

# SUMANDEEP VIDYAPEETH

(Declared as Deemed to be University under Section 3 of the UGC Act 1956)

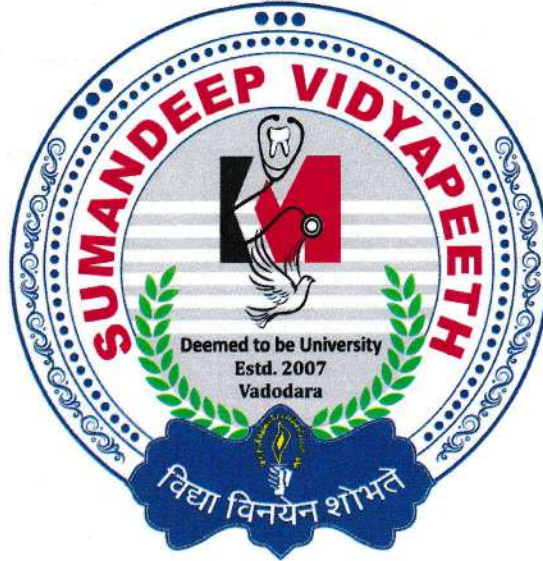
Accredited by NAAC with a CGPA of 3.53 out of four-point scale at 'A' Grade

Category – I deemed to be university under UGC Act - 2018

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## CURRICULUM

### Master of Surgery (M.S.)

ENT **Attested CTC**

*Charaney*  
15/2/2021

Vice-Chancellor

Sumandeep Vidyapeeth

An Institution Deemed to be University

VIII. Piparia, Taluka: Waghodia.

Dist. Vadodara-391 760. (Gujarat)



*Mhandh...*

*Polwade*



AMENDED UP TO DECEMBER -2020

## POST GRADUATE CURRICULUM IN ENT

### Programme outcome M.S.

The purpose of MS education is to create specialists who would provide high quality health care and advance the cause of science through research & training. The goal of postgraduate medical education shall be to produce competent specialists and/or Medical teachers.

### Programme specific outcome M.S.

**POS 1.** A post graduate specialist having undergone the required training should be able to recognize the health needs of the community, acquire knowledge to handle effectively medical / surgical problems and should be aware of the recent advances pertaining to his specialty.

**POS 2.** Practice the speciality concerned ethically and in step with the principles of primary health care.

**POS 3...**The PG student should acquire the basic skills in teaching of medical / para-medical students and is also expected to know the principles of research methodology and self-directed learning for continuous professional development.

**POS 4..**Play the assigned role in the implementation of national health programme, effectively and responsibly.

**POS 5..** Organize and supervise the chosen/assigned health care services demonstrating adequate managerial skills in the clinic/hospital or the field situation.

**POS 6..** Develop skills as a self-directed learner, recognize continuing education needs; select and use appropriate learning resources.

**COURSE OUTCOME (CO) :**At the end of postgraduate training the student Practice his specialty ethically keeping in mind the requirement of the patient, community and people at large.

1. Demonstrate sufficient understanding of basic sciences related to his specialty and be able to integrate such knowledge in his Clinical practice.
2. Diagnose and manage majority of conditions in his specialty (clinically and with the help of relevant investigations)
3. Plan and advise measures for the promotive, preventive, curative and rehabilitative aspects of health and diseases in the specialty of ENT.
4. Should be able to demonstrate his cognitive skills in the field of ENT and its ancillary branches during the formative and summative evaluation processes.
5. Play the assigned role in the implementation of National Health Programs
6. Demonstrate competence in basic concepts of research methodology and writing thesis and research papers.
7. Develop good learning, communication and teaching skills.

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## 8. Goals

The goals of MS course in ENT are to produce a competent Otolaryngologist who:

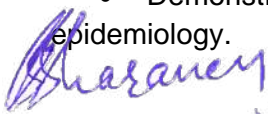
- Recognizes the health needs of ENT patients and carries out professional obligations in keeping with principles of National Health Policy and professional ethics.
  - Has the acquired competencies pertaining to ENT that are required to be practiced in the community and that all levels of health care system.
- Has acquired skills in effectively communicating with the patient, family and community.
- Is aware of the contemporary advances and developments in medical science as related to Otolaryngology.
  - Is oriented to principles of research methodology.
  - Has acquired skills in educating medical and paramedical professionals.

## Objectives

At the end of MS course in ENT, the student will be able to:

- Practice the specialty of Otolaryngology in keeping with the principles of professional ethics.
- Recognize the key importance of deafness control programme in the context of health priority of the country.
- Take detailed history; perform physical and local ENT examination including Indirect Laryngoscopy, Anterior, Posterior rhinoscopy, otoscopy, audiometric assessment and interpretation.
- Perform relevant investigative and therapeutic procedures for the ENT patient.
- Interpret important imaging and laboratory results.
- Diagnose ENT problems based on the analysis of history, physical examination and investigative work up.
- Plan and deliver comprehensive treatment for ENT pathologies. .
- Plan and advice measures for the prevention of deafness, allergies, head neck cancers and to plan rehabilitation accordingly.
- Manage ENT emergencies efficiently.
- Demonstrate skills in documentations of case details and of morbidity and mortality data relevant to the assigned situation.
- Demonstrate empathy and humane approach towards patients and their families and respect their emotions.
- Demonstrate communicate skills in explaining management and prognosis, providing counseling and giving health education messages to patients and their families.
- Develop skills as self directed learner, recognize continuing educational needs, use appropriate resources and critically analyze relevant published literature in order to practice, evidence based otolaryngology.
- Demonstrate competence in basic concepts of research methodology and epidemiology.

Attested by



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- Facilitate learning of medical/nursing students, practicing physicians, paramedical health workers and other providers as a teacher trainer.
- Play the assigned role in the implementation of national deafness programs, effectively and responsibly.
  - Organize and supervise the desired managerial and leadership skills.
  - Function as a productive member of a team engaged in health care, research and education.
  - Be able to search, appraise and apply the latest evidences related to his topic.

## Syllabus

The syllabus of a Masters course in any subject can never be exhaustive and at best can be considered as indicative only.

### Theory

#### Basic Sciences

##### Ear

- o Anatomy embryology and ultrastructure of the human ear.
- o Physiology of hearing.
- o Assessment of hearing.
- o Hearing loss.
- o Physiology of equilibrium and its application to the dizzy patient.
- o Assessment of vestibular function
- o Eustachean tube anatomy and physiology
- o Facial nerve
- Temporal bone

##### Audiology

- o Audiometry and masking.
- o Tympanometry
- o BERA

##### Nose and Paranasal Sinuses

- o Anatomy and Embryology.
- o Physiology.
- o Pathophysiology of the ears and nasal sinuses in flight and diving.
- o Nasal Septum.
- o Evaluation of the nasal airway (Rhinomanometry)

##### Oral cavity

- o The embryology /anatomy of mouth and related faciomaxillary structure
- o Embryology/anatomy and physiology of salivary glands

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### **Pharynx and oesophagus**

- o Anatomy, embryogenesis and physiology of pharynx
- o Anatomy and embryogenesis of oesophagus and its relations
- o Physiology of deglutination

### **Larynx and tracheobronchial tree**

- o Anatomy and embryology
- o Physiology of respiration
- o Physiology of phonation

### **Skull base**

- o Surgical anatomy
- o Clinical neuroanatomy

### **Neck**

- o Facial spaces of head and neck
- o Lymph nodes of head and neck
- o Thyroid gland

### **Imaging and Radiology**

- o Image taking and interpretation of
- o Ultrasound
- o Angiography
- o Dacrocystography
- o X-rays
- o CT
- o MRI
- o Barium studies
- o Contrast studies etc with respect to ENT

Basic immunology

Microbiology as related to ENT

Wound healing principle

Intensive care in ENT patients

Anesthesia in ENT

Biomaterials used in ENT

Medical negligence in otolaryngology

Principle of chemotherapy

Principle of radiotherapy

Principle and use of nuclear medicine

Principles of laser surgery

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## **ENT Disorders: Their Medical/Surgical Management**

### **Ear**

- o Etiology and management of inflammatory condition of external and middle ear
- o Pathology of cochlea
- o Pathology of vestibular ear
- o Diseases of external ear
- o Diseases of Eustachian tube
- o Ear trauma
- o Management of CSOM and cholesteatoma.
- o Complications of CSOM and their management
- o Otosclerosis etiopathogenesis and management
- o Meniere's disease etiopathogenesis and management
- o Sensorineural hearing loss causes and management
- o Vertigo
- o Otolgia causes and management
- o Tinnitus causes and management
- o Ototoxicity
- o Acoustic neuroma
- o Epithelial tumours of EAC and middle ear
- o Glomous tumour of ear
- o Facial nerve disorder, etiopathogenesis and management
- o Cochlear implants
- o Rehabilitation of hearing impaired
- o Reconstruction of ear

### **Nose and paranasal sinuses**

- o Conditions of external nose
- o Abnormalities of smell
- o Mechanism and treatment of allergic rhinitis
- o Food allergy and rhinitis
- o Infective rhinitis and sinusitis
- o Complications of sinusitis

o Intrinsic rhinitis

o Nasal polyps

o CSF rhinorrhoea

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- o Fracture of facial skeleton
- o Rhinoplasty
- o Epistaxis
- o Snoring and sleep apnea
- o Non healing granulomas of nose
- o Facial pain and headache
- o Aspects of dental surgery for ENT
- o Trans sphenoidal hypophysectomy
- o The orbit with relation with nose
- o Cysts,granulomas and tumours of jaws, nose and sinuses
- o Deviated septum and septoplasty
- o Neoplasm of nasal cavity
- o Neoplasm of PNS

#### **Oral cavity and Salivary Glands**

- o Common disorder of oral cavity
- o Tumors of oral cavity
- o Non neoplastic disorder of oral cavity
- o Neoplasm of salivary gland 1.bengin 2.malignant

#### **Pharynx and Esophagus**

- o Acute and chronic infection of pharynx
- o Neurological affective of pharynx
- o Pharyngeal pouches
- o Abscesses in relation to the pharynx
- o Angiofibroma
- o Nasopharyngeal malignancy
- o Tumours of oropharynx and lymphomas of head and neck
- o Tumours of hypopharynx
- o The oesophagus in otolaryngology.
- o Dysphagia
- o Foreign bodies of food passage

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## **Larynx**

- o Acute and chronic laryngitis
- o Disorders of voice
- o Management of obstructive airway and tracheostomy
- o Trauma and stenosis of larynx
- o Neurological affections of larynx
- o Tumours of larynx (benign & malignant)
- o Congenital lesion of larynx and stridor

## **Neck /Face**

- o Benign disease of neck
- o Metastatic neck disease
- o The thyroid gland benign / malignant disorders
- o Tumours of infratemporal fossa and parapharyngeal space
- o Facial plastic surgery.
- o Plastic and reconstructive surgery of head and neck

## **Paediatrics Otolaryngology**

- o Genetic factors and deafness
- o Causes of deafness
- o Testing hearing in children
- o Screening and surveillance for hearing impairment in pre school children
- o Otitis media with effusion
- o Acute and chronic suppurative otitis media in children
- o Surgery of congenital absence of external /middle ear
- o Management of hearing impaired child.
- o Cochlear implantation in children
- o Vestibular disorder in children
- o Speech and language development
- o Foreign body in ear and nose
- o Congenital anomalies in nose
- o Craniofacial anomalies
- o Nasal obstruction , rhinorrhoea in infants and children

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- o Tonsils and adenoids
- o Dental development , orthodontics, cleft lip and palate
- o Sleep apnea

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- o Stertor and stridor
- o Acute laryngeal infections
- o Home care of tracheostomised children
- o Branchial cleft anomalies, thyroglossal cyst and fistula.
- o Tumors of head and neck in children
- o The drooling child
- o Recurrent respiratory papillomatosis
- o Pediatrics anesthesia

**Practical**

**History taking pertaining to Otolaryngology and examination like:**

- \_ Anterior and posterior rhinoscopy
- \_ Oral cavity examination
- \_ Indirect laryngoscopy
- \_ Otoscopy
- \_ Neuro-otology testing
- \_ Tuning fork testing
- \_ Audiometry
- \_ Impedance and vestibular function testing
- \_ Examination of Eustachian tube
- \_ Functional examination of nose
- \_ Transillumination test
- \_ Neck examination
- \_ Examination of cranial nerves
- \_ Examination of cervical lymph nodes
- \_ Nasal endoscopy
- \_ Flexible fiberoptic laryngoscopy
- \_ Micro-ear examination

**Monitoring skills**

- \_ Temperature recording
- \_ Capillary blood sampling
- \_ Arterial blood sampling
- \_ Cardio-respiratory monitoring
- \_ Post-operative patient monitoring and management accordingly,
- \_ Tracheostomy care
- \_ Blood gas analysis
- \_ Airway management.

**Therapeutic skills**

- \_ Tracheostomy,
- \_ Anterior/posterior nasal packing

**Attested OTS**

- \_ Ear packing, Syringing,
- \_ Foreign body removal from ear/nose/throat,

Airway management

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- \_ Nasogastric feeding
- \_ Endotracheal intubation
- \_ Cardiopulmonary resuscitation
- \_ Administration of oxygen
- \_ Venepuncture and establishment of vascular access
- \_ Administration of fluids, blood, blood components, parenteral nutrition
- \_ Common dressings
- \_ Abscess drainage
- \_ Basic principles of rehabilitation.

### Suggested Books -

#### Core books:

##### Name of Books.

##### Author

- |   |                       |
|---|-----------------------|
| • Diseases of ear, nose and throat.     | Scott Brown           |
| • Head and Neck surgery.                | PM Stell & AGD Maran  |
| • Surgery of the Ear.                   | Glasscock & Shambaugh |
| • Otolaryngology - Head & Neck Surgery. | Cummings.             |
| • Diseases of ear, nose and throat.     | Logan Turner          |
| • Diseases of ear, nose and throat.     | PL Dhingra            |
| • Audiological assessment.              | Anirban Biswas        |

#### Reference Books:

##### Name of Books.

##### Author

- |   |                     |
|---|---------------------|
| • Otolaryngology, Otology & Neurotology.  | Paprella & Micheal. |
| • Essentials of endoscopic sinus surgery. | S. Stamberger       |
| • Colour Atlas of Head & Neck Surgery.    | Jatin P Shah        |

#### Journals

- Archives Otolaryngology.
- Journal of Laryngology & Otology.
- Journal of Otolaryngology,
- Otolaryngologic Clinics of North America
- Indian Journal of Otolaryngology & Head & Neck

Attested C/O

*Sharan*  
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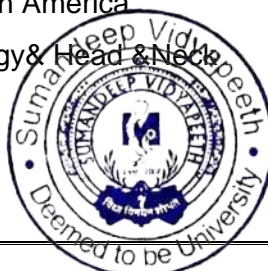
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- **Teaching schedule**

Learning in postgraduate program is essentially self-directed and primarily emanates from clinical and academic work. The formal sessions are merely meant to supplement this core effort. The following are formal teaching sessions for post graduate students:

- Orientation Workshop - At the beginning of the course
- Teaching Technology workshop - In second year
- Didactic lectures (With UG students) - As and when possible
- Seminar Presentations - Once a week
- Case Presentations - Once a week
- Grand Rounds - Once a week
- Thesis Reviews - Once a quarter
- Journal clubs - Once a week
- Death Review - Once a month
- Clinicopathological Conferences - Once a month
- Formative assessments - Once a month & Prelims before University exams.

**Orientation Workshop:**

This is conducted within the first eight weeks of admission to the course. The schedule includes exposure to the steps and elements of EBM over a 2 half day period. It is conducted centrally under the aegis of the College Medical Education Unit.

**Teaching Technology Workshop**

This workshop is conducted in the second year of the course over a period of two half days. It introduces the student to the concepts of Group Dynamics and Microteaching woven with the elements of EBM, thus preparing them for the role of under graduate teacher. It is also conducted centrally under the aegis of the College Medical Education Unit.

- *To introduce Basic life support (BLS) and Advanced Cardiac Life Support (ACLS) training for all the First year Postgraduate Resident Doctors from academic year 2017-18. (Board of Studies letter no.: SBKSMIRC/Dean/1777(A)/2017, dated 28/11/2017 and Vide Notification of Board of Management Resolution Ref: No.: SV/8813/2017-18, dated 06/04/2018)*

**Attested CFO**

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### **Didactic lectures (With UG students)**

Post graduate students who are free are expected to attend the didactic lecture sessions of UG students. These lectures are delivered imbuing the concepts of EBM, especially by incorporating appraised studies related to the topic of the lecture.

### **Seminar Presentations**

All seminar presentations are expected to be incorporated with the latest graded evidence on the matter and assessment is done accordingly.

### **Case Presentations**

The management aspects of case presentations are to be done citing structured evidence pertinent to the condition.

### **Grand Rounds**

The sessions provide a unique opportunity to demonstrate the application of latest relevant evidence on all aspects diagnosis, prognosis and management of patients and are conducted as such. The faculties demonstrate how the actual condition of the patient and his management is assessed and planned using the principles of evidence based management. These sessions, besides providing insights in evidence based management of patients, prime the student to practice lifelong EBM by role modeling.

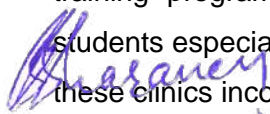
### **Journal Clubs**

Journal Club sessions are conducted purely on the basis of systematic critical appraisal of the article presented. These sessions thus provide a good opportunity to students to practice the principles and steps of critical appraisal of journal articles in EBM. Thus repeated hands on application hones the critical appraisal skills of the student.

### **Under Graduate Teaching**

Besides this post graduate students are an active component of the under graduate training programme. Third year post graduate students conduct clinics for undergraduate students especially those in the fourth semester. The post graduates are encouraged to conduct these clinics incorporating aspects of EBM.

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## Theory

**Paper I: Basic Sciences related Otolaryngology**

**Paper II: Principles and Practices of Otolaryngology**

**Paper III: Recent advances in Otolaryngology and Head Neck surgery.**

**Paper IV: General Surgical Principles and Head-Neck Surgery.**

### **3. Clinical / Practical and viva voce Examination**

**Clinical examination shall be conducted to test the knowledge, skills, attitude and**

**competence of the post graduate students for undertaking independent work as a**

**specialist/teacher, for which post graduate students shall examine a minimum one**

**long case and two short cases.**

**The Oral examination shall be thorough and shall aim at assessing the post graduate**

**student's knowledge and competence about the subject, investigative procedures,**

**therapeutic technique and other aspects of the specialty, which form a part of the**

**examination.**

**Assessment may include Objective Structured Clinical Examination(OSCE).**

**Oral/Viva-voce examination needs to assess knowledge on X-rays, instrumentation,**

**operative procedures. Due weightage should be given to Log Book Records and day-to-**

**day observation during the training.**



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