

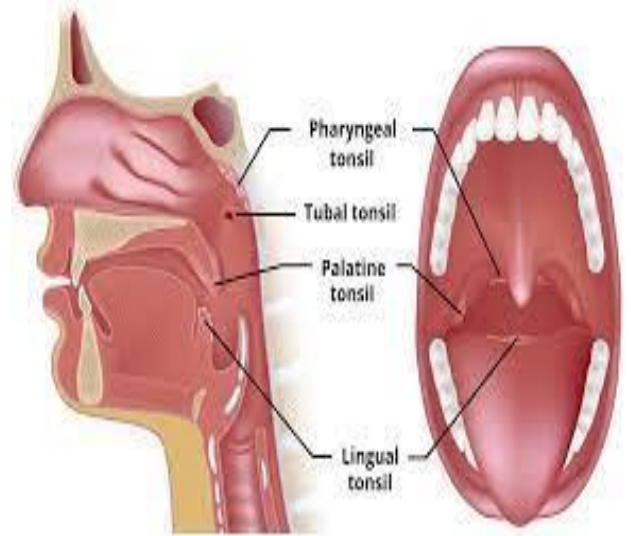
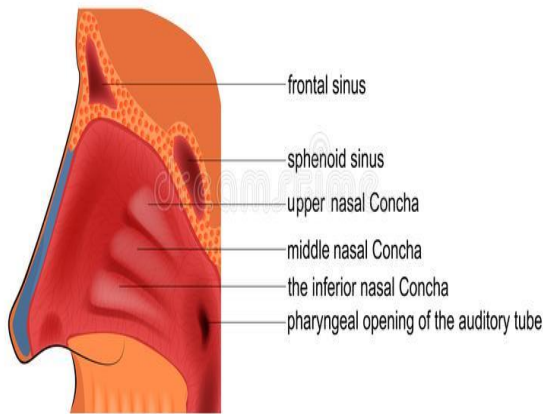
STUDY GUIDE

SECOND YEAR MBBS

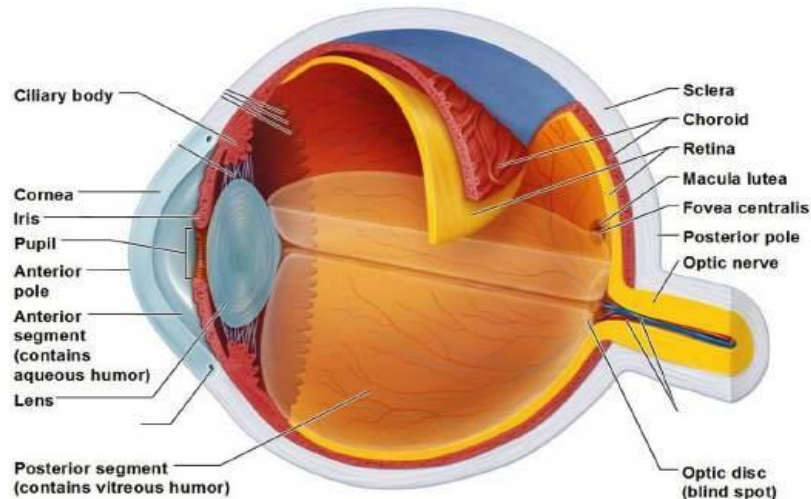
22ND March- 8TH May 2021

DURATION: 7 WEEKS

NASAL CAVITY



CROSS SECTION OF HUMAN EYE



STUDY GUIDE FOR HEAD & NECK MODULE

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Module name: **Head & Neck**Year: **Two**Duration: **7 weeks (March-May 2021)**

Timetable hours: **Lectures, Case-Based Learning (CBL), Self-Study, Practical, Skills, Demonstrations**

MODULE INTEGRATED COMMITTEE

MODULE COORDINATOR:	<ul style="list-style-type: none"> • Professor Zia-ul-Islam (Anatomy)
CO-COORDINATORS:	<ul style="list-style-type: none"> • Dr. Atif Ali Hashmi (Pathology)

DEPARTMENTS' & RESOURCE PERSONS' FACILITATING LEARNING

BASIC HEALTH SCIENCES
ANATOMY <ul style="list-style-type: none"> • Professor Zia-ul-Islam
BIOCHEMISTRY <ul style="list-style-type: none"> • Professor Muhammad Kashif Nisar
DEPARTMENT of HEALTH PROFESSIONS EDUCATION <ul style="list-style-type: none"> • Professor Nighat Huda • Professor Sobia Ali • Dr. Afifa Tabassum • Dr. Muhammad Suleman Sadiq
LNH&MC MANAGEMENT <ul style="list-style-type: none"> • Professor Karimullah 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 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

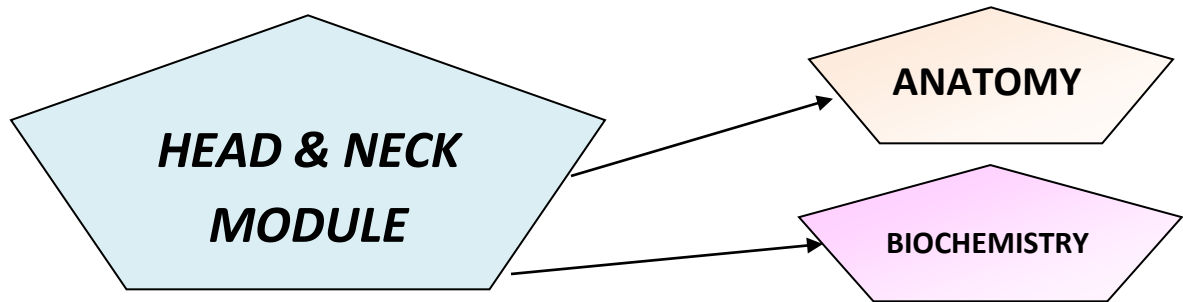
THE STUDY GUIDE:

- Communicates information on organization and management of the module.
This will help the student to contact the right person in case of any difficulty.
- Defines the objectives which are expected to be achieved at the end of the module.
- Identifies 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.
- Provides a list of learning resources such as books, computer assisted learning programs, web- links, journals, for students to consult in order to maximize their learning.
- Highlights information on the contribution of continuous and semester examinations on the student's overall performance.
- Includes information on the assessment methods that will be held to determine every student's achievement of objectives.
- Focuses on information pertaining to examination policy, rules and regulations.

CURRICULUM FRAMEWORK

Students will experience integrated curriculum similar to previous modules.

INTEGRATED CURRICULUM comprises of system-based modules such as Head and Neck, Neurosciences and Endocrinology which links basic science knowledge to clinical problems. Integrated teaching means that subjects are presented as a meaningful whole. Students will be able to have better understanding of basic sciences when they repeatedly learn in relation to clinical examples. Case-based discussions, computer-based assignments, early exposure to clinics, wards, and skills acquisition in skills lab and physiotherapy department are characteristics of integrated teaching program.

INTEGRATING DISCIPLINES OF HEAD & NECK MODULE**LEARNING METHODOLOGIES**

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

- Interactive Lectures
- Small Group Discussion
- Case- Based Learning
- Practicals
- Skills session
- Self Study

INTERACTIVE LECTURES

In large group, 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 DISCUSSION (SGDS): This format helps students to clarify concepts acquire skills or attitudes. Sessions are structured with the help of specific exercises such as patient case, interviews or discussion topics. Students exchange opinions and apply knowledge gained from lectures, tutorials and self study. The facilitator role is to ask probing questions, summarize, or rephrase to help clarify concepts.

CASE- BASED LEARNING: A small group discussion format where learning is focused around a series of questions based on a clinical scenario. Students' discuss and answer the questions applying relevant knowledge gained in clinical and basic health sciences during the module.

PRACTICAL: Basic science practicals related to anatomy, biochemistry, pathology, pharmacology and physiology are scheduled for student learning.

SKILLS SESSION: Skills relevant to respective module are observed and practiced where applicable in skills laboratory or Department of Physiotherapy.

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

MODULE 1: HEAD & NECK

INTRODUCTION

The head and neck module (HNM) for 2nd year MBBS aims to integrate both basic and clinical sciences. In basic sciences, students will be able to explain developmental, gross and microscopic anatomy of the head, neck, eyes, and ears along with relevant neurophysiology, pathology and biochemistry. Integration with relevant clinical sciences disciplines will help students apply their knowledge from a meaningful clinical perspective. Thus the role of basic sciences is to introduce and explain the function of these systems for students who will relate to the diseases affecting these regions, for diagnosis and management.



COURSE OBJECTIVES AND STRATEGIES

At the end of the module the students will be able to:

ANATOMY

OBJECTIVES	LEARNING STRATEGY
Bony features of skull	
<ul style="list-style-type: none"> Describe bony features of skull with reference to its norma, vault and base of skull and clinical importance of fontanelles. 	Small Group Discussion
<ul style="list-style-type: none"> Identify the basic anatomical features, sutures, foramina & their contents of norma frontalis, lateralis, verticalis, occipitalis & basalis. 	
Importance of scalp	
<ul style="list-style-type: none"> Describe scalp and superficial temporal region with their muscles, neurovascular supply and clinical importance 	Interactive Lecture
Clinical anatomy & neurovascular supply of face	
<ul style="list-style-type: none"> Discuss muscles and clinical importance & neurovascular supply of face in relation to facial palsy. 	Small Group Discussion
<ul style="list-style-type: none"> Describe the extracranial pathway of Trigeminal and Facial nerve with clinical importance 	Small Group Discussion & Interactive Lecture
Development and congenital anomalies of pharyngeal arches, pouches, face and tongue	
<ul style="list-style-type: none"> Describe the development of head and neck (pharyngeal apparatus), their derivatives and congenital anomalies 	Interactive Lecture
<ul style="list-style-type: none"> Discuss the development of face and palate with congenital anomalies 	
Development, anatomy and contents of orbit	
<ul style="list-style-type: none"> Describe the boundaries, contents and structures that pass through different openings of orbital cavity. 	Small Group Discussion
<ul style="list-style-type: none"> Describe the extra-ocular muscles with attachments, movements, nerve supply & clinical importance 	Interactive lecture and SGD
<ul style="list-style-type: none"> Describe the clinical importance of Optic, Oculomotor, Trochlear and Abducence nerve 	
Temporal and infratemporal region	
<ul style="list-style-type: none"> Identify the bony features of mandible and hyoid bone with their muscular attachments 	Interactive Lecture and Small Group Discussion
<ul style="list-style-type: none"> Discuss the temporomandibular joint with its neurovascular supply and movements 	

<ul style="list-style-type: none"> Discuss the boundaries and contents of pterygopalatine, temporal and infratemporal fossae 	
<ul style="list-style-type: none"> Describe maxillary artery and its branches. 	Interactive Lecture
Development and anatomical features of nose and sinuses	
<ul style="list-style-type: none"> Describe the development of nose with its congenital anomalies 	Interactive Lecture
<ul style="list-style-type: none"> Describe the gross anatomy , neurovascular supply and lymphatic drainage of nose. 	Small Group Discussion/Practical
<ul style="list-style-type: none"> Describe the clinical importance of paranasal air sinuses 	Interactive Lecture
Oral cavity and related disorders	
<ul style="list-style-type: none"> Describe the development of tongue with its congenital anomalies 	Interactive Lecture
<ul style="list-style-type: none"> Describe the gross anatomy & microscopic features of tongue. 	Case-Based Learning/Practical
<ul style="list-style-type: none"> Explain Hypoglossal nerve with clinical importance 	
<ul style="list-style-type: none"> Discuss the boundaries, muscle attachments and mucosal coverings of hard and soft palate. 	Interactive Lecture
Development, gross and microscopic structure of salivary glands	
<ul style="list-style-type: none"> Describe the development, gross anatomical and microscopic features of salivary glands, with neurovascular supply 	Interactive Lecture and Practical
Vertebrae and landmarks of the neck region	
<ul style="list-style-type: none"> Identify the features of cervical vertebrae with their attachments 	Small Group Discussion
<ul style="list-style-type: none"> Discuss cervical fascia and cervical plexus 	
Clinical significance of neck region and its contents	
<ul style="list-style-type: none"> Explain the triangles of the neck with boundaries and contents 	Interactive Lecture / Practical
<ul style="list-style-type: none"> Describe the vessels, lymph nodes, ganglia and plexuses of the head & neck 	
<ul style="list-style-type: none"> Identify the gross anatomy & microscopic features of thyroid & parathyroid glands 	
<ul style="list-style-type: none"> Describe neurovascular supply & clinical importance of thyroid & parathyroid glands 	
Larynx, pharynx and tonsils	
<ul style="list-style-type: none"> Describe the structure of larynx, with neurovascular supply and clinical importance 	Interactive Lecture
<ul style="list-style-type: none"> Discuss the development of pharynx with its gross anatomical features, different parts and neurovascular supply. 	Interactive Lecture
<ul style="list-style-type: none"> Describe the pharyngeal and palatine tonsils 	Skills

BIOCHEMISTRY

OBJECTIVES	LEARNING STRATEGY
Introduction to Nutrition	Interactive Lecture
<ul style="list-style-type: none"> • Discuss nutrition, nutrients, BMI, RDA and RMR 	
<ul style="list-style-type: none"> • Discuss the biochemical importance of Balanced diet. 	
<ul style="list-style-type: none"> • Discuss the Basic Food groups 	
<ul style="list-style-type: none"> • List the essential nutrients and their importance in the diet 	
<ul style="list-style-type: none"> • Discuss the dietary sources and recommendation of micronutrients. 	
<ul style="list-style-type: none"> • Describe the importance and benefits of water 	
<ul style="list-style-type: none"> • Discuss the importance of dietary fibres 	
<ul style="list-style-type: none"> • Discuss the daily caloric requirements 	
<ul style="list-style-type: none"> • Discuss the Dietary Reference Intakes (EAR, RDA, AI, UL) 	
<ul style="list-style-type: none"> • Discuss the clinical disorders of nutrition 	
MACRONUTIRENTS	
Nutritional importance of dietary carbohydrates	
<ul style="list-style-type: none"> • Explain the biochemical importance of dietary carbohydrate. 	
<ul style="list-style-type: none"> • Discuss Balanced diet 	
<ul style="list-style-type: none"> • Classify the types of dietary carbohydrates 	
<ul style="list-style-type: none"> • Discuss the significance of simple and complex dietary carbohydrates 	
<ul style="list-style-type: none"> • Explain the Glycemic index and Glycemic load 	
<ul style="list-style-type: none"> • Describe the biochemical complications of Obesity 	
<ul style="list-style-type: none"> • Discuss metabolic syndrome and its complications. 	
Nutritional importance of dietary proteins	
<ul style="list-style-type: none"> • Classify Protein according to their nutritional importance and give examples 	
<ul style="list-style-type: none"> • List the biochemical functions of proteins in the body 	
<ul style="list-style-type: none"> • Explain recommended dietary requirements of protein in different age groups 	
<ul style="list-style-type: none"> • Describe the Amino acid pool & Nitrogen balance. 	
<ul style="list-style-type: none"> • Describe Protein energy malnutrition (Marasmus & Kwashiorkor) 	
Nutritional importance of dietary lipids	

<ul style="list-style-type: none"> Classify Lipids according to their nutritional importance and give examples 	
<ul style="list-style-type: none"> Explain the biochemical functions of dietary lipids 	
<ul style="list-style-type: none"> Discuss the sources and recommended daily allowance of dietary lipids 	
<ul style="list-style-type: none"> Discuss the biochemical mechanism of development of atherosclerosis 	
<ul style="list-style-type: none"> Discuss the clinical significance of dietary lipids (Metabolic syndrome, Atherosclerosis) 	
MICRO NUTRIENTS	
Vitamin A	
<ul style="list-style-type: none"> Explain the chemical structure of Vitamin A 	
<ul style="list-style-type: none"> Classify the different types of Vitamin A 	
<ul style="list-style-type: none"> Explain the biochemical functions of Vitamin A 	
<ul style="list-style-type: none"> Discuss the role of vitamin A in visual cycle. 	
<ul style="list-style-type: none"> List the sources and daily requirement of Vitamin A 	
<ul style="list-style-type: none"> Discuss the clinical significance of Vitamin A deficiency and toxicity 	
Overview of Dietary Minerals	
<ul style="list-style-type: none"> List and classify the dietary minerals with their biochemical importance 	
<ul style="list-style-type: none"> Describe their sources and daily recommended allowances 	
<ul style="list-style-type: none"> Explain their biochemical functions 	
<ul style="list-style-type: none"> Discuss the clinical significance of mineral deficiency and toxicity 	
Calculation of BMI	Practical
<ul style="list-style-type: none"> Explain the significance of calculation of Body Mass Index 	
<ul style="list-style-type: none"> Explain the method to calculate BMI 	
<ul style="list-style-type: none"> Calculate the BMI 	
<ul style="list-style-type: none"> Interpret the significance of the calculated BMI 	
<ul style="list-style-type: none"> Interpret clinical conditions correlated with their laboratory investigations 	
Interpretation of Glycemic index	
<ul style="list-style-type: none"> Define and explain Glycemic Index and Glycemic Load 	
<ul style="list-style-type: none"> Comparison of the Glycemic index of different carbohydrates 	
<ul style="list-style-type: none"> Interpret the significance of GI & GL 	
<ul style="list-style-type: none"> Outline the method for calculation of GI of various food items 	
<ul style="list-style-type: none"> Interpret clinical conditions correlated with their laboratory investigations 	

LEARNING RESOURCES

SUBJECT	RESOURCES
ANATOMY	A. <u>GROSS ANATOMY</u> <ol style="list-style-type: none">1. K.L. Moore, Clinically Oriented Anatomy2. Neuro Anatomy by Richard Snell3. https://www.kenhub.com/en/dashboard B. <u>HISTOLOGY</u> <ol style="list-style-type: none">1. B. Young J. W. Health Wheather's Functional Histology C. <u>EMBRYOLOGY</u> <ol style="list-style-type: none">1. Keith L. Moore. The Developing Human2. Langman's Medical Embryology
BIOCHEMISTRY	A. <u>TEXTBOOKS</u> <ol style="list-style-type: none">1. Harper's Illustrated Biochemistry2. Lippincott's Illustrated reviews of Biochemistry3. Lehninger Principle of Biochemistry4. Biochemistry by Devlin5. Essentials of Medical Biochemistry by Mushtaq Ahmed (2 Volumes)

ASSESSMENT METHODS:

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

BCQs:

- A BCQ has a statement or clinical scenario of four options (likely answers).
- **Correct answer carries one mark, and incorrect 'zero mark'. There is NO negative marking.**
- Students mark their responses on specified computer-based sheet designed for LNHMC.

OSCE:

- All students rotate through the same series of stations in the same allocated time.
- At each station, a brief written statement includes the task. Student completes the given task at one given station in a specified time.
- Stations are observed, unobserved, interactive or rest stations.
- In unobserved stations, flowcharts, models, slide identification, lab reports, case scenarios may be used to cover knowledge component of the content.
- Observed station: Performance of skills /procedures is observed by assessor
- Interactive: Examiner/s ask questions related to the task within the time allocated.
- In Rest station, students in the given time not given any specific task but wait to move to the following station.

Internal Evaluation

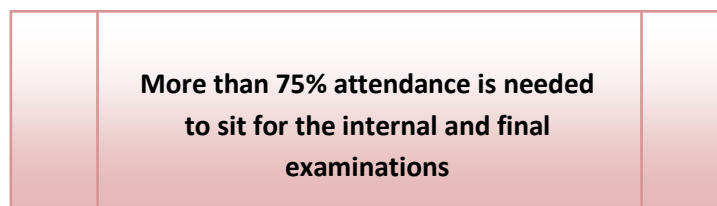
- Students will be assessed comprehensively through multiple methods.
- 20% marks of internal evaluation will be added to JSMU final exam. That 20% may include class tests, assignment, practicals and the internal exam which will all have specific marks allocation.

Formative Assessment

Individual department may hold quiz or short answer questions to help students assess their own learning.

The marks obtained are not included in the internal evaluation

For JSMU Examination Policy, please consult JSMU website!



LNH&MC EXAMINATION RULES & REGULATIONS

- Student must report to examination hall/venue, 30 minutes before the exam.
- **Exam will begin sharp 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 examination hall.**
- If any student is found with cell phone in any mode (silent, switched off or on) he/she will be not be allowed to continue their exam.
- No students will be allowed to sit in exam without University Admit Card, LNMC College ID Card and Lab Coat
- Student 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:

WEEKS	2 ND YEAR	MONTH
WEEK 1-7	HEAD & NECK MODULE	22 nd March, 2021
		8 th May, 2021
		10 th May, 2021*
WEEK 1-8	NEUROSCIENCES MODULE -1	10 th May, 2021*
		3 rd July, 2021*
MID TERM EXAMINATION*		

*Final dates will be announced later