

Pravara Institute of Medical Sciences (Deemed University)

Loni Bk - 413 736, Tal. Rahata, Dist. Ahmednagar (MS)

Established Under Section 3 of UGC Act 1956, Vide Govt. of India Notification
No.F.9-11/2000-U.3, dated 29th September 2003



Syllabus

Diploma in ENT

Approved Vide Academic Council Resolution
No. 08 / AC / 2008 dated 12th Sept. 2008.



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Loni Bk. 413 736, Tal. Rahata, Dist. Ahmednager (M.S.)

SYLLABUS FOR DIPLOMA IN ENT-HNS (OTOLARYNGOLOGY AND HEAD NECK SURGERY) BASIC SCIENCES: -

1. Anatomy, Ultrastructure of Human Ear.
2. Physiology of Hearing.
3. Physiology of Equilibrium.
4. Anatomy of the Nose & Paranasal sinuses.
5. Physiology of Nose & Paranasal sinuses.
6. Pathophysiology of Ear & Paranasal sinuses in Flight and Diving.
7. Mouth & Related Facio-Maxillary Structure.
8. Anatomy & Physiology of Salivary Glands.
9. Anatomy of Pharynx & Esophagus
10. Physiology of Deglutition.
11. Anatomy of Tracheobronchial tree.
12. Physiology of Respiration.
13. Anatomy of Thyroid & Parathyroid Glands.
14. Physiology of Thyroid & Parathyroid Glands.
15. Physiology & Reception of Speech.
16. Surgical Anatomy of Skull Base.
17. Clinical Neuro-Anatomy.
18. Imaging & Radiology.
19. Basic Immunology.
20. Microbiology related to ENT & HEAD, NECK Diseases.
21. Cell Biology.
22. Principles of Radiotherapy in Head & Neck Cancer.
23. Principles of Chemotherapy in Head & Neck Cancer.
24. Principles & Use of Nuclear Medicine.
25. Wound Healing.
26. Principles of Laser Surgery.
27. Intensive & High Dependency Care.
28. Anaesthesia in ENT & HEAD, NECK Surgery.
29. Biomaterials.
30. Medical Negligence in Otorhinolaryngology.

OTOLOGY: -

1. Examination of Ear.
2. Aetiopathology of Inflammatory Conditions of External & Middle Ear
3. Pathology of Cochlea.
4. Pathology of Vestibular System.
5. Diseases of External Ear.
6. Ear Trauma.
7. Plastic Surgery of the Ear.
8. Acute Suppurative Otitis Media.
9. Management of Acute Suppurative Otitis Media
10. Chronic Suppurative Otitis Media.
11. Management of Chronic Suppurative Otitis Media.
12. Reconstruction of the Ear.
13. Complication of Suppurative Otitis Media.
14. Otagia.
15. Otosclerosis.
16. Diseases of Temporal Bone.
17. Sensorineural Hearing Loss.
18. Sudden & Fluctuant Sensorineural Hearing Loss.
19. Vertigo.
20. Meniere's Disease.
21. Ototoxicity.
22. Vestibular Schwannoma.
23. Epithelial Tumours of External Auditory Meatus.
24. Glomus & Other Tumours of the Ear.
25. Disorders of Facial Nerve.
26. Surgery of the Vestibular System.
27. Cochlear Implants.
28. Presbycusis.
29. Implantable Hearing Devices.

RHINOLOGY: -

1. Examination of Nose.
2. Conditions of the External Nose.
3. Congenital Anomalies of the Nose.
4. Evaluation of the Nasal Airway & Nasal Challenge.
5. Abnormalities of Smell.
6. Mechanism & Treatment of Allergic Rhinitis.
7. Food Allergy & Intolerance.
8. Infective Rhinitis & Sinusitis.
9. Intrinsic Rhinitis.
10. Nasal Polyps.
11. The Nasal Septum.
12. Surgical Management of Sinusitis.
13. Complications of Sinusitis.
14. Cerebrospinal Fluid Rhinorrhoea.
15. The Upper Airways & their relation to the respiratory System.
16. Fracture of Facial Skeleton.
17. Rhinoplasty.
18. Epistaxis.
19. Snoring & Sleep Apnoea.
20. Non-Healing Granulomas.
21. Facial pain & Headache.
22. Aspects of Dental Surgery for Otorhinolaryngology.
23. Trans-Sphenoidal Hypophysectomy.
24. The Orbit.
25. Neoplasms of Nose & Paranasal sinuses.

LARYNGOLOGY & HEAD, NECK

1. Examination & Endoscopy of the Upper Aerodigestive Tract.
2. Oral Cavity.
3. Acute & Chronic Infections of Pharynx & Tonsils.
4. Acute & Chronic Laryngitis.
5. Disorders of Voice.
6. Management of Obstructed Airway & Tracheostomy.
7. Trauma & Stenosis of Larynx.
8. Neurological Affections of Larynx & Pharynx.
9. Pharyngeal Pouches.
10. Tumours of the Larynx.
11. Angiofibroma.
12. Nasopharynx (the postnasal space).
13. Tumours of Oropharynx & Lymphomas of the head & Neck
14. Benign Diseases of Neck.
15. Malignant neck Diseases;
16. The Thyroid & Parathyroid Gland.
17. Non-neoplastic Salivary Gland Diseases.
18. Benign Salivary Gland Tumours.
19. Malignant Salivary Gland Tumours.
20. Tumours of Infratemporal fossa & Parapharyngeal space.
21. Cysts, Granulomas & Tumours of the Jaw, Nose & Sinuses.
22. The Esophagus in Otolaryngology.
23. Facial Plastic Surgery.
24. Plastic & Reconstructive Surgery of the head & neck.
25. Terminal Care of Patients with head & neck Cancer.

AUDIOLOGY: -

1. Acoustics.
2. Computers in Audiology.
3. Epidemiology.
4. Otological Symptoms & Emotional Disturbances.
5. Clinical tests of Hearing & Balance.
6. Pharmacological Treatment of Hearing & Balance Disorders.
7. Legal & Ethical Matters.
8. Prevention of Hearing & Balance Disorders.
9. Hearing Overview.
10. Causes of Hearing Disorders.
11. Noise & the Ear.
12. Diagnostic Audiometry.
13. Audiological Rehabilitation.
14. Hearing Aids.
15. Cochlear Implants.
16. Tactile Aids.
17. Central Auditory Dysfunction.
18. Tinnitus.
19. Overview of Balance.
20. Causes of Balance Disorders.
21. Diagnostic Testing of Vestibular System.
22. Rehabilitation of Balance Disorders.

PAEDIATRIC OTOLARYNGOLOGY: -

1. Improving Paediatric Otolaryngological Consultation.
2. Genetic Factors & Deafness.
3. The Causes of Deafness.
4. Testing Hearing in Children.
5. Screening & Surveillance for Hearing Impairment in Preschool Children.
6. Otitis Media with Effusion.
7. Acute Suppurative Otitis Media in Children.
8. Chronic Suppurative Otitis Media in Children.
9. Surgery of Congenital Abnormalities of the External & Middle Ear.
10. Management of Hearing Impaired Child.
11. Cochlear Implantation in Children.
12. Vestibular Disorders in Children.
13. Speech & Language.
14. Foreign Bodies in the Ear & Nose.
15. Congenital Anomalies of the Nose.
16. Craniofacial Anomalies.
17. Nasal Obstruction & Rhinorrhoea in Infants & Children.
18. Tonsils & Adenoids.
19. Dental development, Orthodontics, Cleft lip & Cleft palate.
20. Sleep Apnoea.
21. Stertor & Stridor.
22. Congenital Disorders of Larynx, Trachea & Bronchi.
23. Stenosis of Larynx.
24. Acute Laryngeal Infections.
25. Foreign Bodies in Larynx & Trachea.
26. Tracheostomy & Decannulation.
27. Home care of Tracheostomised Child.
28. Neonatal Pulmonary Disorders.
29. Diseases of the Esophagus in Children.
30. Branchial cleft Anomalies, Thyroglossal cysts & Fistulae.
31. Tumours of the Head & Neck in Children.
32. Salivary Glands Disorders in Children.
33. The Drooling Child.
34. Recurrent Respiratory Papillomatosis.
35. Paediatric Anesthesia.

DISSERTATION

1. The dissertation is compulsory for the candidates registered for M.S. (ENT-HNS) and should include candidates own work under a supervisor qualified for the purpose and recognized as a postgraduate teacher by the university.
2. The subject of thesis along with a synopsis (about 200 words in the prescribed proforma) should be countersigned by the postgraduate teacher, head of the department and head of the institution. It should be submitted to the university within four months of registration as postgraduate student. No change in the dissertation topic or guide shall be made without prior approval of university.
3. The dissertation should be submitted under the following headings:
 - I. Introduction
 - II. Aims and objectives of the study
 - III. Review of literature
 - IV. Materials & methods
 - V. Observations
 - VI. Results
 - VII. Discussion
 - VIII. Conclusion
 - IX. Summary
 - X. Master chart
 - XI. References
4. If a work required for the thesis entails collaboration with other department or specialties, the collaborative portion of work will be supervised by a co-guides designated by the head of the institution .A co-guide should normally be a post graduate teacher in his own specialty, however, workers who have specialized in a particular field may be designated as co-guides by the Head of the institution. In cases where there is guide and co-guide for a thesis, the certificate required for submission of the thesis should be signed both guide and co-guide.
5. The subject of the thesis should as far as possible reflect the research priorities of the postgraduate department where the work is being done. The department should provide all facilities to the candidate and the candidate should not be asked to spend money on chemicals instruments etc. The Dean, Commandant/Principal of the college while submitting the topic of the thesis to the university for approval should make sure that the institution provides all facilities for the research work The candidate should submit to the university six monthly progress report of thesis and his other postgraduate work through his

Post-Graduate teacher, Head of the post graduate department and Head of institution.

6. If the progress of the candidate's work including thesis work is not satisfactory, the university on recommendation of the Head of the department, head of the institution and Dean of the faculty of medicine may not grant the particular term and the period of training will be extended by the number of terms not granted.
7. If there is a minor change in the topic of dissertation the same be allowed at any time However if there is major change the student may allowed to change without keeping additional terms provided there is an interval of three clear terms between the date of application and date of examination
8. Lectures, Seminars, Journal club etc: The Post-graduate departments will organize lectures, seminars, symposia, tutorials, journal clubs, grand rounds and clinical meetings to keep the student abreast with the latest developments in the subject and ensure active participation by all PG students. 80% attendance is mandatory in these activities for grant of terms.
9. Log Book: Each PG student shall maintain a logbook of all academic activities, surgeries assisted and performed independently on a monthly basis. This logbook shall be signed by the Guide and Head of the department with their remarks on the progress of the student. This Logbook shall be produced at the time of Final Practical Examination as a record of academic and surgical work performed by the student over his training period.

SCHEME OF EXAMINATION

A. THEORY EXAMINATION:

1. There shall be four theory papers in M.S. examinations, of 100 marks each.
2. There shall be three theory papers in Diploma examinations, of 100 marks each.

B. CLINICAL, ORAL AND PRACTICAL:

1. Consisting of long, short cases, instruments, x-rays, CT scans, MRI, specimens, spots, laboratory, osteology, audiology etc.
2. There will be 400 marks in clinical, oral and practical in M.S. examinations and 300 marks in Diploma examinations.

C. HEADS AND STANDARD OF PASSING:

1. There will be two heads of passing: -
 - (a) Four/three papers of theory shall form one head of passing and
 - (b) Clinical, oral and practical taken together shall form the second head of passing.
2. A candidate must pass on both the heads of passing that is the whole examination at one and the same attempt. A candidate passing in one head and failing to pass in the other head will be declared fail and shall not be entitled to any exemption in the head in which he / she has passed, in an examination taken subsequently.
3. To pass a candidate must obtain:-
 - (a) 50 % of the total marks in theory examination
 - (b) 50 % of the total marks in clinical, oral and practical taken together.
 - (c) In any of the papers in theory, he must not obtain less than 40 % marks to be declared pass. (Total of all the four / three papers however must be 50 % of the total marks of the theory)
 - (d) Grand total is not head of passing.
4. Gracing: -

This will be done as per University Rules.

Examination Pattern

Diploma in Otorhinoarynglogy (DLO) Examination

Paper I: Diseases of Ear, Basic sciences related to Otology and Recent Advances related to Otology

Paper II: Diseases of Nose and Paranasal Sinuses, Basic Sciences related to Nose and Paranasal Sinuses and recent Advances related to Rhinology

Paper. III: Diseases of throat, Head and Neck including Tracheobronchial tree and Oesophagus and Basic Sciences and Recent Advances related to that.

THEORY PAPER SETTING PATTERN

Pattern - 3 Papers of 100 Marks each (I,II & III) Each paper shall have 4 Questions

Que-1- Long Answer Questions - 20 Marks

Que-2- Long Answer Questions - 20 Marks

Que-3- Long Answer Questions - 20 Marks

Que-4- Write short answers on (10X4) - 40 Marks

(w) D.L.O

Practical Exam.

1) One Long Case in ENT : 75 Marks

2) Two short Cases in ENT : 100 marks
each of 50 marks

3) Viva voce examination as follows

i) Surgical Pathology : 25 Marks

ii) Instruments : 25 Marks

iii) X - Ray : 25 Marks

iv) Bones in ENT : 25 Marks

v) Audiograms : 25 Marks

Total : 300 Marks

Theory + Practical Grand Total : 600 Marks

RECOMMENDED BOOKS: -

1. Scott-Browns Otolaryngology.
2. Paparella Otolaryngology.
3. Shambaugh/Glasscock - Surgery of Ear.
4. Logan & Turner Diseases of ENT.
5. Ballenger Snow Otolaryngology.
6. Diseases of the Head & Neck by Cummins
7. Surgery of the Head & Neck – Stell & Maran
8. Rob & Smith Operative ENT Surgery.
9. Lore — Operative ENT Surgery.

RECOMMENDED JOURNALS: -

1. Indian Journal of Otolaryngology and Head neck Surgery.
2. Otology & Neurotology
3. Journal of Laryngology & Otology
4. Laryngoscope.
5. Annals of Otorhinolaryngology.
6. Archives of Otorhinolaryngology.
7. Otolaryngology Clinics of North America.