



**YENEPOYA UNIVERSITY**

**Deralakatte, Mangalore - 575018**

**REGULATIONS AND CURRICULUM GOVERNING  
POSTGRADUATE PROGRAM (MS) IN  
OTORHINOLARYNGOLOGY (ENT)**

**(CURRICULUM - EFFECTIVE FROM 2010-11)**

**ATTESTED**

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Recognised under Sec. 3(A) of the UGC Act 1956 as per notification number F.9-11/2007.U.3(A) dated 27-02-2008  
No.YU/REG/AC-5(8)/RA1/Noti./2010 dt.16.10.2010

**NOTIFICATION**

Sub: Curriculum and Syllabus governing the Postgraduate Course in eight specialities

Ref: Proceedings of the meetings of the Academic Council and Board of Management held on 11<sup>th</sup> and 12<sup>th</sup> October 2010

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The proposed curriculum and the syllabus governing the Postgraduate Course in the Specialities of MS General Surgery, MS Ophthalmology, MS Otorhinolaryngology, MD Pediatrics, MD General Medicine, MD Radio Diagnosis, MD Pulmonary Medicine, MD Obstetrics & Gynaecology as approved by the Academic Council and Board of Management in the meetings held on 11<sup>th</sup> and 12<sup>th</sup> October 2010 respectively are here-by notified for implementation.

  
REGISTRAR

To:

The Principal  
Yenepoya Medical College

Copy to:

- Prof. & HODs. of MS General Surgery/MS Ophthalmology/ MS Otorhinolaryngology/  
MD Pediatrics/ MD General Medicine/ MD Radio Diagnosis/  
MD Pulmonary Medicine/ MD Obstetrics & Gynaecology
- The Controller of Examinations
- Notification file – Academic Section

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## **Post Graduate Course in MS Otorhinolaryngology**

### **Preamble:**

A postgraduate specialist having undergone the required training should be able to recognize the health needs of the community should be competent to handle effectively medical problems and should be aware of the recent advances pertaining to his speciality. The PG student should acquire the basic skills in teaching of medical / Para-medical students. He /she is also expected to know the principles of research methodology and modes of consulting library. A postgraduate in ORL-Head and Neck surgery at the end of its 3 year course should develop proper clinical acumen to interpret diagnostic results and correlate them with symptoms from history taking and become capable to diagnose the common clinical conditions/diseases in the speciality and to manage them effectively with success without making any serious complications; and sincerely to take such accurate decision, for the patient's best interest including making a referral to/consultation with a more experienced colleague /professional friend while dealing with any patient with a difficult condition. He/ she should be able to create awareness about preventive Otolaryngology in the society

### **Goal**

The goals of postgraduate training course would be to train a MBBS doctor who will:

- Practice efficiently and effectively, backed by scientific knowledge and skill base.
- Exercise empathy and a caring attitude and maintain high ethical standards.
- Continue to evince keen interest in continuing education in the speciality irrespective of whether he is in a teaching institution or is a practicing surgeon.
- Be a motivated 'teacher' – defined as a specialist keen to share his knowledge and skills with a colleague or a junior or any learner.

### **Objectives**

#### **Programme Objective:**

The following objectives are laid out to achieve the goals of the course.

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At the end of postgraduate training the student should be able to:-

- Practice his specialty ethically.
- Demonstrate sufficient understanding of basic sciences related to his specialty.
- Diagnose and manage majority of conditions in his speciality (clinically and with the help of relevant investigations.)
- Plan and advise measure for the prevention and rehabilitation of patients belonging to his speciality.
- Play the assigned role in the implementation of National Health Programs.
- Demonstrate competence in basic concepts or research methodology
- Develop good teaching skills
- Develop humane approach to patient care
- Good communicating ability with the patient's relatives especially in emergency situation such as in Casualty department while dealing with cancer patients and victims of accident.
- Maintain human values with ethical consideration.

These objectives are to be achieved by the time the candidate completes the course. The Objectives may be considered under the subheadings

1. Knowledge (Cognitive domain)
2. Skills (Psycho motor domain)
3. Human values, Ethical practice and Communication abilities

**Knowledge:**

- **Theoretical Knowledge:** A student should have fair knowledge of basic sciences (Anatomy, Physiology, Biochemistry, Microbiology, Pathology and Pharmacology) as applied to his speciality.
- He /she should acquire in depth knowledge of his subject including recent advances.

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- He should be fully conversant with the bedside procedures (diagnostic and therapeutic) and having knowledge of latest diagnosis diagnostic and therapeutics available.
  - Describe aetiology, pathophysiology, principles of diagnosis and management of common problems including emergencies, in adults and children.
  - Describe indications and methods for fluid and electrolyte replacement therapy including blood transfusion.
  - Describe common malignancies in the country and their management including prevention.
  - Identify social, economic, environmental and emotional determinants in a given case, and take them into account for planning therapeutic measures.
  - Recognize conditions that may be outside the area of his specialty/competence and to refer them to the proper specialist.
  - Advise regarding the operative or non-operative management of the case and to carry out this management effectively.
  - Update oneself by self study and by attending conferences and seminars relevant to the speciality
  - Teach and guide his team, colleagues and other students
  - Undertake audit, use information technology tools and carry out research, both basic and clinical, with the aim of publishing his work and presenting his work at various scientific forum.

### **Skills**

- Take a proper clinical history, examine the patient, perform essential diagnostic procedures and order relevant tests and interpret them to come to a reasonable diagnosis about the surgical condition.
- Diagnose and manage the common ENT conditions independently.
- To pick the rare ENT conditions at the earliest

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- Acquire proper knowledge of the ancillary specialties like neurosurgery, facial aesthetics, head and neck reconstruction, Faciomaxillary injuries, audiology and acoustics, head and neck radiology
  - Perform common operative procedures in Otorhinolaryngology.
  - Provide basic and advanced life saving support services (BLS & ALS) in emergency situations
  - Undertake complete patient monitoring including the preoperative and post operative care of the patient.

#### **Human values, Ethical practice and Communication abilities**

- Adopt ethical principles in all aspects of his/her practice. Professional honesty and integrity are to be fostered. Care is to be delivered irrespective of the social status, caste, creed or religion of the patient.
- Develop communication skills, in particular the skill to explain various options available in management and to obtain a true informed consent from the patient.
- Provide leadership and get the best out of his team in a congenial working atmosphere.
- Apply high moral and ethical standards while carrying out human or animal research.
- Be humble and accept the limitations in his knowledge and skill and to ask for help from colleagues when needed.
- Respect patient's rights and privileges including patient's right to information and right to seek a second opinion.
- Some elementary knowledge in clinical Psychology and social,work management is to be acquired for management of patients, especially those terminally ill and disable-persons and interacting with their relatives.

**Research:** He / she should know the basic concepts of research methodology plan a research project and should know how to consult library. Basic knowledge of statistics is also required.

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**Teaching:** Should learn the basic methodology of teaching and develop competence in teaching medical / paramedical students

**Postgraduate Training Program:**

Didactic lectures are of least importance; seminars, journal clubs, symposia. Reviews and guest lectures should get priority for theoretical knowledge. Bedside teaching, grand rounds, interactive group discussions and clinical demonstrations should be the hallmark of clinical / practical learning. Student should have hand-on training in performing various procedures (medical/surgical concerning his subject) and ability to interpret various tests / investigations. Exposure to newer specialized diagnostic / therapeutic procedures concerning his subject should be given.

**Clinical Postings**

**FIRST YEAR**

- Spends 6 months in orientation programme including exposure to speech and Audiology Section and Vestibular Laboratory.
- Learn bedside history taking in wards, OT exposure, casualty,
- Care of indoor (Medical; preoperative and postoperative) patients for a minimum period of 6 months.
- Attends operation theatre and emergency operations for acclimatisation
- Assists ward rounds and visit wards with senior colleagues to attend call consultations from other dept.
- Participated in the teaching sessions in ward for bedside clinical aspect in the Seminar/Journal Club./case discussion

**After 6 months orientation during next two and a half yrs.**

- Attends ENT OPD thrice a week
- Discusses problematic cases with the consultant(s) in OPD/ward.
- Attends Operation Room/theatre

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- Attends morning rounds
  - Looks after minor OT by rotation in the OPD area for procedures.
  - Care of the indoor patients on beds allotted to him/her.
  - Attends the Journal Club and seminar and present the same by rotation.
  - Attends Vertigo Clinic, Headache Clinic and present cases.
  - Participates in discussions including therapy panning etc.
  - During the 2 and a half years, the resident must attend the combined Teaching Programme of the Department of Surgery, Neurosurgery and Medicine i.e. Clinical meetings, CPC's of students and staff of the whole hospital.
  - Surgicopathological conference in Pathology Department, with surgeons.
  - All kinds of specially prepared lectures by dept. faculty or from R.T./Plastic or Neurosurgery dept.
  - Does casualty duty on rotation
  - Visits by rotation the Camps for community exposures/work experience.
  - Does 12 hours emergency department duty twice a week as per Roster of the dept.
  - Attends lectures by visiting faculty to the dept. /college from India/abroad.
  - Attends/participates/presents papers in State/Zonal/National conference.
  - Actively participate/help in organization of Department Workshop, Courses In specialized areas like FESS/Otology. Rhinoplasty. Neurotology and Head-Neck Oncology from time to time.
  - It is optional to have atleast 2 publications in his/her name before they finish the course.

**Research Methology:**

**Reporting on research:**

- Learns the basics in research methodology and make the thesis protocol within 3 months of admission.



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- Problem oriented record keeping including use of computer (wherever feasible/available)
  - Use of Medical literature search including through Internet use, in the Library.
  - Attends biostatistics classes by arrangement.
  - Research Report – writing including preparation of protocol for Research/Thesis.
  - Writing an abstract/shot paper/presentation style (Slide-making & audiovisual aids).
  - Preparation of a report on a research/Thesis
  - Humanity/Ethics
  - Lectures on humanity including personality development, team spirit and ethical issues in patient care and human relationship including, public relations, by Psychologist and public relation officers are to be arranged by the dept./college

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## TEACHING METHODS

### Teaching and Learning Activities

A candidate pursuing the course should work in the institution as a full time student. No candidate should be permitted to run a clinic/laboratory/nursing home while studying postgraduate course. Each year should be taken as a unit for the purpose of calculating attendance.

Every student shall attend teaching and learning activities during each year as prescribed by the department and not absent himself / herself from work without valid reasons.

A list of teaching and learning activities designed to facilitate students acquire essential knowledge and skills outlined is given below.

- 1. Lectures:** Lectures are to be kept to a minimum. They may, however, be employed for teaching certain topics. Lectures may be didactic or integrated.
  - a) Lectures: Lectures recommended for selected common topics for post graduate students of all specialties. Few topics are suggested as examples:
    - 1) Bio-statistics
    - 2) Use of library
    - 3) Research methods
    - 4) Medical code of conduct and medical ethics
    - 5) National health and Diseases control programmes
    - 6) Communication skills etc.

These topics may preferably taken up in the first few weeks of the 1<sup>st</sup> year.

- b) Integrated Lectures: These are recommended to be taken by multidisciplinary teams for selected topics, eg. Jaundice, Diabetes mellitus, Thyroid etc.

- 2. Journal Club:** Recommended to be held once 2 weeks. All the PG students are expected to attend and actively participate in discussion and enter in the Log book relevant details. Further, every candidate must make a presentation from the allotted journal(s), selected articles at least four times a year and a total of 12 seminar presentations in three years. The presentations would be evaluated using

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check lists and would carry weightage for internal assessment. A time table with names of the student and the moderator should be announced in advance.

**3. Paper presentation/discussion**

**4. Subject Seminar:** Recommended to be held once a week. All the PG students are expected to attend and actively participate in discussion and enter in the Log Book relevant details. Further, every candidate must present on selected topics at least four times a year and a total of 12 seminar presentations in three years. The presentations would be evaluated using check lists and would carry weightage for internal assessment (See Checklist in Chapter IV). A timetable for the subject with names of the student and the moderator should be announced in advance.

**5. Cadaveric head and neck and temporal bone dissection:**

Temporal bone dissection which includes:

- Cortical mastoidectomy
- MRM and Radical Mastoidectomy
- Facial nerve decompression
- Posterior tympanotomy
- Labrinthectomy
- Endolymphatic sac decompression
- Extended procedures wherever possible

. Cadaveric dissection Lab: Cadaveric temporal bone. Nose & Para nasal Sinuses and head & neck dissections must be arranged in the Departmental Lab and/or in the anatomy department for learning surgical anatomy by dissection as well and for learning different operative procedures under faculty supervision and independently (for middle ear operations using operating microscope and for other head and neck surgical procedures including endoscopic (FESS) sinus surgery using endoscopes during 2nd & 3rd year of residency on a regular basis before/during exposure of particular batch of students to real operative procedures in patients

**6. Ward Rounds:** Ward rounds may be service or teaching rounds.

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- a) **Service Rounds:** Postgraduate and Interns should do every day for the care of the patients. Newly admitted patients should be worked up by the PGs and presented to the seniors the following day.
- b) **Teaching Rounds:** Every unit should have 'grand rounds' for teaching purpose. A diary should be maintained for day to day activities by the students. Case presentation to be done in the ward  
Entries (a) and (b) should be made in the Log book.
- 7. Clinico-pathological Conference:** Recommended at least once in three months for all post graduate students. Presentation may be done by rotation. If cases are not available due to lack of clinical postmortems, it could be supplemented by published CPCs.
- 8. Clinical cases:** (minimum of 40 cases) to be presented, which will be assessed by using Check lists
- 9. Inter-departmental Meetings:** with departments of Pathology and Radio-Diagnosis at least once a week. Radio-diagnosis: Interesting cases and the imaging modalities should be discussed. These meetings should be attended by post graduate students and relevant entries must be made in the Log Book.
- 10. Teaching skills:** Postgraduate students must teach undergraduate students (Eg. Medical, nursing) by taking demonstrations, bed side clinics, tutorials, lectures etc. Assessment is made using a checklist by surgery faculty as well students.. Record of their participation may be kept in Log book. Training of post graduate students in Educational Science and Technology is recommended.
- 11. Continuing Medical Education Programmes (CME):** Recommended that at least 4 state level CME programmes should be attended by each student in 3 years. It is optional to attend workshops, zonal & national conferences. It is advisable to have atleast 2 presentations/publications before the completion of the course.

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**12. Community camps:** For rural exposure and also for experience in preventive aspect in rural situation/Hospital/School, patient care camps are to be arranged involving Residents junior faculty.

**13. Emergency situation:** Casualty duty to be arranged by rotation among the PGs with a faculty cover daily by rotation.

**14. Afternoon Clinics:**

(i) Vertigo Clinic: All the patients of vertigo attending ENT OPD/referred cases are worked up in details by the Junior Residents and are discussed with one/two Faculty and treatment decided upon.

(ii) Headache clinic: For patients with sinus diseases, facial pain and primary headaches

**15. Bedside clinical training** for patient care management and for bedside manners. Daily for half to one hour's duration during ward round with faculty and 1-2 hours in the evenings by senior resident/Faculty on emergency duty Bedside patient care discussion are to be made. Faculty should take a Teaching Rounds by Rotation.

**16. Death Cases:** The records of such cases are presented by the Senior Residents. The Junior Residents are encouraged to participate actively in the discussion in the presence of Faculty of ENT and hospital administration. This programme helps to take corrective measures as well as to maintain accountability in patient management.

**17. Clinical teaching:** In OPD, ward rounds, Emergency, ICU and the Operation Theatres: Residents/Senior Residents and Faculty on duty in respective places – make discussion on clinical diagnosis/surgical procedures/treatment modalities, including post operative care and preparation discharge slip.

**18. Clinical interaction with audiologists/speech therapist:** clinical interaction with. Audiologist/speech therapist pertaining to management of the patients with audiological/speech problems are to be made/discussion arranged. Audiologic methods and therapy strategies are to be made known to Resident doctors.

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**19. Research Methodology:** Courses and lectures are to be arranged for the residents for language proficiency by humanity teachers besides few lectures on human values and ethical issues in patient care.

**20. Writing Thesis:** Thesis progress is presented periodically and discussion made in the dept. Guides/co-guides are to hear the problems of the candidate, can provide assistance to the student. Progress made or any failure of the candidate may be brought to the notice of college Dean/principal.

### **Dissertation**

Every candidate pursuing MD/MS degree course is required to carry out work on a selected research project under the guidance of a recognised postgraduate teacher. The results of such a work shall be submitted in the form of a dissertation.

1. The dissertation is aimed to train a post graduate student in research methods and techniques. It includes identification of a problem, formulation of a hypothesis, search and review of literature, getting acquainted with recent advances, designing of a research study, collection of data, critical analysis, comparison of results and drawing conclusions.
2. Every candidate shall submit to the Registrar (Academic) of the university in the prescribed proforma, a synopsis containing particulars of proposed dissertation work six months from the date of commencement of the course on or before the dates notified by the University. The synopsis shall be sent through the proper channel.
3. Such synopsis will be reviewed and the dissertation topic will be registered by the University. No change in the dissertation topic or guide shall be made without prior approval of the University.
4. The dissertation should be written under the following headings:
  - i) Introduction

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- ii) Aims or Objectives of study
  - iii) Review of Literature
  - iv) Material and Methods
  - v) Results
  - vi) Discussion
  - vii) Conclusion
  - viii) Summary
  - ix) Reference (Vancouver style)
  - x) Tables
  - xi) Annexure

5. The written text of dissertation shall be not less than 50 pages and shall not exceed 150 pages excluding references, tables, questionnaires and other annexure. It should be neatly typed in double line spacing on one side of paper (A4 size, 8.27" x 11.69") and bound properly. Spiral binding should be avoided. The dissertation shall be certified by the guide, head of the department and head of the Institution.
6. Four copies of dissertation thus prepared shall be submitted to the Registrar (Evaluation), six months before final examination on or before the dates notified by the University.
7. The dissertation shall be valued by examiners appointed by the University. Approval of dissertation work is an essential precondition for a candidate to appear in the University examination.

**Presentation for the Thesis work:**

- Selection of thesis Topic: subject of thesis will be selected by the candidate under guidance of Faculty which will be approved by the department guide and other faculty. The candidate will be asked to submit the protocol within 3 (four) month of admission after departmental Faculty scrutinizes it. It is to be approved

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by the central thesis committee/Ethical committee of the Institute/College and the ethical considerations are also discussed in such Research Programme committee.

- Once the thesis protocol is approved the candidate starts his research work under direct supervision of guide and co guides.
- Three/six monthly progress of the thesis will be checked to know the outcomes/or difficulties faced by the candidate.
- Candidate will be asked to submit the thesis 6 months before the final exams

### **Course contents**

#### **i) Components of Curriculum: Theory**

- Anatomy & Physiology of Ear, Nose & Throat, Trachea and esophagus.
- The ears and nasal sinuses in the aerospace environment
- Physiological consideration of pressure effects on the ear and sinuses in deep water diving.
- The generation and reception of speech.
- Radiographic anatomy of the ear, nose, throat and imaging
- Bacteriology in relation to Otorhinolaryngology.
- Allergy and rhinitis.
- The principles of cancer immunology with particular reference to head and neck cancer.
- Principles of chemotherapy in head and neck cancer
- Hematology in relation to Otolaryngology.
- Anesthesia for Otolaryngology



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- Pharmacology of drugs used in ENT
  - Electrolyte. Fluid balance/shock conditions.
  - Use of teaching aids
  - Routine blood, urine testing
  - Preparation of slides
  - Facial nerve stimulation test.
  - Audiometry, impedance Audiometry, Free field Audiometry, Specialized tests of hearing including SISI, Tone decay, ABLB, Speech discrimination score , use of computers in audio vestibular assessment, Hearing aids and cochlear implants, Deafness – causes & prevention, Deaf mutism etc.
  - Vestibular tests like caloric testing (Water & Air) stopping test, Fukuda's tests, craniocorpography recording of nystagmus by ENG and its interpretation.
  - Evoked response audiometry.
  
  - **EAR:**
  - The physical and functional examination of the ear.
  - The functional and physical examination of the vestibular system.
  - Tinnitus
  - Affections of external ear.
  - Repair of deformities of the external ear.
  - Congenital conditions of the middle ear cleft.
  - Traumatic conductive deafness
  - Acute inflammation of the middle ear cleft
  - Non-suppurative otitis media
  - Chronic suppurative otitis media
  - Management of chronic suppurative otitis media
  - Complications of infections of middle ear.
  - Tumors of the middle ear cleft and temporal bone
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- Diseases of the otic capsule-otosclerosis
  - Diseases of the otic capsule-other diseases
  - The deaf child
  - Traumatic lesions of the inner ear.
  - Inflammatory lesions of the vestibular and auditory nerve
  - Acoustic neuroma
  - Ototoxicity
  - Presbycusis
  - Vascular lesions of the inner ear
  - Diagnosis and management of sudden and fluctuant sensorineural hearing loss
  - Meniere's disease
  - Neurologic aspects of vertigo
  - Facial paralysis
  - Rehabilitation of adults with acquired hearing loss-Hearing aids, cochlear implants
  - Nystagmus and Electronystagmography
  - Skull base/Neurologic surgery
  - **NOSE: -**
  - Examination of the nose
  - Conditions of the external nose
  - Injuries of the facial skeleton
  - Cosmetic surgery of the nose
  - Congenital diseases of the nose
  - The nasal septum
  - Foreign bodies in the nose, rhinolith
  - Epistaxis
  - Acute chronic inflammations of the nasal cavities
  - Vasomotor rhinitis-allergic and non-allergic
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- Nasal polyposis
  - Abnormalities of smell
  - Acute sinusitis
  - Chronic sinusitis
  - Nasal Allergy/Fungal allergic sinusitis
  - Complications of acute and chronic sinusitis
  - Non healing granuloma of the nose
  - Tumors of nose and sinuses
  - Facial pains
  - Trans-ethmoidal hypophysectomy
  - Surgery of the pterygo palatine fossa.
  - FESS/LASER Surgery
  - Extended FESS
  - Orbit in relation to ENT
  - Facial pain & headache
  
  - **THROAT:**
  - Methods of examination of the mouth and pharynx
  - Diseases of the mouth
  - Diseases of the salivary glands
  - Pharyngeal lesions associated with general diseases.
  - Diseases of the tonsils and adenoids (excluding neoplasms)
  - Tumors of the pharynx
  - Hypopharyngeal diverticulum (Pharyngeal Pouch)
  - Oesophageal conditions in the practice of ear, nose and throat Surgery
  - Methods of examining and larynx tracheobronchial tree
  - Congenital diseases of the larynx
  - Laryngeal disorders in singers and other voice users

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- Neurological affections of larynx and pharynx
  - Disorders of speech
  - Neoplasms of head and neck and management
  - Intubation of the larynx and tracheotomy
    - Cervical node dissection
    - Skin grafts in otolaryngology
    - Lower respiratory conditions in Otolaryngology
    - Micro laryngeal surgery/thyroplasty
  - **Miscellaneous (Head and Neck)**
  - Functional Anatomy of cerebellum and brainstem
    - Cranial nerves
    - Raised intracranial tension-causes, diagnosis, and management with particular reference to Otitic hydrocephalus.
    - Pituitary gland, anatomy physiology hypo and hyper pituitarism, new growths.
    - Intracranial venous sinuses and their affections
  - Osteology: Skull, mandible cervical and vertebral sternum
    - Cervical fascia, facial spaces in neck, retro pharyngeal and parapharyngeal Abscesses
    - Anatomy and physiology of thyroid gland, goitre, diseases of the thyroid and carcinoma of thyroid.
  - Anatomy of mediastinum, large blood vessels in neck, thoracic duct development of major cervical and thoracic blood vessels.
  - Lesions of parapharyngeal, infratemporal & pterygopalatine fossa
  - Skull base lesions, Pleura, plural cavity, bronchopulmonary segments and their clinical importance, Facial plastic surgery, Head and neck reconstructive surgery.
  - Terminal care in ENT
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- Odontogenic cysts & tumours
  
  - **GENERAL:**
  - Physiology of circulation, regulation of blood pressure, reactions of body to haemorrhage, Physiology of coagulation, wound healing,
  - Molecular biology and genetics- basics related to ENT
  - Pathophysiology of shock, fluid balance, blood transfusion and its hazards, fluid replacement therapy, burns.
  
  - **DRUGS USED IN THE ENT:**
  - Antihistammic
  - Nasal vaso constrictors
  - Local anaesthetics
  - Cortico steroids
  - Cyto-toxic agents
  - Antibiotics
  - Radioactive isotopes
  - Antifungal agents
  - Vasopressors and other agents used in shock like states

**ii) Components of curriculum: Practical / clinical**

- i) Mandatory: Dissection of Head & Neck
  
- ii) 10 temporal bone dissection which includes:
  1. Cortical mastoidectomy
  2. MRM & Radical mastoidectomy

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3. Facial nerve decompression
  4. Post tympanotomy
  5. Labyrinthectomy
  6. Endolymphatic sac decompression
  7. Translabryinthine approach to IAM

iii) **Essential list of Surgical Procedures**

Following procedures are classified as

- a) To be done independently (PI)
- b) To assist a senior specialist / consultant (PA)
- c) To wash and observe the procedure (O)

**Otology**

To be done independently (PI). The minimum number to be done is given against each procedure

Cortical mastoidectomy – 5 cases

MRM – 2 cases

Radical mastoidectomy – 2 cases

Myringoplasty – 5

Myringotomy and Grommet insertion – 5 Cases

Ossiculoplasty – one case

Facial N Decompression – optional

To have assisted or observed – Stapedectomy (PA/O)

**Rhinology**

To be done independently (PI)

- ❖ Reduction of fracture nasal bone – 2

SMR – 2cases

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- ❖ Septoplasty – 10 cases
  - ❖ Diagnostic nasal endoscopy – 10 cases
  - ❖ FESS a) Uncinectomy – 5 caes
    - b) Polypectomy – 2 cases
    - c) Anterioethmoidal cell clearance – 2 cases
    - d) Middle meatal antrostomy – 2 caes
  - ❖ Caldwell Luc – 1 case

To Assist or observe:

- ❖ FESS – Postr. Ethmoid / sphenoid / frontal sinus surgery
- ❖ Maxillo facial surgeries
- ❖ External operations of frontoethmoid sinus
- ❖ Maxillectomy – Total/Partial

### **Laryngology Head and Neck**

To be done Independently (PI)

- ❖ Tracheostomy – 5 cases
- ❖ Tonsillectomy – 10 cases
- ❖ Adenoidectomy – 10 cases
- ❖ DL Scopy – 10 cases
- ❖ Oesophagoscopy / Upper oesophagus foreign body removal – 5 cases

To assist or observe

- ❖ Bronchoscopy
- ❖ Total / Partial laryngectomy
- ❖ Block dissections of neck
- ❖ Thyroid surgery
- ❖ Salivary gland surgery
- ❖ Microlaryngeal surgery

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### Rotation posting in other departments

Neurosurgery	4 weeks
Plastic Surgery	2 weeks (optional)
Head & Neck Oncology	8 weeks
Anesthesia	2 weeks
Cardio-thoracic Surgery	2 weeks (optional)
Speech & Hearing	2 weeks
Radiology	2 weeks
Anaesthesia	2 weeks

### Monitoring Learning Progress

It is essential to monitor the learning progress of each candidate through continuous appraisal and regular assessment. It not only also helps teachers to evaluate students, but also students to evaluate themselves. The monitoring may be done by the staff of the department based on participation of students in various teaching / learning activities. It may be structured and assessment be done using checklists that assess various aspects. The learning out comes to be assessed should included: (i) Personal Attitudes, (ii) Acquisition of Knowledge, (iii) Clinical and operative skills, (iv) Teaching skills and (v) Dissertation.

i) **Personal Attitudes.** The essential items are:

- Caring attitudes
- Initiative
- Organisational ability
- Potential to cope with stressful situations and undertake responsibility
- Trust worthiness and reliability
- To understand and communicate intelligibly with patients and others



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- To behave in a manner which establishes professional relationships with patients and colleagues
  - Ability to work in team
  - A critical enquiring approach to the acquisition of knowledge

The methods used mainly consist of observation. It is appreciated that these items require a degree of subjective assessment by the guide, supervisors and peers.

- ii) **Acquisition of Knowledge:** The methods used comprise of 'Log Book' which records participation in various teaching / learning activities by the students. The number of activities attended and the number in which presentations are made are to be recorded. The log book should periodically be validated by the supervisors. Some of the activities are listed. The list is not complete. Institutions may include additional activities, if so, desired.

Journal Review Meeting (Journal Club): The ability to do literature search, in depth study, presentation skills, and use of audio-visual aids are to be assessed. The assessment is made by faculty members and peers attending the meeting using a checklist

Seminar / Symposia: The topics should be assigned to the student well in advance to facilitate in depth study. The ability to do literature search, in depth study, presentation skills and use of audio – visual aids are to be assessed using a checklist

Clinico-pathological conferences: this should be a multidisciplinary case study of an interesting case to train the candidate to solve diagnostic and therapeutic problems by using an analytical approach. The presenter(s) are to be assessed using a check list similar to that used for seminar.

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### iii) **Clinical Skills**

Day to day work: Skills in outpatient and ward work should be assessed periodically. The assessment should include the candidates' sincerity and punctuality, analytical ability and communication skills

Clinical Meetings: Candidates should periodically present cases to his peers and faculty members. This should be assessed using a check list

### (iv) **Teaching Skills:**

Candidates should be encouraged to teach undergraduate medical students and paramedical students, if any. This performance should be based on assessment by the faculty members of the department and from feedback from the undergraduate students

### (v) **Dissertation in the Department:**

Periodic presentations are to be made in the department. Initially the topic selected is to be presented before submission to the University for registration, again before finalization for critical evaluation and another before final submission of the completed work

### (vi) **Work diary / Log Book**

Every candidate shall maintain a work diary and record his/her participation in the training programmes conducted by the department such as journal reviews, seminars, etc. Special mention may be made of the presentations by the candidate as well as details of clinical or laboratory procedures, if any conducted by the candidate. The work diary shall be scrutinised and certified by the Head of the Department and Head of the Institution, and presented in the university practical/clinical examination.

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**(vii) Periodic tests:**

The departments may conduct three tests, two of them be annual tests, one at the end of first year and the other in the second year. The third test may be held three months before the final examination. The tests may include written papers, practicals / clinicals and viva voce.

**(viii) Records**

Records, log books and marks obtained in tests will be maintained by the Head of the Department and will be made available to the University or MCI.

**Log Book**

The log book is a record of the important activities of the candidates during his training, internal assessment should be based on the evaluation of the log book. Collectively, log books are a tool for the evaluation of the training programme of the institution by external agencies. The record includes academic activities as well as the presentations and procedures carried out by the candidate.

**Procedure for defaulters:** Every department should have a committee to review such situations. The defaulting candidate is counseled by the guide and head of the department. In extreme cases of default the departmental committee may recommend that defaulting candidate be withheld from appearing the examination, if she/he fails to fulfill the requirements in spite of being given adequate chances to set himself or herself right.

**Final Examination & Examiners**

Not more than 4 P.G. students should be subjected to practical exam in a day during the examination. Results of the examination will be declared as pass/failed/pass with distinction (Grades/marks may also be given if necessary as per University Rules).

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While doing so, both, formative and summative assessment will be taken into consideration.

## Assessment

**Formative:** 25% (6 monthly, each with 5% weightage) Based on day to day/semester Tests, jointly or individually assessed by different faculty members & computed and a final aggregate will be considered together

**Summative:** Final Examination - will have a 75% weightage: Basis Theory/practical examination. Both Formative assessment and Summative assessment will be added together at the time of final examination, and results prepared accordingly.

### Scheme of Examination

#### i) Theory

There shall be four question papers, each of three hours duration. Each paper shall consist of two long essay question carrying 20 marks and 6 short essay questions each carrying 10 marks. Total marks for each paper will be 100. Questions on recent advances may be asked in any or all the papers. Details of distribution of topics for each paper will be as follows:

Paper I:	Basic Sciences & recent advances	100 marks
	1. Anatomy	
	2. Physiology	
	3. Other basic science topics covered in syllabus	
Paper II:	Rhinology including recent advances	100 marks
Paper III:	Otology including recent advances	100 marks
Paper IV:	Laryngology and Pharyngology & Broncho-oesophagology including recent advances	100 marks
ii) Clinical		200 marks

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There shall be one long case and three short cases to be examined and presented by each candidate.

Type of cases

Long case	1	80 marks
Short cases/OSCE	3 (40 x 3)	120 marks

It is suggested that the short cases may be replaced by OSCE (Objective structured clinical examination) pattern subjected MCI approval.

iii) Viva voce 100 marks

1) Viva-voce Examination: 80 marks

All examiners will conduct viva-voce conjointly on candidate's comprehension, analytical approach, expression and interpretation of data. It includes all components of course contents. In addition candidates may be also be given case reports, CT scan images, Temporal bone dissection, etc., for interpretation. Questions on operative surgery and use of instruments will be asked. It includes discussion on dissertation also.

2) Pedagogy Exercise: 20 marks

A topic may be given to each candidate in the beginning of clinical examination. He/she is asked to make a presentation on the topic for 8-10 minutes.

Maximum marks for	Theory	Practical	Viva	Grand total
M.S. Otorhinolaryngology	400	200	100	700

**Examiners/ Final Examinations**

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A) There shall be four examiners including two external and two internal. One of the internal examiners will be the Head of the Department and he /she shall be the Chairman/Convener. The second internal examiner shall be next senior most member of Faculty of the department provided he/she is eligible for such duty. It is also suggested that if there are many eligible internal examiners in the department, the second examiner may be selected on rotation.

The necessity of an external examiner is to maintain the standard of the examination at the National level. One external has to be from outside the state. Other external may be selected from a different university of the same state. All examiners must be a full time teacher with requisite experience as per MCI guidelines.

The internal shall have minimum 3 years of PG teaching experience and the external shall have minimum 5 years of PG teaching experience.

B) The external examiners will be asked to send two sets of question papers for the theory examination. There will be 2 external examiners from a different University so that the number of questions available will be double the number which will be given to the student in the moderated papers. The Chief internal examiner or Chairman/Convener will moderate it and finally make two sets of question paper. He/she shall send both sets of such papers to the university and university will decide to give one of the sets to the students.

C). All examiners shall be jointly responsible for the examination. In presence of the external examiners, the Chairman and the internal examiner shall make the necessary arrangements for conducting the final examination. Not more than 4 students will be evaluated / examined per day in any Centre. For different College/Institution, separate examination Centre/Examiners may be arranged/ appointed for convenience and proper administration of the Final examination. While preparing the Final results, formative assessment of the students shall be taken into consideration and the results will be sent to the university under seal cover.

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## Recommended Books

Sl. No.	Name of the Book	Year	Edition	Publisher	Cost
1.	Scott Broun 6 volumes	2008	7 <sup>th</sup>	Butterworth & Co Ltd.	15000/-
2.	Cummings 4 volumes Otolaryngology, Head & Neck Surgery	2007	4 <sup>th</sup>	Mosby	\$495.00
3.	Rob and Smith Operations surgery pertaining to ENT				
4.	Paperalla Otolaryngology (4 Vol set)	1991	3 <sup>rd</sup>	W.B. Saunder's Company	\$450.00
5.	Logan & Turner Diseases of ENT	1988	10 <sup>th</sup>	Wright / Varghese	425/-
6.	Lore Atlas of Head and Neck Surgery	1988	3 <sup>rd</sup>	W.B. Saunder's Company	\$200.00
7.	Shambagh / Glasscock Surgery of the Ear	2000	4 <sup>th</sup>	W.B. Saunder's Company	\$125.00
8.	Ballenger Snow Jr.	2009	17 <sup>th</sup>	Williams & Wilkins	\$95.00
9.	Brackman otologic surgery	2000	2nd		\$ 175
10.	Bailey – Otolaryngology and head and neck surgery	2001	3 <sup>rd</sup>		\$339

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## **Journals**

- 1) The Laryngoscope – Lippincott Williams & William
- 2) American journal of otolaryngology and head and neck surgery
- 3) Ear Nose Throat Journal
- 4) Indian Journal of Otolaryngology –IJOHNS
- 5) Annals of Otology / Rhinology / Laryngology – Annals Publishing Co.
- 6) Archives of Otorhinolaryngology
- 7) British Journal of Otolaryngology
- 8) Indian Journal of Otology.
- 9) Recent advances in Otorhinolaryngology – MOSBY
- 10)The Otolaryngology Clinics of North America – WB Saunders Company



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Format of Model Check Lists

Check List – I. MODEL CHECK-LIST FOR EVALUATION OF JOURNAL  
REVIEW PRESENTATIONS

Name of the Student:

Date:

Name of the Faculty / Observer:

Sl No.	Items for observation during presentation	Poor 0	Below Average 1	Average 2	Good 3	Very Good 4
1.	Article chosen was					
2.	Extent of understanding of scope & objectives of the paper by the candidate					
3.	Whether cross references have been consulted					
4.	Whether other relevant publications consulted					
5.	Ability to respond to questions on the paper / subject					
6.	Audio-Visual aids used					
7.	Ability to defend the paper					
8.	Clarity of presentation					
9.	Any other observation					
	Total Score					

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Check List – II

MODEL CHECK-LIST FOR EVALUATION OF SEMINAR  
PRESENTATIONS / JOURNAL CLUB

Name of the Student:

Date:

Name of the Faculty / Observer:

Sl No.	Items for observation during presentation	Poor 0	Below Average 1	Average 2	Good 3	Very Good 4
1.	Whether other relevant publications consulted					
2.	Whether cross references have been consulted					
3.	Completeness of Preparation / Article chosen was					
4.	Clarity of Presentation / Audibility / Proficiency in language					
5.	Understanding of subject / knowledge in the subject					
6.	Ability to answer questions / interaction					
7.	Time scheduling / attitude / body language					
8.	Appropriate use of Audio-visual aids					

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9.	Overall Performance					
	Total Score					

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## CHECK LIST – III

### MODEL CHECK LIST FOR EVALUATION OF CLINICAL WORK IN WARD / OPD

(To be completed once a month by respective Unit Heads including posting in other departments)

Name of the Student:

Date:

Name of the unit Head:

Sl. No.	Points to be considered	Poor 0	Below Average 1	Average 2	Good 3	Very Good 4
1.	Regularity of attendance					
2.	Punctuality					
3.	Interaction with colleagues and supportive staff					
4.	Maintenance of case records					
5.	Presentation of cases during rounds					
6	Investigations work up					
7	Beside manners					
8	Rapport with patients					
9	OT work Post-op & follow-up					
10.	Over all quality of Ward					

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	work					
	Total Score					

CHECK LIST – IV

EVALUATION FORM FOR CLINICAL PRESENTATION

Name of the Student:

Date:

Name of the Faculty:

Sl. No.	Points to be considered	Poor 0	Below Average 1	Average 2	Good 3	Very Good 4
1.	Completeness of history with all relevant points elicited					
2.	Clarity of Presentation / Audibility					
3.	Mentioned all positive and negative points of importance					
4.	Accuracy of general physical / local examination					
5.	Diagnosis Whether it follows logically from history and findings					
6.	Approach to the management, investigations					

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	& step by step discussion of treatment with application of logic & relevance					
7.	Proficiency of language & knowledge of the subject					
	<b>Grand Total</b>					

LOG BOOK

Table 1: Academic activities attended

Name:

Admission Year:

College:

Sl. No.	Date	Type of Activity CASE PRESENTATION	Particulars

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LOG BOOK

Table 1 : Academic presentations made by the student

Name:

Admission Year:

College:

Date	Topic	Type of Activity Specify Seminar, Journal Club, Presentation, UG teaching

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LOG BOOK

Table 3 : Diagnostic and Operative procedures performed.

Name:

Admission Year:

College:

Sl. No.	Date	Name	IP NO.	Procedure	Category O, A, PS, PI*



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- \* Key:
- O - Washed up and observed
  - A - Assisted a more senior Surgeon
  - PS - Performed procedure under the direct supervision of a senior Surgeon
  - PI - Performed independently

DEPARTMENT OF ENT

ANNUAL EVALUATION OF ACADEMIC WORK OF POSTGRADUATES

Name of the Student:

Date:

Name of the unit Head:

Sl. No.	Points to be considered	Poor 0	Below Average 1	Average 2	Good 3	Very Good 4
1.	Regularity of attendance					
2.	Punctuality					

3.	Maintenance of case records						
4.	Case presentation	Total no					
5.	Seminars	Total no					
6	Journal club	Total no					
7	OPD work & ward work						
8	Operative work						
9	Clinical knowledge						
10.	Overall quality of work						
	Total Score						

### Check List V

### MODEL CHECK LIST FOR EVALUATION OF TEACHING SKILL PRACTICE

SI No	Criteria	Strong Point	Weak Point
1.	Communication of the purpose of the talk		
2.	Evokes audience interest in the subject		
3.	The introduction		
4.	The sequence of ideas		

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5.	The use of practical examples and/or illustrations		
6.	Speaking style (enjoyable, monotonous, etc., specify)		
7.	Attempts audience participation		
8.	Summary of the main points at the end		
9.	Asks questions		
10.	Answers questions asked by the audience		
11.	Rapport of speaker with his audience		
12.	Effectiveness of the talk		
13.	Uses AV aids appropriately		

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Check list VI

MODEL CHECK LIST FOR DISSERTATION PRESENTATION

Name of the Student:

Date:

Name of Faculty:

Sl No.	Points to be considered	Poor 0	Below Average 1	Average 2	Good 3	Very Good 4
1.	Interest shown in selecting a topic					
2.	Appropriate review of literature					
3.	Discussion with guide & other faculty					
4.	Quality of Protocol					
5.	Preparation of proforma					
	<b>Total Score</b>					

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Check List VII

CONTINUOUS EVALUATION OF DISSERTATION WORK BY GUIDE /  
CO-GUIDE

Name of the Student:

Date:

Name of the Faculty:

Sl No.	Items for observation during presentation	Poor 0	Below Average 1	Average 2	Good 3	Very Good 4
1.	Periodic consultation with guide/co-guide					
2.	Regular collection of case material					
3.	Depth of analysis / discussion					
4.	Departmental presentation of findings					
5.	Quality of final output					
6.	Others					
	Total Score					