

CURRICULUM



**DIPLOMA IN LARYNGOLOGY & OTOLOGY
(DLO)
DEPARTMENT OF OTORHINIOLARYNGOLOGY
HEAD & NECK SURGERY**

**Peoples University of Medical & Health Sciences,
Nawabshah, Sindh**

Curriculum & Syllabus for D.L.O



PEOPLES UNIVERSITY OF MEDICAL & HEALTH SCIENCES, NAWABSHAH.

Prof. Dr. *ASVDS MAL KHEMANI*
Chairman Dept of ENT
PUMHS Nawabshah.

D,L,O. Curriculum & Syllabus

Course Duration: Two (02) Years

Course Parts: Two

Part -1 Basic Medical Sciences

Part -2 Clinical Oto-Rhino-Laryngology

Criteria for Admission:

1. MBBS degree holder along with current PMDC Registration.
2. One Year House Job in ENT at PMDC recognized teaching hospital.

OR

3. Six month House Job in Surgery and Six month House Job in Medical.

OR

4. Five Year Clinical Experience after MBBS qualification.

SYLLABUS DLO, Part-One

It consist of Cognitive Knowledge (C1, C2,) about the Basic Medical Sciences

Develomental and Surgical Anatomy

- Ear
- External Ear
- Middle Ear
- Internal Ear
- Nose
- Para nasal Sinuses
- Oro-pharynx
- Naso-pharynx
- Hypo-pharynx
- Larynx
- Head & Nack,
- Neck Spaces
- Triangles of Neck
- Base of Skull
- Salivary Glands (Parotid, Submandibular and Sublingual gland).
- Tracheo-Bronchi,
- Esophagus,
- Cranial Nerves (1st, 5th, 7th, 8th, 9th, 11th, and 12th).

Physiology & Acoustics

- Sound and Acoustic
- Functions of External Ear
- Function of middle Ear
- Mechanism of Hearing
- Theories of Hearing
- Functions of Inner Ear
- Inner Ear Fluids & its biochemistry
- Mechanism of Balance
- Auditory Pathway
- Vestibular Pathway
- Function of Nose and Para-Nasal Sinuses
- Mechanism & Theories of Olfaction
- Olfaction Pathways
- Taste and its Pathway
- Theories of Taste
- Function of tonsil and Lymphoid structures
- Immunity and its different type
- Function and composition of Saliva
- Mechanism of Salivation
- Function of Larynx
- Mechanism of Voice and speech
- Physiology of Deglutition
- Basic physiology of Respiration
- Basic physiology of Blood and Blood Coagulation
- Cell and its basic physiology
- Basic physiology of Respiration

Part – I – Examination

1. Theory: Marks 200

Two Papers :

Paper -1, MCQ's Single Best Type, (it will consist of 75 questions)

Forty (40) from Anatomy & Thirty Five (35) from physiology.

Marks: 100

Paper -II, problem solving short Essay question, consist of 10 questions.

(Five from each anatomy and physiology)

Marks: 100

Minimum Passing Marks ; 60% of the passing marks in BOTH papers.

Candidate will be eligible to appear in viva & practical after pass both papers.

2. Viva Voce Examination

Marks 200

Grand Oral viva

Osteology related to ENT

Histology related to ENT

Identification of structures in Cadaveric specimen.

Table of Specification for DLO Part-I

Paper will consist of 75 MCQs

Category	Essential	Important	supplementary	Questionable
Difficult	12	12	-	-
Moderate	20	20	-	-
Easy	3	8	-	-

DLO Part-I Anatomy -40 MCQs

<u>CONTENT AREA</u>	<u>OBJECTIVE OUTCOMES</u>			<u>TOTAL CONTENT %AGE</u>
	<u>Recall C1</u>	<u>Interpretation C2</u>	<u>Problem Solving C3</u>	
Ear-12	4	4	4	30%
Nose+sinuses-10	4	4	2	25%
Naso-pharynx-2	1	1	-	5%
Oro-pharynx-2	1	1	-	5%
Larynx-2	1	1	-	5%
Hypo-pharynx-1	1	-	-	2.5%
Neck-4	2	2	2	10%
Easophagus-2	1	1	-	5%
Trachea/Bronchus-	1	-	1	5%
Cranial Nerve-3	1	1	1	7.5%

DLO Part-I Physiology -35 MCQs

<u>Content Area</u>	<u>Objective outcomes</u>			<u>Total Content %age</u>
	<u>Recall C1</u>	<u>Interpretation C2</u>	<u>Problem Solving C3</u>	
Ear-6	2	2	2	17%
Nose/sinuses-	2	2	1	14.2%
pharynx-2	1	-	1	5.7%
Easophagus-2	1	-	1	5.7%
Larynx-2	1	1	-	5.7%
Salivation-2	1	1	-	5.7%
Immunity-3	1	1	1	8.5%
Cell-physiology-5	3	2	-	14.2%
Blood-3	1	1	1	8.5%
respiration-3	1	1	1	8.5%
Miscellaneuos-2	1	1	-	5.7%

DLO, Part- Two

Clinical & Practical knowledge and the application of Cognitive Knowledge (C1, C2, C3,) Level) in diseases of ENT & Head & Neck.

Discipline of training

- History Taking
- Examination of cases of ENT & Head and Neck.
- Case presentation and discussion
- Audi logical and Vestibular Tests
- Surgical Skills

Goals of Training

- Able to interpret the clinical features, results, Investigation & to diagnose
the Common clinical disorders in Emergency and in OPD.
- Manage the cases in the department.
- Able to understand the difficult cases and situation.
- Able to consult or refer the difficult cases with Senior faculty
Members
and other specialty.
- Able to perform selective minor surgical procedures in
dependently as the supervisor's decided for him.
- Able to assist the major surgical procedures.
- Able to manage the Cases in post operative periods.

Surgical procedure (Independently)

- Anterior nasal packing,
- Suction Clearance of Ear
- Incision Drainage of Body from Ear and Nose and Oropharynx.
- Care of Tracheostomy Tube
- Incision drainage of Peri-tonsillar abscess(Quinsy)
- Proof puncture
- Electric cauterization of Bleeding Points in Nose

Surgical procedure (Independently)

- Tonsillectomy
- Sub mucosal Diathermy of Inferior Turbinate.
- Posterior Nasal Packing
- Sub mucosal Resection.
- Removal of Foreign Bodies from hypo-pharynx and Crico pharynx,
- Simple Nasal Polypectomy
- Antro-choanal Polypectomy
- Tracheostomy
- Decannulation and change of tracheotomy tube
- Myringotomy,
- Cortical Mastoidectomy
- Direct Laryngoscopy
- Direct Laryngoscopy

Knowledge about recent advance techniques like

- Laser therapy in ENT
- Functional Endoscopic Sinus Surgery,
- Cochlear implant,
- BERA test, Oto-acoustic Emission test.

SYLLABUS, DLO, Part-^{ONE} I

EAR

- Basic Clinical Anatomy & physiology
- Symptology of Ear Diseases.
- Examination of Ear & Tympanic Membrane
- Assessment of Hearing Loss
- Clinical assessment of Internal Ear.

External Ear

- Perforation, Otitis External, Perichondritis.
- Trauma
- Wax
- Fungus
- Foreign Bodies
- Aural Haemotoma.
- Aural Abscess.
- Tumors
- Otagia

Middle Ear

- Perforation of Tympanic Membrane
- Infections of Tympanic Membrane
- Acute Otitis Media
- Serous otitis Media
- Adhesive Otitis Media
- Tympanosclerosis
- Baro-Trauma
- Complications of Otitis Media
- Facial Nerve Paralysis
- Otosclerosis
- D.D OF Conductive Deafness
- Tumors of Middle Ear

Internal Ear

- Labrynthitis
- Meiners Disease
- Acoustics Disease
- Acoustic Neuroma
- Vertigo & Tinnitus
- Sensori-Neural Deafness, its Causes &D.

Nose & Para Nasal Sadness

- Basic Clinical Anatomy & Physiology
- Clinical Examination
- Symptology & Signs of diseases of Nose and Para nasal sinuses.
- Diseases of External Nose
 1. Infection
 2. Nasal Trauma
 3. Tumors
 4. Deformities

Diseases of Nasal Septum

- Septal Septal Deviations
- Septal Haematoma
- Septal Abscess
- Septal Perforations
- Adhesion
- Septal Tumors

Epistaxis

Rhinitis

1. Infective Rhinitis
2. Allergic Rhinitis
3. Vasomotor Rhinitis
4. Atropis Rhinitis

Sinusitis

- Acute Sinusitis
- Chronic Sinusitis
- Fungal Sinusitis
- Tumors of Sinuses

Nasal polyps

Antro-Choanal polyps

Rhinolith

Foreign Bodies

PHARYNX

NASO- Pharynx Includes,

- Basic Clinical Anatomy
- Examination
- Adenoid
- Nasopharyngitis
- Retropharyngeal Abscess
- Tumors

Oro-Pharynx Includes.

- Basic Clinical Anatomy
- Examination
- Signs & Symptoms.
- Ulcerative Disorder & Its Differential Diagnosis
- Infections of the Tonsil.
- Infection of Floor of Mouth
- Rannula
- Tumors of Tonsil
- Pharyngeal Abscess (Quinsy, para-Pharyngeal)
- Salivary Glands Disorders, (Infections, Sialo-lithiasis, Tumors.)

Larynx & Hypo-Pharynx. Includes,

- Basic Clinical Anatomy
- Symptomology & Signs
- Congenital Disorders
- Infective Disorders
- Neurological Disorders
- Tumors

Trachea and Bronchus

- Basic Clinical Anatomy
- Infections
- Foreign air ways obstruction, D.D.

Esophagus

- Basic Clinical Anatomy
- Dysphagia
- Esophageal Strictures
- Tumors of esophagus

Part – II – Examination

Theory: Each Paper will be of 100 Marks

Paper -1:- MCQ'S Single Best Type, consist of 75 questions

No Negative Marking.

Paper -11:- Ten Problem solving short Essay questions

- Minimum Passing Score 60% of the passing marks
- Candidate will be eligible to appear in viva & practical examination after pass
both paper-1 and Paper II

Viva & practical

- Will be conducted in the ENT department.
- Total Marks 200.
- Minimum Passing Score: 60% of the passing marks
- Examination includes the following criteria of assessment.
- Oral viva.
- One long case, inside clinical examination and discussion.
- Two Short cases, with diagnosis and Examination of one of the Particular area.
- Examination of Head and Neck.
- Surgical instrument identification and their application.
- Radiological assessment.
- Clinical specimen assessment.

<u>CONTENT AREA</u>	<u>OBJECTIVE OUTCOMES</u>			<u>TOTAL</u>
	<u>Recall</u>	<u>Interpretation</u>	<u>Problem</u>	<u>CONTENT</u>
	<u>C1</u>	<u>C2</u>	<u>Solving C3</u>	<u>%AGE</u>
Diseases pharynx-5	1	2	2	20%
Diseases Larynx-5	1	2	2	20%
Diseases of Trachea-5	1	2	2	20%
Diseases of Easophagus-5	1	2	2	20%
Diseases of Nack-5	1	2	2	20%

Prof. Dr. ASVDO MAL KHOMANI

Chairman, Dept of ENT,

PUMHS Nawabshah