	C2	
		Must know	C2	
	Demonstrate anatomical position of testis	Must know	C2	
	Discuss layers and structure of testis Discuss important clinical anatomy related to testis	Must know	С3	
	Understand curative and preventive health care measures	Should know	C2	
	Practice the principles of bioethics.	Nice to Know	С3	
	Apply strategic use of A.I in health care	Nice to Know	С3	
	Read a relevant research article	Nice to Know	С3	
Male genital ducts	Describe the anatomical position of vas deferens, seminal vesicles, ejaculatory ducts on model	Must know	C2	Clinical Oriented Anatomy by Keith L. Moore.6TH Edition.
	Discuss the anatomical relations of vas deferens, seminal vesicles, ejaculatory ducts	Must know	C2	(Chapter 3, Page 376 - 381). • https://www.youtube.co
	Discuss clinical anatomy	Must know	С3	m/watch?v=N66sAZH1
	Understand curative and preventive health care measures	Must know	C2	<u>VA8</u> https://www.youtube.co m/watch?v=ai7MjQvenK
	Practice the principles of bioethics.	Should know	C2	<u>s</u>
	Apply strategic use of A.I in health care	Nice to Know	С3	
	Read a relevant research article	Nice to Know	C3	
Prostate	Identify the position of prostate	Must know	C2	Clinical Oriented
	Demonstrate the anatomical features and relations of prostate	Must know	C2	Anatomy by Keith L. Moore.6TH Edition.

	Discuss clinical anatomy	Must know	СЗ	(Chapter 3, Page 376 -
	Understand curative and preventive health care measures	Must know	C2	381). https://www.youtube.com/watch?v=93Ayq248u 8
	Practice the principles of bioethics.	Should know	C2	https://www.youtube.com/
	Apply strategic use of A.I in health care	Nice to Know	СЗ	watch?v=ai7MjQvenKs
	Read a relevant research article	Nice to Know	С3	
Ovaries	Identify the site of ovarian fossa	Must know	C2	 Clinical Oriented
	Discuss anatomical relations of ovary	Must know	C2	Anatomy by Keith L. Moore.6TH Edition.
	Discuss neurovasculature and hormonal effects of ovaries	Must know	C2	(Chapter 3, Page 376 - 381).
	Discuss important clinical anatomy of ovary	Must know	C3	https://www.youtube.com/
	Understand curative and preventive health care measures	Should know	C2	watch?v=93Ayq248u_8 https://www.youtube.com/w
	Practice the principles of bioethics.	Nice to Know	С3	atch?v=ai7MjQvenKs
	Apply strategic use of A.I in health care	Nice to Know	СЗ	
	Read a relevant research article	Nice to Know	С3	
Fallopian tubes,	Identify the location of structures in pelvis	Must know	C2	Clinical Oriented
Uterus	Demonstrate anatomical relations of these structures	Must know	C2	Anatomy by Keith L. Moore.6TH Edition.
	Discuss normal positions of uterus with its ligaments	Must know	C2	(Chapter 3, Page 376 - 381).
	Discuss its neurovasculature	Must know	C2	https://www.youtube.com/watch?v=93Ayq248u 8
	Discuss important clinical anatomy of fallopian tubes, uterus and uterine tube	Should know	C2	https://www.youtube.com/watch?v=ai7MjQvenKs
	Understand curative and preventive health care measures	Nice to Know	С3	aten: v-ar/wjj@venks
	Practice the principles of bioethics.	Nice to Know	С3	
	Apply strategic use of A.I in health care	Nice to Know	C3	
	Read a relevant research article	Nice to Know	С3	
Cervix	Discuss anatomy of cervix	Must know	C2	Clinical Oriented
	Describe anatomical relations of cervix	Must know	C2	Anatomy by Keith L. Moore.6TH Edition.
	Describe its neurovasculature	Must know	C2	(Chapter 3, Page 376 -
	Understand curative and preventive health care measures	Must know	СЗ	381). https://www.youtube.com/
	Practice the principles of bioethics.	Should know	C2	watch?v=93Ayq248u_8
	Apply strategic use of A.I in health care	Nice to Know	СЗ	https://www.youtube.com/w
	Read a relevant research article	Nice to Know	СЗ	atch?v=ai7MjQvenKs
Ischio-anal fossa	Discuss the dimensions, boundaries and recesses	Must know	C2	Clinical Oriented Anatomy by Keith L.
	Describe the contents of Ischio anal fossa	Must know	C2	Moore.6TH Edition.
	Describe pudendal canal and its contents	Must know	C2	

	Discuss important clinical anatomy of structures	Must know	C2	(Chapter 3, Page 376 - 381).
	Understand curative and preventive health care measures	Should know	C2	• https://www.youtube.com/ watch?v=93Ayq248u_8
	Practice the principles of bioethics.	Nice to Know	СЗ	https://www.youtube.com/w
	Apply strategic use of A.I in health care	Nice to Know	C3	atch?v=ai7MjQvenKs
	Read a relevant research article	Nice to Know	C3	
Urogenital diaphragm	Discuss the formation of diaphragm	Must know	C2	Clinical Oriented Anatomy by Keith L.
diapinagin	Identify the relations and contents of diaphragm	Must know	C1	Moore.6TH Edition.
	Discuss organs piercing urogenital diaphragm	Must know	C2	(Chapter 3, Page 376 -
	Discuss important clinical anatomy related to diaphragm	Should know	C2	381). • https://www.youtube.com/
	Understand curative and preventive health care measures	Nice to Know	C3	watch?v=93Ayq248u_8 https://www.youtube.com/w
	Practice the principles of bioethics.	Nice to Know	СЗ	atch?v=ai7MjQvenKs
	Apply strategic use of A.I in health care	Nice to Know	С3	
	Read a relevant research article	Nice to Know	С3	
	Identify boundaries and divisions of perineum	Must know	C2	Clinical Oriented A
Perineum &	Discuss formation of perineal pouches	Must know	C2	Anatomy by Keith L. Moore.6TH Edition.
Superficial perineal pouches	Discuss in detail the contents of superficial perineal pouches in male and female	Must know	C2	(Chapter 3, Page 376 - 381).
	Discuss important clinical anatomy related to superficial perineal pouches	Should know	C2	• https://www.youtube.com/ watch?v=93Ayq248u 8
	Understand curative and preventive health care measures	Nice to Know	С3	https://www.youtube.com/watch?v=ai7MjQvenKs
	Practice the principles of bioethics.	Nice to Know	С3	aten?v=ar/ivijQvenKs
	Apply strategic use of A.I in health care	Nice to Know	С3	
	Read a relevant research article	Nice to Know	С3	
Deep perineal pouches	Discuss in detail the contents of deep perineal pouches in male and female	Must know	C2	Clinical Oriented Anatomy by Keith L.
	Discuss important clinical anatomy related to deep perineal pouches.	Must know	C2	Moore.6TH Edition. (Chapter 3, Page 376 - 381).
	Understand curative and preventive health care measures	Should know	C2	• https://www.youtube.com/
	Practice the principles of bioethics.	Nice to Know	C3	watch?v=93Ayq248u_8
	Apply strategic use of A.I in health care	Nice to Know	СЗ	https://www.youtube.com/watch?v=ai7MjQvenKs
	Read a relevant research article	Nice to Know	C3	aten: v-ai/ivijQvenK8
Blood supply of pelvis and	Identify major blood vessels & nerves of pelvis and perineum	Must know	C1	Clinical Oriented Anatomy by Keith L.
perineum	Demonstrate anatomical relationships	Must know	C2	Moore.6TH Edition. (Chapter 3, Page 376 -
	Describe important clinical anatomy related to blood vessels of pelvis and perineum	Should know	C2	381).

	Understand curative and preventive health care measures	Nice to Know	С3	• https://www.youtube.com/ watch?v=93Ayq248u_8
	Practice the principles of bioethics.	Nice to Know	C3	https://www.youtube.com/w
	Apply strategic use of A.I in health care	Nice to Know	СЗ	atch?v=ai7MjQvenKs
	Read a relevant research article	Nice to Know	С3	
Lymphatic drainage of pelvis	Identify major lymphatic vessels of pelvis and perineum	Must know	C1	 Clinical Oriented Anatomy by Keith L.
and perineum	Discuss lymphatic drainage of pelvis and perineum	Must know	C2	Moore.6TH Edition. (Chapter 3, Page 376 -
	Discuss important clinical anatomy	Should know	C2	381).
	Understand curative and preventive health care measures	Nice to Know	С3	https://www.youtube.com/
	Practice the principles of bioethics.	Nice to Know	C3	watch?v=93Ayq248u_8
	Apply strategic use of A.I in health care	Nice to Know	С3	https://www.youtube.com/w
	Read a relevant research article	Nice to Know	C3	atch?v=ai7MjQvenKs
Sacral and Coccygeal plexus	Identify various branches of sacral and coccygeal plexus	Must know	C1	Clinical Oriented Anatomy by Keith L.
	Discuss anatomical relations	Must know	C2	Moore.6TH Edition. (Chapter 3, Page 376 -
	Describe root values of each branch of plexus and its related applied	Should know	C2	381).
	Understand curative and preventive health care measures	Nice to Know	С3	• https://www.youtube.com/ watch?v=93Ayq248u_8
	Practice the principles of bioethics.	Nice to Know	СЗ	https://www.youtube.com/w atch?v=ai7MjQvenKs
	Apply strategic use of A.I in health care	Nice to Know	C3	aton v arring voines
	Read a relevant research article	Nice to Know	C3	

Practical/Skill Lab (SKL)

Topics	At The End of Demonstration Student Should Be Able To	Calgary Gauge	Learning Domains	References
Testis, Epididymis,	Identify the histological slide of testis, Ductus deferens and epididymis	Must know	P	1.Histology Junqueira's Basic Histology 18th Edition 2.USMLE Q Bank Step 1
Ductus deferens	Illustrate the microscopic picture of testis, Ductus deferens and epididymis	Should know	C2	(Volume 1) 2023-2034 3.UWORLD Step 1
	Enlist two points of identification of each	Must know	C1	(Volume 3) 2023-2024
	Read relevant research article	Nice to know	C3	
	Use digital library	Nice to know	C3	
Seminal	Identify the histological slide of seminal vesicles and prostate	Must know	P	1.Histology Junqueira's Basic Histology 18th Edition
vesicles, prostate	Illustrate the microscopic picture of seminal vesicles and prostate	Should know	C2	2.USMLE Q Bank Step 1 (Volume 1) 2023-2034 3.UWORLD Step 1
	Enlist two points of identification of each	Must know	C1	(Volume 3) 2023-2024
	Read relevant research article	Nice to know	СЗ	(
	Use digital library	Nice to know	C3	
_	Identify the histological slide of ovary	Must know	P	1.Histology Junqueira's Basic Histology 18th
Ovary	Illustrate the microscopic picture of ovary	Should know	C2	Edition 2.USMLE Q Bank Step 1 (Volume 1) 2023-2034
	Enlist two points of identification	Must know	C1	3.UWORLD Step 1
	Read relevant research article	Nice to know	C3	(Volume 3) 2023-2024
	Use digital library	Nice to know	C3	
	Identify the histological slide of Uterus and uterine tubes	Must know	P	1.Histology Junqueira's Basic Histology 18th
Uterus, uterine tubes	Illustrate the microscopic picture of Uterus and uterine tubes	Should know	C2	Edition 2.USMLE Q Bank Step 1 (Volume 1) 2023-2034
	Enlist two points of identification of each	Must know	C1	3.UWORLD Step 1 (Volume 3) 2023-2024
	Read relevant research article	Nice to know	C3	-
	Use digital library	Nice to know	С3	

TOS for LMS Assessment of Reproduction Module-I 2nd Year MBBS, Batch -50 (Session 2023-24)

LMS based Assessment for Reproduction Module will be held on 03-06-2024 Monday from 9 pm to 9:30 pm. Detail of topics are mentioned in the table below:

S No.	Domain of Teaching and	Торіс	No. of MCQs	Cog	gnitive Don	nain
	Learning Activity			C1	C2	С3
1.	LGIS	Embryology Testis Genital Ducts, Prostate and Accessory glands Uterus & Uterine tubes	04	1	1	2
		Histology Testis Genital Ducts, Prostate and Accessory glands Uterus & Uterine tubes	04	1	1	2
2.	SGD	Sacrum, Bony Pelvis & Joints of Pelvis Pelvic Fascia, Pelvic Peritoneum, Pelvic Diaphragm Testis & Scrotum Prostate	16	4	4	8
3.	Practical	Testis, Epididymis, Ductus deferens	02	0	1	1
4.	CBL	Benign Prostatic Hyperplasia	02	0	1	1
5.	PBL	Unraveling PCOS; A complex journey	02	0	1	1

MCQS = 30

Learning Resources:

- Embryology :- KLM Embryology Developing Human 11th Edition
- **Histology :-**Junqueira's Basic Histology 18th Edition
- Gross Anatomy :- KLM clinically oriented anatomy edition 10
- USMLE Q Bank Step 1 (Volume 1) 2023-2034 UWORLD Step 1 (Volume 3) 2023

TOS for LMS Assessment of Reproduction Module-I 2nd Year MBBS, Batch -50 (Session 2023-24)

LMS based Assessment for Reproduction Module will be held on 10-06-2024 Monday from 9 pm to 9:30 pm. Detail of topics are mentioned in the table below:

S No. Domain of Teaching and		T	No. of MCQs	Cognitive Domain		
	Learning Activity		_	C1	C2	С3
1.	LGIS	Embryology Uterus & Uterine tubes Ovary & Vagina	04	1	1	2
		Histology Uterus & Uterine tubes Ovary & Vagina	04	1	1	2
2.	SGD	Male internal genital organs Female internal genital organs Ischioanal Fossa	16	4	4	8
3.	Practical	Seminal vesicles & Prostate	02	0	1	1
4.	CBL	PCOS	02	0	1	1
5.	PBL	Ectopic Pregnancy	02	0	1	1

MCQS = 30

Learning Resources:

- Embryology :- KLM Embryology Developing Human 11th Edition
- **Histology :-**Junqueira's Basic Histology 18th Edition
- Gross Anatomy:- KLM clinically oriented anatomy edition 10
- USMLE Q Bank Step 1 (Volume 1) 2023-2034 UWORLD Step 1 (Volume 3) 2023-2024

Central Nervous System (CNS) Module Small Group Discussion (SGD)

Topic	At The End Of The Session Student	Calgary	Learning	References
	Should Be Able To	Gauge	Domain	
	Discuss the major divisions of	Must know	C2	
	nervous system			General Anatomy by
General Anatomy	Differentiate between neurons and	Must know	C2	Tassaduq Hussain 19 th
Nervous System	neuroglia			edition
	List the neuroglia and their functions	Must know	C1	• USMLE Q Bank Step 1
	Describe myelination of nerve fibers	Must know	C2	(Volume 1) 2023-2024
	Describe the structure of a peripheral	Must know	C2	• UWORLD Step 1 (Volume 3) 2023-2024
	nerve and reflex action			Volume 3) 2023-2024
	Describe degeneration and	Should know	C2	
	regeneration of nerves	~! !!!	~~	_
	Correlate the clinical conditions	Should know	C3	
	associated with it	G1 111	G2	_
	• Focus on provision of curative and	Should know	C3	
	preventive health care measures	Nice to know	C2	_
	Practice principle of bioethics		C3	4
	Apply strategic use of AI in health	Nice to know	C3	
	care	N T: 4 1	C2	_
	Read relevant research article	Nice to know	C3	
	• Describe the process of development of	Must know	C2	KINE 1 1
Embayalaay	neurocranium and viscerocranium	N	C2	KLM Embryology
Embryology Early	Describe formation of neural tube,	Must know	C2	Developing Human USMLE O Bank Step 1
development of	neuropores and their closure	Must know	C2	• USMLE Q Bank Step 1 (Volume 1) 2023-2024
Skull & Central	 Describe histogenesis and Cytodifferentiation within the neural 	Must Know	C2	• UWORLD Step 1 (
Nervous System	tube.			Volume 3) 2023-2024
	Describe the brain flexures and their	Must know	C2	- Volume 3) 2023 2021
	derivatives	Widst Kilow	02	
	Describe role of neuroblasts forming	Must know	C2	†
	efferent and afferent rows.			
	Correlate the clinical conditions	Should know	C3	-
	associated with it			
	Focus on provision of curative and	Should know	C3	-
	preventive health care measures			
	Practice principle of bioethics	Nice to know	C3	1
	Apply strategic use of AI in health	Nice to know	C3	1
	care			
	Read relevant research article	Nice to know	С3	1
	Describe the significance of	Must know	C2	
	ventricular, mantle and marginal			KLM Embryology
Embryology	layers of developing spinal cord.			Developing Human
Development of	Enumerate derivatives of alar and	Must know	C1	• USMLE Q Bank Step 1
spinal cord	basal plates in developing spinal cord			(Volume 1) 2023-2024
	Describe the process of myelination	Must know	C2	UWORLD Step 1 (Volume
	of nerve fibers.			3) 2023-2024

•	Describe role of neural crest cells in development of spinal ganglia.	Must know	C2	
•		Must know	C2	
•	Discuss congenital anomalies due to neural tube defects and abnormal histogenesis	Should know	С3	
	Focus on provision of curative and preventive health care measures	Should know	С3	
[Practice principle of bioethics	Nice to know	C3]
	• Apply strategic use of AI in health care	Nice to know	С3	
	Read relevant research article	Nice to know	C3]
General Anatomy	Enlist the components of peripheral and autonomic nervous system	Must know	C1	General Anatomy by
Autonomic Nervous System	Tabulate differences between sympathetic and parasympathetic nervous system	Must know	C2	Tassaduq Hussain 19 th edition USMLE Q Bank Step 1
•	 Describe effects of sympathetic and parasympathetic nervous system on various parts of the body 	Must know	C2	(Volume 1) 2023-2024 • UWORLD Step 1 (Volume 3) 2023-2024
	Discuss the anatomical basis of autonomic injuries such as Horner's syndrome, Urinary bladder dysfunction, Rectal distention, Erectile dysfunction and Argyll Robertson pupil.	Should know	C3	
[Focus on provision of curative and preventive health care measures	Should know	С3	1
	Practice principle of bioethics	Nice to know	C3	1
•	Read relevant research article	Nice to know	С3]
Histology	Describe the histological structure of meninges and choroid plexus	Must know	C2	Junqueira's
Choroid Plexus Peripheral	 Discuss the histological structure of myelinated and unmyelinated nerve fibres. 	Must know	C2	Basic Histology 18 th Edition USMLE Q Bank
Nervous System and Ganglia	 Discuss the histological structure of sensory and autonomic ganglia 	Must know	C2	Step 1 (Volume 1) 2023-2024
•	 Discuss the principles of neuroplasticity and regeneration 	Should know	C2	• UWORLD Step 1 (Volume 3) 2023-2024
	 Correlate the clinical conditions associated with it 	Should know	C3	
•	Focus on provision of curative and preventive health care measures	Should know	С3	1
		<u> </u>		

	Read relevant research article	Nice to know	С3	
Embryology	Describe the development of Myelencephalon	Must know	C2	KLM Embryology
Development of Rhombencephalo	Describe the arrangement of neuroblasts in Metencephalon	Must know	C2	Developing Human • USMLE Q Bank Step 1
n	Describe the development of Metencephalon	Must know	C2	(Volume 1) 2023-2024 • UWORLD Step 1 (
	Describe the arrangement of neuroblasts in Metencephalon	Must know	C2	Volume 3) 2023-2024
	Correlate the clinical conditions associated with it	Should know	С3	
	Focus on provision of curative and preventive health care measures	Should know	С3	
	Practice principle of bioethics	Nice to know	C3	
	Read relevant research article	Nice to know	C3	
Histology	Describe the histological structure of spinal cord	Must know	C2	Junqueira's Basic
Spinal cord and Cerebellum	Describe the histological structure of cerebellum	Must know	C2	Histology 18 th Edition USMLE Q Bank Step 1
	Discuss cells in each layer along with its histological morphology	Must know	C2	(Volume 1) 2023-2024 • UWORLD Step 1 (
	Illustrate the cross-sectional view of spinal cord and cerebellum	Must know	С3	Volume 3) 2023-2024
	Correlate the clinical conditions associated with it	Should know	С3	
	Focus on provision of curative and preventive health care measures	Should know	С3	
	Practice principle of bioethics	Nice to know	C3	
	Read relevant research article	Nice to know	C3	
Embryology	Describe the development of Mesencephalon	Must know	C2	
Development of Mesencephalon	Describe the arrangement of neuroblasts in mesencephalon	Must know	C2	KLM Embryology Developing Human
and Prosencephalon	Describe the development of pituitary gland	Must know	C2	• USMLE Q Bank Step 1 (Volume 1) 2023-2024
	Discuss the anatomical basis of pharyngeal hypophysis and craniopharyngiomas	Should know	С3	• UWORLD Step 1 (Volume 3) 2023-2024
	Discuss the anatomical basis of birth defects such as encephalocele, microencephaly, Arnold Chiari malformation	Should know	СЗ	
	Focus on provision of curative and preventive health care measures	Should know	С3	

	Practice principle of bioethics	Nice to know	С3	
	Read relevant research article	Nice to know	C3	
Histology	Describe the histological structure of cerebrum	Must know	C2	Junqueira's Basic Histology 18 th Edition
Cerebrum	Correlate the clinical conditions associated with it	Should know	С3	• USMLE Q Bank Step 1 (Volume 1) 2023-2024
	Focus on provision of curative and preventive health care measures	Should know	С3	• UWORLD Step 1 (Volume 3) 2023-2024
	Practice principle of bioethics	Nice to know	С3	
	Read relevant research article	Nice to know	С3	
	Describe the development of cranial nerves	Must know	C2	KLM Embryology Developing Human
Embryology Development of	Describe the development of spinal nerves	Must know	C2	• USMLE Q Bank Step 1 (Volume 1) 2023-2024
Peripheral and Autonomic	Describe the development of sympathetic nervous system	Must know	C2	• UWORLD Step 1 (Volume 3) 2023-2024
nervous system	Describe the development of parasympathetic nervous system	Must know	C2	
	Correlate the clinical conditions associated with it	Should know	С3	
	Focus on provision of curative and preventive health care measures	Should know	С3	
	Practice principle of bioethics	Nice to know	C3	
	Read relevant research article	Nice to know	СЗ	

Practical/Skill Lab (SKL)

Practical	At The End Of This Skill Lab, Should Be Able To Illustrate:	Calgary Gauge	Learning Domain	References
Ganglia	Identify the microscopic features of ganglia	Must know	P	Histology Junqueira's Basic Histology 18th Edition
	Illustrate histological picture of ganglia	Should know	C2	2. USMLE Q Bank Step 1 (Volume 1) 2023-2034
	List two points of identification	Must know	C1	3.UWORLD Step 1 (Volume 3) 2023-2024
Peripheral nerve	Identify the microscopic features of peripheral nerve on given histological slide	Must know	P	Histology Junqueira's Basic Histology 18th Edition USMLE Q Bank Step 1
	Illustrate histological picture of peripheral nerve	Should know	C2	(Volume 1) 2023-2034 3.UWORLD Step 1 (Volume 3)
	List two points of identification	Must know	C1	2023-2024
Spinal cord	Identify histological slide of spinal cord	Must know	P	1. Histology Junqueira's Basic Histology 18th Edition
	Illustrate histological picture of spinal cord	Should know	C2	2. USMLE Q Bank Step 1 (Volume 1) 2023-2034
	List two points of identification	Must know	C1	3.UWORLD Step 1 (Volume 3) 2023-2024
Cerebellum	Identify the microscopic features of cerebellum	Must know	P	Histology Junqueira's Basic Histology 18th Edition
	Illustrate histological picture of cerebellum	Should know	C2	2. USMLE Q Bank Step 1 (Volume 1) 2023-2034
	List two points of identification	Must know	C1	3.UWORLD Step 1 (Volume 3) 2023-2024

TOS for LMS Assessment of CNS Module-I 2nd Year MBBS, Batch -50 (Session 2023-24)

LMS Assessment for the second year MBBS for the CNS Module will be held on 05-08-2024 (Monday) from 9:00pm to 9:30pm. Detail of topics are mentioned in the table below:

S No.	Domain of	Topic	Number	Cognitive Domain		
	Teaching And Learning Activity		of MCQS	C1	C2	C3
1.	LGIS	Embryology Early development of CNS Development of spinal cord	04	1	1	2
		General Anatomy General anatomy of nervous system Autonomic nervous system Histology Nil	04	1	1	2
2.	SGD	Cranial fossae (Anterior, Middle & Posterior) Meninges Dural venous sinuses Cisterns Spinal cord (Ascending tracts)	20	5	5	10
3.	Practical	Peripheral nerve	02		1	1

MCQS=30 MCQS

Learning Resources:

- Embryology:- KLM Embryology Developing Human
- **Histology:** Junqueira's Basic Histology 18th Edition
- Gross Anatomy:- Snell's Neuroanatomy
- USMLE Q Bank Step 1 (Volume 1) 2023-2024
- **UWORLD Step 1** (Volume 3) 2023-2024

TOS for LMS Assessment of CNS Module-I 2nd Year MBBS, Batch -50 (Session 2023-24)

LMS Assessment for the second year MBBS for the CNS Module will be held on 12-08-2024 (Monday) from 9:00pm to 9:30pm. Details of topics are mentioned in the table below:

S No.	Domain of Teaching And	Торіс	No. of	No. of Cognitive Domain MCQS		
	Learning Activity		MCQS	C1	C2	С3
9.	LGIS	Embryology Development of Rhombencephalon General Anatomy	04	1	1	2
		Nil Histology Histology of spinal cord Histology of peripheral nerve	04	1	1	2
10.	SGD/Dissection	Spinal cord descending tracts Spinal cord lesions Medulla oblongata Pons Midbrain Fourth ventricle	20	5	5	10
11.	Practical	Ganglia	02	0	1	1

MCQS= 30 MCQS

Learning Resources:

- Embryology:- KLM Embryology Developing Human
- **Histology:** Junqueira's Basic Histology 18th Edition
- Gross Anatomy:- Snell's Neuroanatomy
- USMLE Q Bank Step 1 (Volume 1) 2023-2024
- **UWORLD Step 1** (Volume3) 2023-20

TOS for LMS Assessment of CNS Module-I 2nd Year MBBS, Batch -50 (Session 2023-24)

LMS Assessment for the second year MBBS for the CNS Module will be held on 19-08-2024(Monday) from 9:00pm to 9:30pm. Details of topics are mentioned in the table below:

S No.	Domain of Teaching And Learning	Торіс	No. of	No. of Cognitive Domain MCQs		
	Activity		MCQS	C 1	C2	C3
1.	LGIS	Embryology Development of Mesencephalon Development of Prosencephalon General Anatomy Nil	04	1	1	2
		Histology Histology of Cerebellum	04	1	1	2
2.	SGD/Dissection	Cerebellum Thalamus, Epithalamus & Subthalamus Hypothalamus Cortical areas, layers & lesions of Cerebrum	18	4	4	10
3.	Practical	Spinal cord	02	0	1	1
4.	CBL	Cystic Astrocytoma of Cerebellum	02	0	1	1

MCQS= 30 MCQS

Learning Resources:

- Embryology:- KLM Embryology Developing Human
- **Histology:** Junqueira's Basic Histology 18th Edition
- Gross Anatomy:- Snell's Neuroanatomy
- USMLE Q Bank Step 1 (Volume 1) 2023-2024
- UWORLD Step 1 (Volume 3) 2023-2024

Special Senses Module

Learning Objectives

Large Group Interactive Session (LGIS)

Topics	At the end of lecture students should be able to:	Learning Domains	Calgary Gauge	References
	Embryology	D cinamic		
	Define the pharyngeal arch apparatus.	C1	Must know	• Embryology :- KLM
Development of	Describe components of pharyngeal arches.	C2	Must know	Embryology Developing Human 11 th Edition
Pharyngeal apparatus	Enlist derivatives of each of pharyngeal arch.	C1	Must know	• USMLE Q Bank Step 1 (Volume 1) 2023-2034
	 Describe the development of pharyngeal grooves and pharyngeal membranes. 	C1	Must know	• UWORLD Step 1 (Volume 3) 2023-2024
	 Enlist the derivates of pharyngeal pouches and clefts. 	C1	Must know	
	 Enlist common birth defects associated with pharyngeal apparatus. 	C3	Must know	
	 Explain the embryological basis of these defects. 	С3	Must know	
	 Understand the bio-physiological aspects of arches. 	С3	Should know	
	• Correlate with the clinical conditions.	C3	Nice to know	
	 Understand provision of curative and preventive health care measures. 	СЗ	Nice to know	
	Practice principles of bioethics.Apply strategic use of AI in health care.	СЗ	Nice to know	
	Read relevant research article.	С3	Nice to know	
	Describe the developmental stages of face.	C2	Must know Must know	• Embryology :- KLM
Development of face, nasal	 Discuss the role of neural crest cells in development of facial skeleton and pharyngeal arch derivatives. 	C2 C3	Must know Must know	Embryology Developing Human 11 th Edition USMLE Q Bank Step 1
cavities	Describe the molecular regulation of facial development.	C2	Should know	(Volume 1) 2023-2034
	Discuss the congenital anomalies of face.	С3	Should know	UWORLD Step 1 (Volume 3) 2023-2024
	 Describe the development of nasal cavities and paranasal sinuses. Understand the bio-physiological 	C3 C2	Should know	
	aspects of face & nasal cavitiesCorrelate with the clinical	С3	Should know	
	 Conditions understand provision of curative and preventive health care measures. 	C3	Nice to know	

			-	
	Practice principles of bioethics	С3	Nice to know	
	Apply strategic use of AI in health care.	С3	Nice to know	-
-	Read relevant research article.	С3	Nice to know	
	Discuss the development of primary and secondary palate.	C2	Must know	
	Enlist the different varieties of cleft palate.	C1	Must know	-
Development of palate	Discuss the etiology of cleft lip and cleft palate.	С3	Must know	• Embryology :- KLM Embryology Developing
	Describe embryological basis of craniofacial anomalies.	C2	Must know	Human 11 th Edition USMLE Q Bank Step 1
	Understand the bio-physiological aspects of Palate.	С3	Should know	(Volume 1) 2023-2034
	Correlate with the clinical conditions	C3	Should know	UWORLD Step 1 (Volume 3) 2023-2024
	 Understand provision of curative and preventive health care measures. 	C3	Nice to know	(volume 3) 2023-2024
	Practice principles of bioethics.	С3	Nice to know]
	Apply strategic use of AI in health care.	C3	Nice to know	
	Read relevant research article.	C3	Nice to know	
	Describe the different embryological sources of development of eye.	C2	Must know	
Development of Eye I	Describe development of eye field on rostral neural tube.	C2	Must know	
(Optic Cup & Retina)	Enlist derivatives of optic cup and development of retina.	C2	Must know	• Embryology :- KLM Embryology Developing Human 11th
	Recall the differentiation of optic grooves and optic vesicle.	C2	Must know	Edition USMLE Q Bank Step 1 (Volume 1) 2023-2034
-	Discuss transformation of optic vesicles into optic cup.	C2	Must know	• UWORLD Step 1
	Describe development of retina.	C2	Must know	(Volume 3) 2023-2024
	Correlate with the clinical conditions.	C2	Should know	
	Understand provision of curative and preventive health care measures.	C2	Nice to know	
	Practice principles of bioethics.	C2	Nice to know	
	Apply strategic use of AI in health care.	C2	Nice to know	
	Read relevant research article.	C2	Nice to know	
	Describe formation of optic stalk.	C2	Must know	
Development of	Explain induction of optic placodes and lens primordia	C1	Must know	Embryology :- KLM
Eye II (Congenital defects)	Enumerate neural crest cell and mesenchymal derived eye structures.	C1	Must know	Embryology Developing Human 11 th Edition

	 Enlist the molecular regulation of eye development. 	C2	Must know	• USMLE Q Bank Step 1 (Volume 1) 2023-
	Discuss birth defects of the eye.	С3	Should know	2034
	• Correlate with the clinical conditions.	С3	Should know	UWORLD Step 1 (Volume 3) 2023-2024
	 Understand provision of curative and preventive health care measures. 	С3	Nice to know	
	Practice principles of bioethics.	СЗ	Nice to know	-
	Apply strategic use of AI in health care.	С3	Nice to know	-
	Read relevant research article.	СЗ	Nice to know	-
	• Explain the development of optic placodes, otic pit, otic vesicle and otic capsule.	C2	Must know	• Embryology :-
	Enlist derivatives of otic vesicle and otic capsule.	C2	Must know	KLM Embryology Developing Human
Development of Ear	 Describe development of middle ear cavity and Eustachian tube from tubotympanic recess. 	C2	Must know	11 th Edition USMLE Q Bank Step 1 (Volume 1)
	Describe the development of auditory ossicles, tympanic membrane and mastoid antrum.	C1	Must know	2023-2034 • UWORLD Step 1 (Volume 3) 2023-
	Discuss development of external acoustic meatus	СЗ	Must know	2024
	Enlist commom congenital anomalies associated with ear development	С3	Should know	
	Describe the embryological basis of these anomalies	СЗ	Nice to know	-
	Correlate with the clinical conditions	СЗ	Nice to know	
	 Understand provision of curative and preventive health care measures. 	С3	Nice to know	
	Practice principles of bioethics.	С3	Nice to know	1
	Apply strategic use of AI in health care.	C3	Nice to know	
	Read relevant research article.	C3		
	Histology			
	 Describe the structural differences between outer, middle and inner ear. 	C2	Must know	
Ear	Discuss the functions of different parts of ear.	C2 C2	Must know]
	Distinguish the auditory part of inner ear from the vestibular system.	C2	Must know	Histology :- Junqueira's Basic
	Discuss their roles in hearing & balance	C2	Must know	Histology 18th Edition USMLE Q
	Describe the fuction of sensory hair cells.	C2 C3	Must know	Bank Step 1 (Volume 1) 2023- 2034
	 Describe the appearance and function of spinal ganglia. 	С3	Must know	• UWORLD Step 1

	Understand the bio-physiological aspects of hearing	С3	Should know	(Volume 3) 2023- 2024
	Correlate with the clinical conditions.	C3	Should know	•
	Understand provision of curative and	C3	Nice to know	
	Preventive health care measures.Practice principles of bioethics.	С3	Nice to know	
	Apply strategic use of AI in health care.	С3	Nice to know	
	Read relevant research article.	С3	Nice to know	
	 Discuss the histology of different coats of the eyeball. 	C2	Must know	
Eye I	Describe histological sections of sclera & Cornea	C2	Must know	• Histology:- Junqueira's Basic
(Fibrous & Vascular coat)	Describe the histology of choroid ciliary body and iris.	C2	Must know	Histology 18th Edition USMLE Q
	 Discuss histological sections of accessory structures of the eye. 	C2	Must know	Bank Step 1 (Volume 1) 2023-
	Discuss the histological details of lens chamber & Vitroeus body	C2	Must know	2034
	Understand the bio-physiological aspects of vision	C2	Must know	UWORLD Step 1 (Volume 3) 2023-
	Correlate with the clinical conditions like glaucoma, cataract.	С3	Should know	2024
	understand provision of curative and	С3	Nice to know	
	 Preventive health care measures. Practice principles of bioethics. 	С3	Nice to know Nice to know	
	Apply strategic use of AI in health care.	СЗ	Nice to know	
	Read relevant research article.	С3	Nice to know	
	Describe layers of retina	C2	Must know	
	Discuss retinal pigment epithelium	C2	Must know	
Eye II (Retina & Photoreceptors)	Discuss histology& functions of neuronal retina.	C2	Must know	• iHistology :- Junqueira' USMLE Q Bank Step 1
	Describe photoreceptors & rod cells.	C2	Must know	(Volume 1) 2023-
	Understand the bio-physiological aspects of Palate.	С3	Must know	2034
	Correlate with the clinical conditions like retinal detachment	C2	Should know	UWORLD Step 1 (Volume 3) 2023-
	Understands provision of curative and preventive health care measure	С3	Nice to know	2024 • s Basic Histology
	Practice principles of bioethics.	С3	Nice to know	18th Edition
	Apply strategic use of AI in health care.	С3	Nice to know	
	Read relevant research article.	СЗ	Nice to know	

Small Group Discussion (SGD)

Topics	At the end of lecture students should be able	Learning	Calgary	References
	to:	Domains	Gauge	
F : 1.0	Define boundaries of Norma frontalis and	C1	Must know	
Facial &	verticalis.	C1	3.6 . 1	Clinical Oriented A section of the IV state I
Superior Aspect of Cranium	Enumerate their muscle attachment.	C1	Must know	Anatomy by Keith L. Moore.6TH Edition.
(Norma	Describe and features of its structure	C2	Must know	(Chapter 7, Page 823-
Frontalis &	Correlate with the clinical conditions.	C3	Should know	8291).
Verticalis.)	Understand provision of curative and	C3	Nice to know	• https://youtu.be/rr3-
<u></u>	preventive health care measures.Practice principles of bioethics	C3	Nice to know	V7Qhf8E
<u> </u>	1 1	C3	Nice to know	• https://youtu.be/35Y71cR
	Apply strategic use of AI in health careRead relevant research article	C3	Nice to know	<u>Bqs8</u>
	Read relevant research article	C3	Nice to know	• USMLE Q Bank Step 1
				(Volume 1) 2023-2034
				•
				UWORLD Step 1
				(Volume 3) 2023-2024
	Describe bones forming the base of skull	C2	Must know	Clinical Oriented Anatomy
	Explain the details of anterior, middle and	C2	Must know	by Keith L. Moore.6TH
External Surface	posterior part of base of skull		171000 11110 11	Edition. (Chapter 7, P829-
of Cranial Base	Identify different foramina and structures	C1	Must know	836).
(Norma	passing through them.			• https://youtu.be/6ZjJPLOJ
Basalis)	Explain the attachments and relations of	C2	Must know	<u>0N8</u>
	base of skull.			• https://youtu.be/75lLaDFJ
	Fracture of cranial base	C2	Must know	<u>TP4</u>
	Head injuries and intracranial hemorrhage	C3	Must know	• https://youtu.be/fteiKT_w
	Correlate with the clinical conditions	C3	Should know	QDE USMLE Q Bank
	Understand provision of curative and	C3	Nice to know	Step 1 (Volume 1) 2023- 2034
	preventive health care measures.			• UWORLD Step 1
	Practice principles of bioethics	C3	Nice to know	(Volume 3) 2023-2024
	Apply strategic use of AI in health care	C3	Nice to know	(
	Read relevant research article	C3	Nice to know	
	• Enlist various bones in normal lateralis.	C1	Must know	Clinical Oriented Anatomy
	Describe the cranial and facial			by Keith L. Moore.6TH
Lateral &	subdivision. Define external acoustic			Edition. (Chapter 7, Page
Occipital Aspect	meatus,Discuss attachments of mastoid and	C2	Must know	827-829).
of Cranium	styloid process.	CZ	Must know	https://youtu.be/tkpzPMXz
(Norma	Explain the boundaries of Norma	C2	Must know	wiM
Lateralis.	occipitalis.	02	TVIGST KITO W	• https://youtu.be/9Msvtw5C
& Occipitalis)	Identify different foramina and structures	C1	Must know	iFY USMLE Q Bank
	passing through them at the base.	- · •		Step 1 (Volume 1) 2023-
	• Explain its attachments and relations.	C2	Must know	2034
	Correlate with the clinical conditions	С3	Should know	• UWORLD Step 1
	Understand provision of curative and	C3	Nice to know	(Volume 3) 2023-2024
	preventive health care measures.	0.5	1 1100 to know	
	Provident of the arter interestres.		I	1

	Practice principles of bioethics	C3	Nice to know	
	Apply strategic use of AI in health care	C3	Nice to know	
	Read relevant research article	C3	Nice to know	
	Describe the anatomical features of mandible	C2	Must know	Clinical Oriented Anatomy by Keith L. Moore.6TH Edition.
	Describe parts of mandible	C2	Must know	• https://youtu.be/_lHosB-
Mandible	Explain structural features of each part	C2	Must know	<u>c fQ</u>
	Enlist attachments of each part	C1	Must know	• https://youtu.be/Qc0ysewM Jg4 USMLE Q Bank Step
	Describe blood and nerve supply of mandible.	C2	Must know	1 (Volume 1) 2023-2034
	Interpret applied anatomy of mandible.	С3	Must know	UWORLD Step 1 (Volume 3) 2023-2024
	Correlate with the clinical conditions	C3	Should know	3) 2023-2024
	understand provision of curative and preventive health care measures.	С3	Nice to know	
	Practice principles of bioethics	C3	Nice to know	
	Apply strategic use of AI in health care	C3	Nice to know	
	Read relevant research article	C3	Nice to know	
	• Discuss the temporomandibular joint, its type, formation and neurovascular supply.	C2	Must know	Clinical Oriented
Temporomandib	Describe the movement's axis and muscles involved.	C2	Must know	Anatomy by Keith L. Moore.6TH Edition.
ular joint (TMJ)	Correlate clinically disorders of the temporo- mandibular joint.	СЗ	Must know	(Chapter 7, Page 916- 920).
	Correlate with the clinical conditions	С3	Should know	• https://youtu.be/6tJsi5og
	Understand provision of curative and preventive health care measures.	С3	Nice to know	https://youtu.be/0BKU04 QLzV0 USMLE Q
	Practice principles of bioethics	С3	Nice to know	Bank Step 1 (Volume 1)
	Apply strategic use of AI in health care	С3	Nice to know	2023-2034
	Read relevant research article	С3	Nice to know	• UWORLD Step 1 (Volume 3) 2023-2024
	Discuss limits of face.	C2	Must know	
	Tabulate the muscles of face. (Superficial and deep) origin, insertion, nerve supply and action.	C2	Must know	Gross Anatomy :- KLM clinically oriented anatomy edition 10
Face	Discuss their role in facial expression.	C2	Must know	• USMLE Q Bank Step 1 (Volume 1) 2023-2034
	Describe facial nerve palsy upper and lower motor neuron.	С3	Must know	UWORLD Step 1 (Volume 3) 2023-2024
	Discuss nerve supply of face.	C1	Must know	
	Discuss superficial and deep vasculature of face.	C1	Must know	
	Map the outline of facial artery and vein on simulated patient / model.	P+A	Must know	Gross Anatomy:- KLM clinically oriented
	Correlate with the clinical conditions	C3	Should know	anatomy edition 10

	Understand provision of curative and preventive health care measures.	С3	Nice to know	• USMLE Q Bank Step 1 (Volume 1) 2023-2034
	Practice principles of bioethics	C3	Nice to know	UWORLD Step 1
	Apply strategic use of AI in health care	C3	Nice to know	(Volume 3) 2023-2024
	Read relevant research article	C3	Nice to know	
	Explain the extent of scalp	C2	Must know	
a	Describe the Scalp layers, nerves &vessels	C2	Must know	• Gross Anatomy :- KLM clinically
Scalp and temple	Discuss the clinical correlates like scalp injuries and scalp wounds.	С3	Must know	oriented anatomy edition 10
	Correlate with the clinical conditions	С3	Should know	• USMLE Q Bank Step 1 (Volume 1) 2023-
	Understand provision of curative and preventive health care measures.	С3	Nice to know	2034 UWORLD Step 1
	Practice principles of bioethics	C3	Nice to know	(Volume 3) 2023-2024
	Apply strategic use of AI in health care	C3	Nice to know	
	Read relevant research article	C3	Nice to know	
	Discuss its location, surfaces and borders	C2	Must know	
	Describe its muscular and ligamentous attachment.	C2	Must know	
Orbit	Describe eyeball movements in relation to recti and oblique muscles.	C2	Must know	Clinical Oriented Anatomy by Keith L. Moore.6TH
	Discuss role of levator palpebrae superioris	C2	Must know	Edition. (Chapter 7, Page 889-906).
	Discuss clinical correlations of different coats of eyeball.	C2	Must know	• https://youtu.be/HKEA4p5 k66U
	Explain extent and subdivisions of pharynx	C2	Must know	• https://youtu.be/Oz4kGGiJ NrA • USMLE Q Bank Step 1
	Correlate with the clinical conditions	C3	Should know	(Volume 1) 2023-2034
	Understand provision of curative and preventive health care measures.	С3	Nice to know	• UWORLD Step 1
	Practice principles of bioethics	C3	Nice to know	(Volume 3) 2023-2024
	Apply strategic use of AI in health care	C3	Nice to know	
	Read relevant research article	C3	Nice to know	
	Describe anatomy of eyeball with suspensory apparatus.	C2	Must know	Gross Anatomy :- KLM
Eyeball	Discuss different coats of eyeball with their nerve and blood supply.	C2	Must know	clinically oriented anatomy edition 10
-	Discuss refractive media and compartments of eyeball.	C2	Must know	• USMLE Q Bank Step 1 (Volume 1) 2023-2034
	Correlate with the clinical conditions	C3	Should know	UWORLD Step 1
	Understand provision of curative and preventive health care measures.	С3	Nice to know	(Volume 3) 2023-2024
	Practice principles of bioethics	C3	Nice to know	
	Apply strategic use of AI in health care	C3	Nice to know	
	Read relevant research article	C3	Nice to know	
	Discuss the different components of lacrimal apparatus	C2	Must know	

Eyelid & lacrimal app	Describe the lacrimal gland and its neurovascular supply	C2	Must know	Gross Anatomy :- KLM clinically oriented anatomy
	Correlate with the clinical conditions	C3	Should know	edition 10
	understand provision of curative and preventive health care measures.	С3	Nice to know	• USMLE Q Bank Step 1 (Volume 1) 2023-2034
	Practice principles of bioethics	C3	Nice to know	UWORLD Step 1
	Apply strategic use of AI in health care	C3	Nice to know	(Volume 3) 2023-2024
	Read relevant research article	C3	Nice to know	
	Describe boundaries of parotid region.	C2	Must know	
Parotid &	Discuss surfaces, innervation and relations of parotid gland.	C2	Must know	• Gross Anatomy :- KLM clinically oriented anatomy
Temporal Region	Understand the bio-physiological aspects of arches	C2	Must know	edition 10 • USMLE Q Bank Step 1
	Map the outline of parotid gland and duct on simulated patient / model.	P+As	Must know	(Volume 1) 2023-2034 UWORLD Step 1
	Correlate with the clinical conditions	C3	Should know	(Volume 3) 2023-2024
	• understand provision of curative and preventive health care measures.	C3	Nice to know	
	Practice principles of bioethics	C3	Nice to know	
	Apply strategic use of AI in health care	C3	Nice to know	
	Read relevant research article	C3	Nice to know]
	Discuss the boundaries and contents of temporal region.	C2	Must know	Clinical Oriented Anatomy by Keith L.
	Describe the temporalis muscle and its relations	C2	Must know	Moore.6TH Edition. (Chapter 7, Page 916-
Infra temporal Fossa	• Enumerate the boundaries and contents of infratemporal region.	C1	Must know	926).
	Discuss muscles of mastication	C2	Must know	https://youtu.be/z2GlluoC
	Correlate with the clinical conditions	C3	Should know	<u>tMY</u>
	• understand provision of curative and preventive health care measures.	C3	Nice to know	https://youtu.be/ixCCX46 XWHA NONE O. P. J. St. 4
	Practice principles of bioethics	C3	Nice to know	• USMLE Q Bank Step 1
	Apply strategic use of AI in health care	C3	Nice to know	(Volume 1) 2023-2034
	Read relevant research article	С3	Nice to know	UWORLD Step 1 (Volume 3) 2023-2024
	Discuss the boundaries and contents of pterygopalatine fossa.	C2	Must know	Clinical Oriented Anatomy by Keith L.
Pterygopalatine Fossa	Discuss the communications of pterygopalatine fossa.	C2	Must know	Moore.6TH Edition. (Chapter 7, Page 951-
	Understand the bio-physiological aspects of arches	C2	Must know	954) • https://youtu.be/9taW-
	Correlate with the clinical conditions	C3	Should know	Th3ycc
	understand provision of curative and preventive health care measures	С3	Nice to know	• https USMLE Q Bank Step 1 (Volume 1) 2023-
	Practice principles of bioethics	C3	Nice to know	2034
	Apply strategic use of AI in health care	С3	Nice to know	IIWODI D Stan 1
	Read relevant research article	C3	Nice to know	UWORLD Step 1 (Volume 3) 2023-2024

				://youtu.be/o JbDynMZjo
	Describe parts of the ear.	C2	Must know	Clinical Oriented Anatomy
	Discuss walls and contents of external and	C2	Must know	by Keith L. Moore.6TH
	middle ear,			Edition. (Chapter 7, Page
External &	Discuss their blood and nerve supply.	C2	Must know	966-973).
Middle Ear	Explain pharynges tympanic tube,	C2	Must know	• <u>https://youtu.be/VRLm7cp</u>
	mastoid antrum and air cells.			<u>mZSk</u>
	Relation of chorda tympani and facial	C1	Must know	• https://youtu.be/unDpXRE
	nerve.			PPA
	Discuss Mastoiditis and tubal blockage	С3	Must know	• USMLE Q Bank Step 1
	Correlate with the clinical conditions	C3	Should know	(Volume 1) 2023-2034
	understand provision of curative and	C3	Nice to know	• UWORLD Step 1
	preventive health care measures			(Volume 3) 2023-2024
	Practice principles of bioethics	C3	Nice to know	(Volume 3) 2023 2021
	Apply strategic use of AI in health care	C3	Nice to know	
	Read relevant research article	C3	Nice to know	
	Discuss membranous and bony labyrinth.	C2	Must know	• Gross Anatomy :- KLM
I D	Describe internal acoustic meatus.	C2	Must know	clinically oriented anatomy
Inner Ear	• Explain the course of 7th and 8th cranial	C2	Must know	edition 10
	nerve in detail.			• USMLE Q Bank Step 1
	Correlate with the clinical conditions	C3	Should know	(Volume 1) 2023-2034
	understand provision of curative and	C3	Nice to know	UWORLD Step 1 (Volume 3) 2023-2024
	preventive health care measures	C2	NI. 4 1	(Volume 3) 2023 2021
	Practice principles of bioethics	C3	Nice to know	-
	Apply strategic use of AI in health care	C3	Nice to know	-
	Read relevant research article	C3 C2	Must know	Course Assets and WIM
	Discuss anatomy and location of paranasal air sinuses separately.	CZ	Must know	• Gross Anatomy :- KLM clinically oriented
	Define & list names of paranasal sinuses	C1	Must know	anatomy edition 10
	Describe their blood and nerve supply	C2	Must know	USMLE Q Bank Step 1
	Describe functions of paranasal sinuses.	C2	Must know	(Volume 1) 2023-2034
Nose &	 Discuss drainage of paranasal sinuses. 	C2	Must know	UWORLD Step 1
Paranasal	Identify carious sinuses in radiographs	C1	Must know	(Volume 3) 2023-2024
Sinuses	Describe anatomy of external nose and	C2	Must know	-
	features of nasal septum, side and	02	Widst Kilo W	
	anatomical position.			
	Describe details of olfactory receptors and	C2	Must know	1
	formation of olfactory nerve.			
	Discuss blood and nerve supply of	C2	Must know]
	external nose and nasal septum.			
	• Explain functions of nose.	C2	Must know	
	Discuss in detail clinical correlates of	C2	Should know	
	external nose and nasal septum. Lateral			
	nasal wall and their importance.		G1 111	
	Discuss on clinical importance of nasal	C3	Should know	
	cavity.	C2	Cl1 1 1	-
	Correlate with the clinical conditions	C3	Should know	4
	understand provision of curative and proventive health agree measures.	C3	Nice to know	
	preventive health care measures			

Practice principles of bioethics	C3	Nice to know
Apply strategic use of AI in health care	C3	Nice to know
Read relevant research article	C3	Nice to know

Practical/Skill Lab (SKL)

Topics	At the End of Demonstration Student Should Be Able To	Learning Domains	_Importance_	References
	Identify the histological slide cornea.	Р	Must know	Histology:-Junqueira's Basic Histology 18th
Cornea	Illustrate the microscopic picture of Cornea.	C2	Should know	• USMLE Q Bank Step 1 (Volume 1) 2023-2034
	 Enlist two points of identification of each Read a relevant research article 	C1 C3	Must know Nice to know	UWORLD Step 1 (Volume 3) 2023-2024
	Identify the histological slide of retina.	Р	Must know	Histology:-Junqueira's Basic Histology 18th
Retina	Illustrate the microscopic picture of retina	C2	Should know	Edition USMLE Q Bank Step 1
	Enlist two points of identification	C1	Must know	(Volume 1) 2023-2034 UWORLD Step 1
	Read a relevant research article	С3	Nice to know	(Volume 3) 2023-2024
	 Identify the histological slide of ear 	P	Must know	Histology:-Junqueira's Basic Histology 18th
Ear	Illustrate the microscopic picture of ear	C1	Should know	EditionUSMLE Q Bank Step 1 (Volume 1) 2023-2034
	Enlist two points of identification of each	C1	Must know	UWORLD Step 1 (Volume 3) 2023-2024
	Read a relevant research article	С3	Nice to know	

TOS for LMS Assessment of Special Senses Module-I 2nd Year MBBS, Batch -50 (Session 2023-24)

LMS based Assessment for special senses module will be held on 23-09-2024 (Wednesday) from 11:30pm to 12:00pm. Detail of topics are mentioned in the table below:

S No.	Domain of Teaching and	Topic	No. of MCQs				
	Learning Activity			C1	C2	С3	
1.	LGIS	Embryology Development of Eye-I	4	1	1	2	
		Histology Histology of eye1	4	1	1	2	
2.	SGD	Facial and superior aspect of cranium (Norma frontalis & Norma verticalis), Norma Basalis, scalp ,Mandible, Temporomandibular joint	18	5	5	8	
3.	Practical	Histology of cornea.	2	0	1	1	
4.	CBL	Extra Dural hemorrhage.	2	0	1	1	

MCQS = 30

Learning Resources:

- Embryology :- KLM Embryology Developing Human 11th Edition
- **Histology**:-Junqueira's Basic Histology 18th Edition
- Gross Anatomy:- KLM clinically oriented anatomy edition 10
- USMLE Q Bank Step 1 (Volume 1) 2023-2034 UWORLD Step 1 (Volume 3) 2023-2024

Endocrinology Module Learning Objectives

Large Group Interactive Session (LGIS)

Topic	Learning Objectives	Calgary	Learning	References	
	At the end of lecture students should be able to	Gauge	Domain		
	Histology				
	Describe histological structure of pituitary and pineal gland	C2	Histology :- Junqueira's Basic Histology 18th		
	Enumerate different cells present in both glands	Must know	C1	Edition USMLE Q Bank Step 1	
Pituitary and pineal glands	Discuss bio-physiological aspects related to their secretions	Must know	C2	(Volume 1) 2023-2034 UWORLD Step 1	
	Correlate with the clinical conditions	Should know	C3	(Volume 3) 2023-	
	Focus on provision of curative and preventive health care measures	Nice to know	СЗ	2024LGIS	
	Practice principles of bioethics	Nice to know	C3		
	Apply strategic use of AI in health care	Nice to know	С3		
	Read relevant research article				
Thyroid and parathyroid	Describe histological structure of thyroid and parathyroid gland	Must know	C2	Histology :- Junqueira's Basic Histology 18th	
glands	• Enumerate different cells present in both glands	Must know	C1	Edition	
	Discuss bio-physiological aspects related to their secretions	Must know	C2	USMLE Q Bank Step 1 (Volume 1) 2023-2034 UWORLD Step 1	
	Correlate with the clinical conditions	Should know	C3	(Volume 3) 2023-	
	focus on provision of curative and preventive health care measures	Nice to know	СЗ	2024LGIS	
	Practice principles of bioethics	Nice to know	C3		
	Apply strategic use of AI in health care	Nice to know	С3		
	Read relevant research article				
Adrenal gland	Describe histological structure of adrenal gland.	Must know	C2	Histology :- Junqueira's Basic Histology 18th	
	Enumerate different cells present in gland	Must know	C1	Edition USMLE Q Bank Step 1	
	Discuss bio-physiological aspects related to secretions.	Must know	C2	(Volume 1) 2023-2034 UWORLD Step 1	

	Correlate with the clinical conditions	Should know	С3	(Volume 3) 2023-
	 focus on provision of curative and preventive health care measures 	Nice to know	СЗ	2024LGIS
	Practice principles of bioethics	Nice to know	C3	
	Apply strategic use of AI in health care	Nice to know	C3	
	Read relevant research article			
	Embryology			
Pituitary and pineal glansd	 Describe stages of development of pituitary and pineal glands 	Must know	C2	Embryology :- KLM
	 Enumerate structures involved in development of glands 	Must know	C1	Embryology Developing Human 11 th Edition
	 Discuss congenital abnormalities related to development of glands 	Must know	C2	USMLE Q Bank Step 1
	Correlate with the clinical conditions	Should know	С3	(Volume 1) 2023-2034
	 focus on provision of curative and preventive health care measures 	Nice to know	C3	UWORLD Step 1 (Volume 3) 2023-2024
	 Practice principles of bioethics 	Nice to know	C3	
	• Apply strategic use of AI in health care	Nice to know	C3	
	Read relevant research article			
Thyroid and parathyroid	Describe a stage of development of thyroid and parathyroid glands	Must know	C2	Embryology Developing Human
glands	 Enumerate structures involved in development of glands 	Must know	C1	11 th Edition USMLE Q Bank Step 1
	 Discuss congenital abnormalities associated with their development 	Must know	C2	(Volume 1) 2023-2034 UWORLD Step 1 (Volume 3) 2023-2024
	Correlate with the clinical conditions	Should know	С3	
	 focus on provision of curative and preventive health care measures 	Nice to know	C3	
	Practice principles of bioethics	Nice to know	C3	
	• Apply strategic use of AI in health care	Nice to know	C3	
	• Read relevant research article			
Adrenal gland	Describe stages of development of adrenal glands	Must know	C2	Embryology :- KLM Embryology
	 Enumerate structures involved in the development of gland. 	Must know	C1	Developing Human 11 th Edition
	 Discuss congenital abnormalities associated with its development. 	Must know	C2	USMLE Q Bank Step 1 (Volume 1) 2023-2034 UWORLD Step 1
	Correlate with the clinical conditions	Should know	C3	(Volume 3) 2023-2024
	 focus on provision of curative and preventive health care measures 	Nice to know	С3	

Practice principles of bioethics	Nice to know	С3
Apply strategic use of AI in health care	Nice to know	C3
Read relevant research article	Nice to know	C3

Small Group Discussion (SGD)

Topic	Learning Objectives	_Importance_	Learning	References
	At the end of lecture students should be able		Domain	
	to			
Bones of neck	Describe the borders and surfaces of body	Must know	C2	• Gross Anatomy :-
Hyoid Bone	and the two cornuas of hyoid bone.			KLM Clinical
Cervical	• Discuss the attachments on the hyoid bone.	Must know	C2	Oriented Anatomy by
vertebrae	• Discuss the related applied of hyoid.	Must know	C2	Keith L. Moore.6TH
	Describe anatomical features of cervical	Must know	C2	Edition. (Chapter 8,
	typical & atypical vertebrae.			Page 982-985).
	• Discuss the intervertebral joints&	Must know	C2	• https://youtu.be/Mrtt9s 72a7I?si=-
	movements of cervical region of vertebral			1CPt14ihH7g0tKE
	column.	3.5 1		• https://youtu.be/4Q244
	• Discuss the anatomical basis of cervical pain	Must know	C2	XGveyQ?si=TH6IM2J
	& injuries of cervical vertebral column	36 . 1	G2	f43P SBv3
	Correlate with the clinical conditions	Must know	C3	https://teachmeanatom
	Map the outline of hyoid bone on a	Should know	P	y.info/neck/bones/hyoi
	simulated patient or model	C11.1.1	C2	d-bone/
	• focus on provision of curative and	Should know	C3	USMLE Q Bank Step
•	preventive health care measures	Nice to know		1 (Volume 1) 2023-
	Practice principles of bioethics		C3	2034
	Apply strategic use of AI in health care	Nice to know	C3	UWORLD Step 1
D : 037 1	Read relevant research article	Nice to know	C3	(Volume 3) 2023-2024
Fascias of Neck.	Understand cervical subcutaneous tissue &	Must know	C2	Clinical Oriented
	platysma.	Must know	C2	Anatomy by Keith L.
	• Discuss the deep cervical fascia and the	Must know	C2	Moore.6TH Edition. (Chapter 8, P 989-
•	formation of layers due to its condensation.	Must know	C2	992).
	Discuss the attachments and special features of the investing layer.	Wiust Know	CZ	• https://youtu.be/nSaa
	of the investing layer.Describe the attachments and special	Must know	C2	WPzG4Zk?si=Muj6x
	features of prevertebral fascia.	Wiust Kilow	CZ	MLX8fYkPOie
	Describe the attachments and special	Must know	C2	• https://youtu.be/dEpC
	features of pretracheal fascia.	Widst Know	CZ	SJajCew?si=OM4W
	Discuss the carotid sheath formation,	Must know	C2	bKbS7Eodte4
	contents and relations.	111450 IIIIO 11	22	• https://teachmeanato
	Differentiate between the buccopharyngeal	Must know	C3	my.info/neck/misc/fa
	fascia and pharyngobasilar fascia.			scial-layers/
	Correlate with the anatomical basis of	Should know	P	USMLE Q Bank Step 1
	cervical pain & injuries of cervical vertebral			(Volume 1) 2023-2034
	column			UWORLD Step 1
	focus on provision of curative and	Should know	C3	(Volume 3) 2023-2024
	preventive health care measures			_
	Practice principles of bioethics	Nice to know	C3	_
	Apply strategic use of AI in health care	Nice to know	C3	_
	Read relevant research article	Nice to know	C3	
	• Discuss the location, attachments & actions	Must know	C2	• Gross Anatomy :-
	of SCM & trapezius.			KLM clinically

Superficial	Describe boundaries & location of posterior	Must know	C2	oriented anatomy
structures of the	cervical region.	Widst Know	02	edition 10
neck	Discuss suboccipital triangle of neck & its	Must know	C2	USMLE Q Bank
	contents.	111dSt Mile W	O 2	Step 1 (Volume 1)
	Discuss the location, attachments & actions	Must know	C2	2023-2034
	of SCM & trapezius.			UWORLD Step 1
	Describe boundaries & location of posterior	Must know	C2	(Volume 3) 2023-
	cervical region.			2024
	Discuss the anatomical basis of cervical	Must know	C2	SGD, Skill lab
	pain & injuries of cervical vertebral column			
	• Correlate with the clinical conditions focus	Must know	C3	
	on provision of curative and preventive			
	health care measures			_
	Practice principles of bioethics	Should know	P	_
	Apply strategic use of AI in health care	Should know	C3	_
	Read relevant research article	Nice to know	C3	
lateral cervical	Describe boundaries of posterior triangle.	Must know	C2	Clinical Oriented
region-(Muscles	• Discuss the muscles in lateral cervical	Must know	C2	Anatomy by Keith L.
& triangles)	region. (splenius capitus, levator scapulae,			Moore.6TH Edition.
	middle scalene &posterior scalene.	3.6 1	C2	(Chapter 8, Page 992- 999).
	Describe boundaries and contents of	Must know	C2	• https://youtu.be/bk9K
	occipital triangle	Must know	C2	A2nR7PA?si=jBEzE
	Discuss boundaries and contents of The leavest triangle	Must know	C2	d-MWZ83ne6a
	subclavian triangle	Must know	C2	• https://youtu.be/kPU
	• Discuss the anatomical basis of cervical pain & injuries of cervical vertebral column	Wiust Kilow	CZ	wVJE j0I?si=
	Correlate with the clinical conditions	Must know	C2	Ozn5s bZLuoq-a
•	Map the outline of triangles of neck	Must know	C3	https://teachmeanatomy.i
	(posterior, occipital and subclavian) on a	Widst Kilow	CJ	nfo/neck/areas/posterior
	simulated patient or model			triangle.
•	focus on provision of curative and	Should know	P	
	preventive health care measures		-	USMLE Q Bank Step 1
	Practice principles of bioethics	Should know	С3	(Volume 1) 2023-2034
	Apply strategic use of AI in health care	Nice to know	С3	UWORLD Step 1 (Volume 3) 2023-2024
	Read relevant research article	Nice to know	C3	(Volume 3) 2023-2024
Anterior	Discuss the Muscles in anterior cervical	Must know	C2	Clinical Oriented
cervical region-	region (suprahyoid muscle group &		02	Anatomy by Keith L.
(Muscles	infrahyoid muscle group)			Moore.6TH Edition.
	Discuss the anatomical basis of torticollis	Must know	С3	(Chapter 8, Page,999-
	Correlate with the clinical conditions	Should know	С3	1005).
•	focus on provision of curative and	Nice to know	С3	• https://youtu.be/hnLt
	preventive health care measures			AYvAMkw?si=EWZ
	Practice principles of bioethics	Nice to know	С3	CqciSD2K91uo4
	Apply strategic use of AI in health care	Nice to know	С3	• https://youtu.be/YOg
	Read relevant research article	Must know	С3	E2pmXfZg?si=7hU- ZAw7wcaomUyI
				https://teachmeanatomy.i
				nfo/neck/areas/anterior-
				triangle/ USMLE Q
				Bank Step 1 (Volume 1)
]		= a > top 1 (, oranie 1)

				2023-2034 UWORLD Step 1 (Volume 3) 2023-2024
Anterior Cervical	Discuss arterial supply in anterior cervical region (carotid system of arteries)	Must know	C2	• Gross Anatomy :- KLM clinically
Region-(Vessels of neck &	Discuss venous drainage in anterior cervical region	Must know	C2	oriented anatomy edition 10
Cervical plexus)	Discuss formation of cervical plexus	Must know	C2	USMLE Q Bank
	Enumerate branches of cervical plexus	Must know	C2	Step 1 (Volume 1)
	Discuss area of distribution	Must know	C2	2023-2034
	Correlate with the clinical conditions	Should know	С3	UWORLD Step 1
	Map the outline of carotid vessels and jugular vessels on a simulated patient or model.	Nice to know	Р	(Volume 3) 2023- 2024
	focus on provision of curative and preventive health care measures	Nice to know	С3	
	Practice principles of bioethics	Nice to know	C3	
	Apply strategic use of AI in health care	Nice to know	С3	
	Read relevant research article	Nice to know	С3	
Submandibular Region	• Discuss the relations of digastric, mylohyoid and hyoglossus muscles.	Must know	C2	• Gross Anatomy:- KLM clinically
Ü	Describe the gross features, relations, blood supply, lymphatic drainage and nerve supply of submandibular salivary gland.	Must know	С3	oriented anatomy edition 10 • USMLE Q Bank Step
	Describe the details of Wharton's duct, its opening and related clinicopathological conditions	Should know	C3	1 (Volume 1) 2023- 2034 UWORLD Step 1
	• Describe the gross features, relations, blood supply, lymphatic drainage and nerve supply of sublingual salivary gland.	Nice to know	C3	(Volume 3) 2023-2024
	Tabulate the comparison of three salivary glands.	Nice to know	С3	
	Describe the connections and branches with area of supply by the sub-mandibular ganglion.	Nice to know	С3	
	Correlate with the clinical conditions	Nice to know	С3	
	Map the outline for relevant structures on a simulated patient or model	Nice to know	С3	
	focus on provision of curative and preventive health care measures	Must know	С3	
	Practice principles of bioethics	Must know	C3	
	Apply strategic use of AI in health care	Nice to know	C3	
	Read relevant research article	Nice to know	C3	
Soft Palate	Discuss the anatomy of soft palate along with attachment of muscles and their actions.	Must know	C2	Clinical Oriented Anatomy by Keith L. Moore.6TH Edition.
	Describe boundaries of tonsillar fossa.	Must know	C2	(Chapter 8, Page 1021-
	Correlate with the clinical conditions	Should know	С3	1032).

	focus on provision of curative and	Nice to know	C3	https://youtu.be/eBn3PM
	preventive health care measures			X0tfk?si=hCg37nm5DsR
	Practice principles of bioethics	Nice to know	С3	6T1 s
	Apply strategic use of AI in health care	Nice to know	С3	https://youtu.be/4SDETzy
	Read relevant research article	Nice to know	С3	JCVI?si=zWSHGf-
				prTqR1kqi
				USMLE Q Bank Step 1
				(Volume 1) 2023-2034
				UWORLD Step 1 (Volume 3) 2023-2024
Deep structures	Discuss prevertebral muscles (ant. vertebral	Must know	C2	• Gross Anatomy :-
of neck	muscles & lateral vertebral muscles)	Trust kilo v	O 2	KLM clinically
	Correlate with the clinical conditions	Must know	С3	oriented anatomy
	focus on provision of curative and	Should know	C3	edition 10
	preventive health care measures			 USMLE Q Bank Step
•	Practice principles of bioethics	Should know	С3	1 (Volume 1) 2023-
	Apply strategic use of AI in health care	Nice to know	C3	2034
•	Read relevant research article	Nice to know	С3	UWORLD Step 1
				(Volume 3) 2023-2024
Root of Neck	Discuss arteries & veins in root of neck.	Must know	C2	Gross Anatomy :-
	• Discuss nerve supply in root of neck.	Must know	C2	KLM clinically
	Correlate with the clinical conditions	Should know	C3	oriented anatomy
	focus on provision of curative and	Nice to know	C3	edition 10
	preventive health care measures		03	 USMLE Q Bank Step
	Practice principles of bioethics	Nice to know	C3	1 (Volume 1) 2023-
	Apply strategic use of AI in health care	Nice to know	C3	— 2034
	Read a relevant research article	Nice to know	C3	UWORLD Step 1 (Volume 3) 2023-2024
Thyroid and	• Discuss anatomy & functions of thyroid	Must know	C2	• Clinical Oriented
para thyroid	& parathyroid gland		62	Anatomy by Keith L.
glands	Discuss blood supply of thyroid gland	Must know	C2	Moore.6TH Edition.
8	Discuss lymphatic drainage & nerve	Must know	C2	(Chapter 8, Page 1018-
	supply of thyroid gland	Trust kilo v	02	1021).
	• Correlate with the clinical conditions	Should know	C3	https://youtu.be/7_Rd7
		Nice to know	P	<u>IIEZPI?si=mhoplCBj</u>
	Map the outline of thyroid ghand on a simple to direct on model.	NICC to Know	Г	HSUL6pwIhttps://youtu.be/ruOirr
	simulated patient or model	Nice to know	C3	Ic6oY?si=frzfEV7Lqb
	• focus on provision of curative and	Nice to know	C3	52Pp6Q
	preventive health care measures	Nice to know	<u></u>	https://teachmeanatomy.i
	Practice principles of bioethics		C3	nfo/neck/viscera/thyroid-
	• Apply strategic use of AI in health care	Nice to know	C3	gland/ USMLE Q Bank
	• Read a relevant research article	Must know	C2	Step 1 (Volume 1) 2023-
				2034
				UWORLD Step 1
Lowwy	• Discouga lawrery in datail with its	Must know	C2	(Volume 3) 2023-2024
Larynx	Discuss larynx in detail with its	WIUST KIIOW	C2	Gross Anatomy :- KLM clinically
	cartilages and muscles.	Must know	<u>C2</u>	oriented anatomy
	• Discuss blood supply of larynx		C2	edition 10
	Discuss functions of larynx	Must know	C2	03.0011 10

	• Discuss trachea (revisit).	Must know	C2	USMLE Q Bank Step		
	Map the outline of laryngeal cartilages	Should know	P	1 (Volume 1) 2023-		
	and trachea on a simulated patient or			2034		
	model.			UWORLD Step 1		
	• Correlate with the clinical conditions	Nice to know	C3	(Volume 3) 2023-		
	• focus on provision of curative and	Nice to know	С3	2024		
	preventive health care measures					
	• Practice principles of bioethics	Nice to know	C3			
	• Apply strategic use of AI in health care	Nice to know	С3			
	Read a relevant research article.	Must know	С3			
Pharynx	• Tabulate muscles of pharynx with origin,	Must know	C2	• Gross Anatomy :-		
	insertion, nerve supply and actions			KLM clinically		
	• Discuss nerve supply of Pharynx	Must know	C2	oriented anatomy		
	Discuss blood supply of larynx	Must know	C2	edition 10 USMLE Q Bank Step 1		
	• Discuss esophagus (revisit)	Must know	C2	(Volume 1) 2023-2034		
	Map the outline of oesphagus on a	Should know	P	UWORLD Step 1		
	simulated patient or model			(Volume 3) 2023-2024		
	• Correlate with the clinical conditions	Should know	С3			
	• focus on provision of curative and	Nice to know	С3			
	preventive health care measures					
	Practice principles of bioethics	Nice to know	С3			
	Apply strategic use of AI in health care	Nice to know	С3			
	Read a relevant research article	Nice to know	С3			
Pancreas &	• Describe location of pancreas & Adrenal	Must know	C2	Gross Anatomy :-		
Adrenal gland	gland			KLM clinically		
	• Enlist different parts of pancreas	Must know	C2	oriented anatomy		
	Describe relations of pancreas	Must know	C2	edition 10		
	Discuss blood supply of pancreas	Must know	C2	USMLE Q Bank Step		
	Discuss the clinical Anatomy of	Must know	С3	1 (Volume 1) 2023-		
	pancreas			2034		
	• Correlate with the clinical conditions	Should know	C3	UWORLD Step 1 (Volume 3) 2023-		
	• focus on provision of curative and	Nice to know	C3	2024		
	preventive health care measures			2021		
		-				
		Nice to know	C3			
	Practice principles of bioethicsApply strategic use of AI in health care	Nice to know Nice to know	C3			

Practical/Skill Lab (SKL)

Topic	Learning Objectives At the end of practical students should be able to	Calgary Gauge	Learning Domain	References
Histology of	• Identify the histological slide of the pituitary gland	Must know	P	 Histology :-Junqueira's Basic Histology 18th
pituitary gland	• Illustrate the histological structure of the pituitary gland	Should know	C2	Edition USMLE Q Bank Step 1
	Enlist two points of identification	Must know	C1	(Volume 1) 2023-2034 UWORLD Step 1 (Volume 3) 2023-2024
Histology of	• Identify the histological slide of the adrenal gland	Must know	P	Histology :-Junqueira's Basic Histology 18th
adrenal gland	• Illustrate the histological structure of the adrenal gland	Should know	C2	Edition USMLE Q Bank Step 1
	Enlist two points of identification	Must know	C1	(Volume 1) 2023-2034 UWORLD Step 1 (Volume 3) 2023-2024
Histology of	• Identify the histological slide of the thyroid and parathyroid gland	Must know	P	 Histology :-Junqueira's Basic Histology 18th
thyroid and parathyroid	• Illustrate the histological structure of the thyroid and parathyroid gland	Should know	C2	Edition USMLE Q Bank Step 1
gland	• Enlist two points of identification	Must know	C1	(Volume 1) 2023-2034 UWORLD Step 1 (Volume 3) 2023-2024
Histology of pancreas	• Identify the histological slide of the pancreas	Must know	P	 Histology :-Junqueira's Basic Histology 18th
	• Illustrate the histological structure of the pancreas	Should know	C2	Edition USMLE Q Bank Step 1
	Enlist two points of identification	Must know	C1	(Volume 1) 2023-2034 UWORLD Step 1 (Volume 3) 2023-2024

TOS for LMS Assessment of Endocrinology Module 2nd Year MBBS, Batch -50 (Session 2023-24)

LMS based Assessment for endocrinology Module will be held on Monday from 9:00pm to 9:30pm. Detail of topics are mentioned in the table below:

S No.	S No. Domain of Teaching and Learning Activity	Торіс	No. of MCQs	Cognitive Domain		
			MCQS	C1	C2	С3
1.	LGIS	Embryology Development of pituitary&. pineal gland Development of thyroid and parathyroid gland	4	1	1	2
		Histology Histology of pituitary& pineal gland Histology of thyroid and para thyroid gland	4	1	1	2
2.	SGD	Bones of neck Hyoid bone& Cervical Vertebrae Superficial and deep fascia of the neck Lateral cervical region (Muscles) Lateral cervical region (Neurovascular Organization) Anterior cervical region (Anterior Triangles of neck)	18	5	5	8
3.	Practical	Histology of pituitary gland	2	0	1	1
4.	CBL	Superficial structures of neck (Sternocleidomastoid region of neck, posterior cervical region sub occipital triangle)	2	0	1	1

MCQS = 30

Learning Resources:

- **Embryology**:- KLM Embryology Developing Human 11th Edition
- **Histology**:-Junqueira's Basic Histology 18th Edition
- Gross Anatomy:- KLM clinically oriented anatomy edition 10
- USMLE Q Bank Step 1 (Volume 1) 2023-2034
 UWORLD Step 1 (Volume 3) 2023-2024