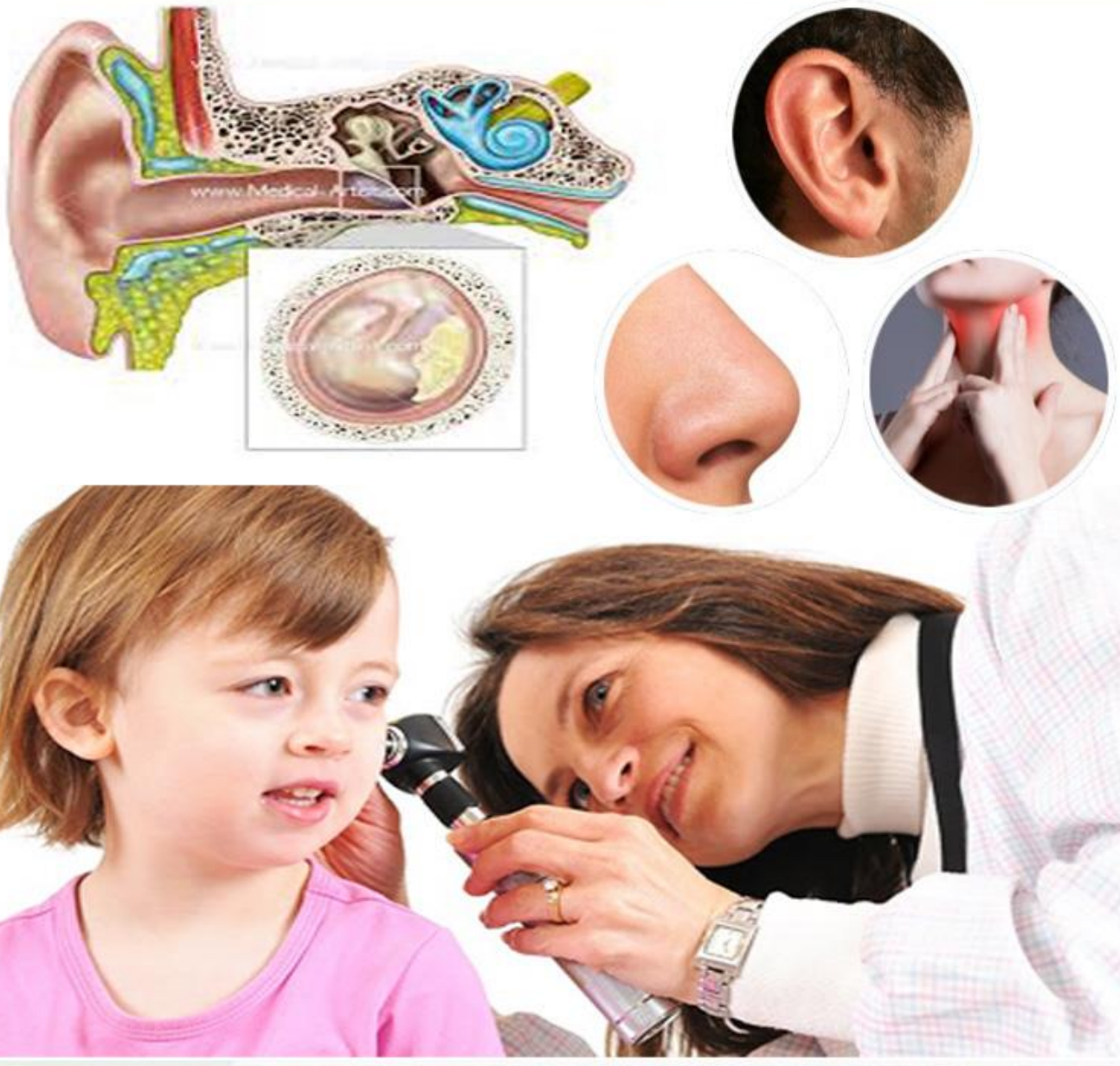
STUDY GUIDE- FOURTH YEAR MBBS

11th August – 6th September 2025

Duration: 4 Weeks

ENT MODULE



LIAQUAT NATIONAL HOSPITAL AND MEDICAL COLLEGE

Institute for Postgraduate Medical Studies & Health Science

STUDY GUIDE FOR EAR NOSE & THROAT (ENT) MODULE

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Module name: **Ear, Nose, and Throat (ENT)** *Year:* ***Four*** *Duration:* ***4 weeks (11th Aug- 6th Sept. 2025)***

Timetable hours: **Interactive Lectures, Case-Based Learning (CBL), Clinical Rotations, Tutorials, Skills, Practicals, Self-Directed Learning**

MODULE INTEGRATED COMMITTEE

MODULE COORDINATOR:	• Dr. Ahmad Nawaz **(ENT)**
CO-COORDINATOR:	• Dr. Afifa Tabassum **(DHPE)**

DEPARTMENTS & RESOURCE PERSONS FACILITATING LEARNING

BASIC HEALTH SCIENCES	CLINICAL DEPARTMENTS
COMMUNITY MEDICINE • Dr. Saima Zainab	***EAR, NOSE AND THROAT*** • Dr. Ahmad Nawaz
MICROBIOLOGY • Professor Shaheen Sharafat	***NEUROLOGY*** • Dr. Syed Ahmed Asif
	RADIOLOGY • Professor Muhammad Ayub Mansoor
	PULMONOLOGY • Professor Syed Ali Arsalan

DEPARTMENT of HEALTH PROFESSIONS EDUCATION

- Professor Nighat Huda
- Professor Sobia Ali
- Dr. Afifa Tabassum
- Dr. Yusra Nasir
- Dr. Syed Asad Sibtain
- Dr. Asra Zia

LNH&MC MANAGEMENT

- Professor K.U. Makki, Principal LNH&MC
- Dr. Shaheena Akbani, Director A.A & R.T LNH&MC

STUDY GUIDE COMPILED BY:

Department of Health Professions Education

INTRODUCTION

WHAT IS A STUDY GUIDE?

It is an aid to:

- Inform students how the student learning program of the module has been organized
- Help students organize and manage their studies throughout the module
- Guide students on assessment methods, rules, and regulations

THE STUDY GUIDE:

- Communicates information on the organization and management of the module. This will help the student to contact the right person in case of any difficulty.
- Define the objectives which are expected to be achieved at the end of the module.
- Identify the learning strategies such as lectures, small group teachings, clinical skills, demonstration, tutorial, and case-based learning that will be implemented to achieve the module objectives.
- Provide a list of learning resources such as books, computer-assisted learning programs, web- links, and journals, for students to consult to maximize their learning.
- Highlights information on the contribution of continuous on the student's overall performance.
- Includes information on the assessment methods that will be held to determine every student's achievement of objectives.
- Focus on information about examination policy, rules, and regulations.

INTEGRATED CURRICULUM comprises system-based modules such as Neuroscience II Reproductive system II, Eye/ENT, Urinary II, Rehabilitation & Orthopedics, Dermatology, and Endocrinology II which links basic science knowledge to clinical problems. Integrated teaching means that subjects are presented as a meaningful whole. Students will be able to better understand basic sciences when they repeatedly learn about clinical examples.

LEARNING EXPERIENCES: Case-based integrated discussions, Task-oriented learning followed by task presentation, skills acquisition in skills lab, computer-based assignments, and learning experiences in clinics, and wards.

LEARNING METHODOLOGIES

The following teaching/learning methods are used to promote better understanding:

- Interactive Lectures
- Small Group Discussion
- Case- Based Learning (CBL)
- Clinical Experiences
- Clinical Rotations
- Skills session
- Self-Directed Learning

INTERACTIVE LECTURES: In large groups, the lecturer introduces a topic or common clinical conditions and explains the underlying phenomena through questions, pictures, videos of patients' interviews, exercises, etc. Students are actively involved in the learning process.

SMALL GROUP SESSION: This format helps students to clarify concepts, acquire skills or desired attitudes. Sessions are structured with the help of specific exercises such as patient cases, interviews, or discussion topics. Students exchange opinions and apply knowledge gained from lectures, tutorials, and self-study. The facilitator asks probing questions, summarizes, or rephrases to help clarify concepts.
CASE-BASED LEARNING (CBL): A small group discussion format where learning is focused on a series of questions based on a clinical scenario. Students discuss and answer the questions by applying relevant knowledge gained previously in clinical and basic health sciences during the module and construct new knowledge. The CBD will be provided by the concerned department.

CLINICAL LEARNING EXPERIENCES: In small groups, students observe patients with signs and symptoms in hospital wards, clinics, and outreach centers. This helps students relate knowledge of the module's basic and clinical sciences and prepare for future practice.

- **CLINICAL ROTATIONS:** In small groups, students rotate in different wards like Neuroscience II Reproductive system II, Eye/ENT, Urinary II, Rehabilitation & Orthopedics, Dermatology, and Endocrinology II. Here students observe patients, take histories and perform supervised clinical examinations in outpatient and inpatient settings. They also get an opportunity to observe medical personnel working as a team. These rotations help students relate basic medical and clinical knowledge in diverse clinical areas.

SKILLS SESSION: Skills relevant to the respective module are observed and practiced where applicable in the simulated-learning environment such as a skills laboratory.

SELF-DIRECTED LEARNING: Students assume responsibilities for their learning through individual study, sharing and discussing with peers, and seeking information from Learning Resource Center, teachers, and resource persons within and outside the college. Students can utilize the time within the college's scheduled hours of self-study.

MODULE: ENT

INTRODUCTION

The Ear, Nose, and Throat (ENT) module introduces fourth-year medical undergraduates to the essential principles and practices of otorhinolaryngology. This specialty deals with common and complex conditions affecting hearing, balance, speech, breathing, swallowing, and related head and neck structures.

In this module, students will develop the ability to take focused histories, perform systematic ENT examinations, and recognize key signs and symptoms of common disorders. Emphasis will be placed on conditions of public health importance in our region in different health settings.

MODULE OBJECTIVES AND STRATEGIES

By the end of the ENT module students should be able to:

COMMUNITY MEDICINE

TOPICS & OBJECTIVES	LEARNING STRATEGIES
1. Noise Pollution	Tutorial
· Describe Noise & Vibration	
· Identify Noise sources & measurements	
· Explain adverse health effects of noise	
· Discuss Noise Management	
2. Cancers related to Head and Neck	
· Describe various cancers of Head & neck	
· Identify risk factors of head & neck cancers	
· Explain the control & prevention of head & neck cancers	

ENT

TOPICS & OBJECTIVES	LEARNING STRATEGIES
EAR	
1. Congenital Disorders of External Ear	Lecture
· Define Anotia, Microtia & Atresia of external Auditory canal	
· Discuss the clinical presentation, investigations and treatment for pre-auricular cyst/ sinus	
2. Diseases of External Ear (wax/ foreign body)	Lecture
· Describe the etiology, clinical presentation, investigations, treatment and complications of impacted wax, frunculosis and foreign body	
· Discuss the etiology, clinical presentation, investigations, treatment and complications for: pre-auricular cyst/ sinus, Myringitis bullosa and Perichondritis	
3. Trauma to external ear	Lecture
· Describe etiology, clinical presentation, investigations, treatment and complications of trauma to pinna and traumatic rupture of tympanic membrane	
· Discuss the etiology, clinical presentation and management for Frostbite and Haematoma Auris.	
4. Acute Otitis externa	Lecture
· Discuss the etiology, clinical presentation, investigations, treatment and complications for- Acute & Diffuse Otitis Externa	
· Discuss the etiology, clinical presentation, investigations, treatment and complications for Otomycosis & Herpes Zoster Oticus	
5. Malignant Otitis Externa (I & II)	Lecture
· Discuss the etiology, clinical presentation, investigations, treatment and complications for Malignant Otitis Externa	
6. Benign tumors of external ear	Lecture
· Discuss the etiology, clinical presentation, investigations, treatment and complications for Benign tumors of external ear	
7. Malignant tumors of external ear	Lecture

· Discuss the etiology, clinical presentation, investigations, treatment and complications for Malignant tumors of external ear	
8. Acute Otitis Media (I & II)	Lecture / SDL
· Discuss the etiology, clinical presentation, investigations, treatment and complications of Acute Otitis Media, Chronic Otitis Media & Glue ear/ Otitis Media with effusion.	
· Discuss the etiology, pathophysiology, clinical presentation, examination findings, investigations and treatment plan for: Acute Necrotizing Otitis Media	
9. Chronic Suppurative Otitis Media (CSOM)- I & II	Lecture / SDL
· Discuss the etiology, clinical presentation, investigations, treatment and complications of CSOM	
· Describe the diagnosis and management of the complications of otitis media	
· Discuss the etiology, pathophysiology, clinical presentations, examination findings, investigations and treatment plans for Serous Otitis Media.	
· Describe the diagnosis and management of the complications of Otitis Media and Mastoiditis	
10. Otosclerosis	Lecture
· Discuss the etiology, pathophysiology, clinical presentations, examination findings, investigations and treatment plans for Otosclerosis	
11. Deafness & Investigations (I & II)	Lecture / SDL
· List the investigations and their indications relevant to diagnose deafness	
· Interpret PTA and Tympanometry reports	
· Identify BERA report	
12. Congenital Diseases of Inner Ear	Lecture
· Explain the etiology and management of Pre-lingual sensori- neural hearing loss	
13. Hearing Loss	Lecture
· Define deafness	
· List causes of deafness	
· Describe the etiology, investigations and principles of treatment for sensori-neural hearing loss (i.e. Presbycusis, Noise-induced hearing loss and Ototoxicity)	
· Describe the etiology, investigations and principles of treatment for conductive hearing loss	
14. Acquired Vestibular Disorders	Lecture / SDL
· Describe the etiology, investigations and principles of treatment for Benign Paroxysmal Positional Vertigo, Vestibular Neuritis, Meniere's disease & Acoustic neuroma	
ORAL CAVITY AND SALIVARY GLANDS	
15. Facial Nerve Paralysis	Lecture/SDL
· Discuss the surgical anatomy of the facial nerve	
· List the causes of facial nerve paralysis	
· Diagnose Bells Palsy and Ramsay Hunt syndrome based on given patient information	
· Describe the principles of Management of facial paralysis in Acute and Chronic Otitis Media and traumatic facial nerve paralysis	
16. Diseases of Salivary glands	Lecture
· Diagnose diseases of salivary gland (inflammatory, benign and malignant) based on clinical presentations and investigation findings	
· Justify selection of treatment options for these salivary gland conditions	
17. Oral cavity ulcers	Lecture
· Justify diagnosis, investigations, differential diagnosis and treatment plans for oral cavity ulcers (Aphthus ulcers, Thrush & Leukoplakia)	

· Justify diagnosis, investigations, differential diagnosis and treatment plans for oral cavity ulcers (Traumatic, Vincents Angina, Agranulocytic Tuberculous Behcet's Syndrome and Ulcerative lesions of Oral Cavity)	
18. Neoplastic conditions of Oral cavity	
· Classify Neoplastic conditions of Oral cavity	
· Justify diagnosis, investigations, differential diagnosis and treatment plans for Neoplastic conditions of Oral cavity	
· Diagnosis, investigations, differential diagnosis and treatment plans for Oral Malignant Ulcers.	Lecture
NOSE & PARANASAL SINUSES	
19. Epistaxis	Lecture
· Discuss the etiology, clinical presentation, investigations, treatment and complications of Epistaxis	
20. Furunculosis	
· Diagnose Furunculosis based on history, clinical findings and investigation findings	
· Discuss treatment plans for Furunculosis	Lecture
21. Deviated Nasal Septum	
· Discuss the etiology, clinical presentation, investigations, treatment and complications of Deviated Nasal Septum	Lecture
22. Nasal Polyps	
· Define Polyps	
· Diagnose Ethmoidal and Antrochoanal Polyps based on history, clinical findings and investigation findings	
· Discuss management plans for Ethmoidal and Antrochoanal Polyps	
· Diagnose Bleeding Polyps based on data provided	
· Discuss management plan for Bleeding Polyps	Lecture
23. Nasal Septal diseases	
· Classify Nasal Septal diseases	
· Discuss the etiology, clinical presentation, investigations, treatment and differential diagnose of Nasal Septal diseases	
· Describe etiology and pathophysiology for syphilis and leprosy.	
· Diagnose syphilis and leprosy based on symptoms and signs and investigation findings	Lecture
24. Acute and chronic sinusitis	
· Discuss the etiology, pathophysiology, clinical presentation, examination findings, investigations, differential diagnosis and treatment plans for: Acute Sinusitis and Chronic Sinusitis.	Lecture / SDL
· Based on data provided, diagnose complications of the above mentioned conditions	
· Suggest treatment plan for these conditions	
25. Nasal Trauma and Rhinoliths	
· Discuss types of foreign bodies in nose and principles of their management	
· Discuss the diagnosis and management of Rhinoliths	
· Diagnose nasal fractures based on history and clinical presentations	
· Discuss the basics of management plan for nasal fractures	Lecture
26. Granulomatous Disorders	
· Discuss the differential diagnosis of Granulomatous disorders	
· Explain the diagnostic features and principles of management of: i. Invasive Aspergillosis ii. Mucormycosis iii. Wegener's Granulomatosis	Lecture / SDL
27. Sino-Nasal Tumors	Lecture / SDL

· Explain the diagnostic features and principles of management of: i. Inverted Papilloma ii. Malignant tumors of nose and Paranasal sinuses	
28. Fungal sinusitis	
· Diagnose Fungal sinusitis based on data provided	
· Discuss management plan for Fungal sinusitis	Lecture
PHARYNX	
29. Malignant Conditions of Nasopharynx	
· Describe the diagnosis and treatment plan for Juvenile Nasopharyngeal Angiofibroma and Nasopharyngeal carcinoma.	Lecture
30. Inflammatory Conditions of Oropharynx	
· Justify diagnosis, investigations, differential diagnosis and treatment plans for Acute and Chronic Pharyngitis.	Lecture
31. Tonsils	
· Justify diagnosis, investigations, differential diagnosis and treatment plans for Tonsillitis, Peri-tonsillitis and abscess.	Lecture
32. Adenoids	
· Justify diagnosis, investigations, differential diagnosis, treatment plans and complications for Adenoid Hyperplasia	Lecture
33. Malignant Conditions of Oropharynx	
· Explain the diagnostic features, investigations and outline of treatment plan for Squamous cell carcinoma	Lecture
34. Conditions of Nasopharynx	
· Describe the diagnosis and treatment plan for Plummer-Vinson syndrome & Hypopharyngeal Carcinoma	Lecture
LARYNX	
35. Acute and chronic inflammations of larynx	
· Describe the etiology, pathophysiology, clinical presentation, investigation findings and treatment plans for Supraglottitis and laryngitis, vocal polyp and Acute Laryngo-Tracheobronchitis	Lecture
36. Vocal Nodules and Paralysis	
· Describe the etiology, pathophysiology, investigations and principles of treatment for Vocal Nodules and Vocal cord paralysis	Lecture
37. Benign & Malignant laryngeal tumors	
· Classify Laryngeal tumors	
· Diagnose Papilloma Larynx, Laryngeal Polyps based on symptoms and signs, and investigation findings	
· Discuss the etiology, clinical features, investigation findings and differential diagnosis of Laryngeal Carcinoma	
· justify diagnosis, investigations, and differential diagnosis for Pyriform Fossa Carcinoma, and Post-Cricoid Carcinoma	Lecture / SDL
38. Diphtheria	
· Describe the etiology and pathophysiology of Diphtheria	
· Diagnose Diphtheria based on symptoms and signs and, investigation findings	
· Develop treatment and follow plans for the above mentioned condition	Lecture
39. Congenital Conditions of Larynx	
· Describe the diagnosis and principles of treatment for Laryngomalacia and Juvenile recurrent laryngeal Papillomatosis	Lecture
OESOPHAGUS	

40. Aero-Digestive tract	
· Discuss foreign bodies in the aero-digestive tract and the principles of their management	Lecture
41. Dysphagia	
· Describe etiology, pathophysiology, differential diagnosis and investigations for dysphagia (oral, pharyngeal and esophageal)	
· Justify diagnosis, investigations, and differential diagnosis for common conditions of the hypo-pharynx (including Plummer- Vinson or Paterson-Kelly syndrome, pharyngeal pouch (zenker diverticulum)	
· Describe indications, contraindications and complication of Esophagostomy	Lecture
NECK	
42. Neck masses	
· Classify Neck masses	
· Justify diagnosis, differential diagnosis, investigations and treatment plans for Neck masses	
· Justify diagnosis, investigations, differential diagnosis and treatment plans for Ludwig's angina, ParaPharyngeal and Acute and Chronic Retropharyngeal abscesses	Lecture
43. Neck fistulas	
· Classify fistulas	
· Justify diagnosis, differential diagnosis, investigations and treatment plans for Neck fistulas	
· Diagnose Hypoglossal cyst/ sinus, Branchial Cyst and Branchial Fistula	Lecture
44. Tracheostomy	
· Describe the indications, contraindications, complications, operation steps and post-operative care for tracheostomy	
45. Diseases of Thyroid and Parathyroid	Lecture
· Classify benign and malignant conditions of Thyroid and Para-Thyroid	
· Explain the diagnostic features, Pathophysiology, investigation findings and treatment plans for benign conditions of Thyroid and ParaThyroid glands	
· Explain the diagnostic features, Pathophysiology, investigation findings and treatment plans for malignant conditions of Thyroid and ParaThyroid glands	
· Justify diagnosis, investigations, differential diagnosis and treatment plans for Sleep Apnea and Sleep apnea syndrome	Lecture
ENT INSTRUMENT IDENTIFICATION	
By the end of the rotation in ENT, student should be able to identify the instruments listed below and discuss their indications and contraindications (where applicable): 1. Adenoid curette 2. Asch's and Walsham's Forceps 3. Ashe's Forceps 4. Ballenger Swivel Knife 5. Boyle Davis mouth gag 6. Bronchoscopes (Rigid/flexible) 7. Ear speculum 8. Ear Syringing instruments 9. Endotracheal Tube, Cuffed/Non-cuffed 10. Fibro-optic Direct Laryngoscope 11. Freer elevator 12. Head lights 13. Indirect laryngoscopic mirror 14. Jobson's Horne probe 1. Laryngoscope Macintosh 15. Luc's forceps	Tutorial

16. Metallic and Nonmetallic Tracheostomy Tubes 17. Metallic Tongue depressor 18. Nasal Snare 19. Nasal Speculum: Thudicum and Killian 2. Nasopharyngoscope 20. Negus Knot Tier or Knot pusher 3. Oesophagoscopes 21. Otoscope 22. Pharyngeal Sucker 23. Posterior Rhinos copy mirror 24. Suction nozzle 25. Suction Tube 26. Tilly's Nasal Dressing Forceps 27. Tonsil holding forceps 28. Tonsil snare 29. Tonsillar artery forceps 30. Tonsillar Dissector 31. Tracheal Dilator 32. Trocar and Cannula 33. Tuning forks	
CLINICAL SKILLS	
By the end of the ENT rotation, students should be able to: 1. Take history appropriately from a patient with an ENT related condition 2. Examine the following according to standard process: • ear • nose • oral cavity and oropharynx • lymph-nodes and salivary glands in the neck	Skills session

MICROBIOLOGY

1. Pathogens causing infections of the ear	Tutorial
• List the pathogens causing infections of the ear	
• Discuss the pathophysiology and clinical features of the infections.	
2. Pathogens causing infections of the nose	
• List the pathogens causing infections of the nose	
• Discuss the pathophysiology and clinical features of the infections.	
3. Pathogens causing infections of the throat	
• List the pathogens causing infections of the throat	
• Discuss the pathophysiology and clinical features of the infections	

NEUROLOGY

1. Examination of cranial nerves related to ENT	Skills session
• Examine Cranial nerves relevant to ENT (Olfactory nerve, Trigeminal nerve, Facial nerve, Vestibulocochlear nerve, Glossopharyngeal nerve, Hypoglossal nerve)	

RADIOLOGY

1. Basic Imaging Techniques in ENT disorders; • Describe the radiological findings on different x-ray related to the ear, nose and throat	Tutorial

PULMONOLOGY

1. Sleep Apnea Syndrome • Justify diagnosis, investigations, differential diagnosis and treatment plans for Sleep Apnea and Sleep apnea syndrome	Lecture / SDL

Apart from attending daily scheduled sessions, students too should engage in self-study to ensure that all the objectives are covered

LEARNING RESOURCES

SUBJECT	*RESOURCES*
COMMUNITY MEDICINE	**TEXTBOOKS** 1. Community Medicine by Parikh 2. Community Medicine by M Ilyas 3. Basic *Statistics* for the Health Sciences by Jan W Kuzma
EAR NOSE AND THROAT (ENT)	**TEXTBOOK** 1. Logan's Turner 2. P. L Dhingra
PATHOLOGY/MICROBIOLOGY	**TEXTBOOKS** 1. Robbins & Cotran, Pathologic Basis of Disease,9th edition. 2. RapidReviewPathology,4th edition by Edward F. Goljan MD
	WEBSITES: 1. http://library.med.utah.edu/WebPath/webpath.html 2. http://www.pathologyatlas.ro/

ASSESSMENT METHODS:

- **Best Choice Questions(BCQs)** also known as MCQs (Multiple Choice Questions)
- **Objective Structured Practical/Clinical Examination (OSPE or OSCE)**

Internal Evaluation

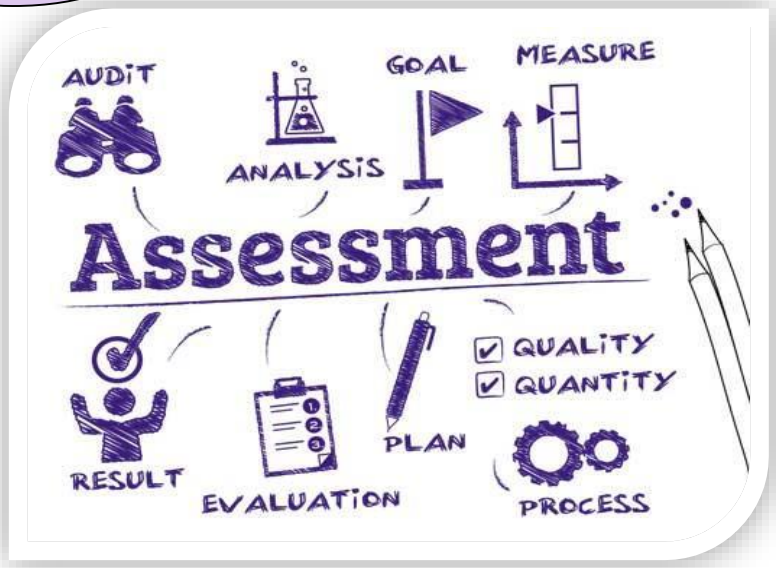
- Students will be assessed comprehensively through multiple methods.
- 20% marks of internal evaluation will be added to JSMU final exam. That 20% may include class tests, assignments, practicals, and the internal exam which will all have specific marks allocation.

Formative Assessment

Individual departments may hold quizzes or short answer questions to help students assess their learning. The marks obtained are not included in the internal evaluation

For JSMU Examination Policy, please consult the JSMU website!

More than 75% attendance is needed to sit for the internal and final examinations



LNH&MC EXAMINATION RULES & REGULATIONS

- Student must report to examination hall/venue, 30 minutes before the exam.
- Exam will begin sharply at the given time.
- No student will be allowed to enter the examination hall after 15 minutes of scheduled examination time.
- Students must sit according to their roll numbers mentioned on the seats.
- Cell phones are strictly not allowed in the examination hall.
- If any student is found with a cell phone in any mode (silent, switched off, or on) he/she will not be allowed to continue their exam.
- No students will be allowed to sit in an exam without University Admit Card, LNMC College ID Card, and Lab Coat
- Students must bring the following stationary items for the exam: Pen, Pencil, Eraser, and Sharpener.
- Indiscipline in the exam hall/venue is not acceptable. Students must not possess any written material or communicate with their fellow students.

SCHEDULE:

4 WEEKS	EAR NOSE AND THROAT (ENT)	11th August 2025 6th September 2025
2 WEEKS	OPHTHALMOLOGY (EYE)	8th September 2025 20th September 2025