

8.00 am to 9.00am - Clinical lecture

9.00am -12 noon - Case demonstration in outpatient department discussions during clinical postings, case records, seminars, discussions, clinical exam

12-1 pm: Clinical lecture

Minimum one day per week is devoted for live operative surgery demonstration and discussion.

Separate clinical record/ log books

#### **PATTERN OF EXAMINATION Theory–**

one paper 40 marks

(Should contain one question on pre-clinical and para-clinical aspects, of 10 marks)

Oral (viva)-10 marks

Clinical-30 marks

Internal assessment-20marks (theory-10; practical-10)

Total-100 marks

#### **Scheme of Practical Examination**

One long Case : 1 x 15=15 marks

Two Short Case : 2 x 5 = 10 marks

OSCE (5 stations) : 5 x 1 = 5 marks

Total : 30 marks

Internal Assessment : 10 marks

**Grand Total : 40 marks**

#### **Text book recommended**

1. Parson's disease of eye – Sihota & Tandon

2. Ophthalmology for under graduates– Dr. P.S. GirijaDevi

#### **Reference books**

Clinical ophthalmology : Kanski J J

## **OTORHINOLARYNGOLOGY**

### **A. Goal**

The broad goal of teaching undergraduate students Otorhinolaryngology is to ensure that they

acquire adequate knowledge, skills and attitude for optimum treatment (including emergencies), rehabilitation of common otorhinolaryngologic disorders and assessment of the need for referral to specialised care.

## **B. Objectives**

Objectives are categorised as objectives for

1. Knowledge
2. Skills
3. Attitude

### **1. Knowledge**

At the end of the course, the student shall be able to:

- a. describe the basic physiology of common ear, nose and throat diseases including emergencies.
- b. adopt rational use of commonly used drugs, keeping in mind their adverse reactions
- c. suggest common investigation procedures and interpret their findings

### **2. Skills**

At the end of the course the student shall be able to:

- a. examine and diagnose common ear, nose and throat problems including the pre-malignant, malignant disorders of head and neck
- b. manage ear, nose and throat problems at the first level of care and be able to refer whenever necessary
- c. observe and assist in carrying out minor surgical procedures like ear syringing, ear dressing and nasal packing, tube feeding, managing and care of long term tracheostomy
- d. assist in certain procedures such as tracheostomy, endoscopies and removal of foreign bodies
- e. communicate effectively with other members of medical profession including nursing, para medical, technical staff and other members of health care teams in a collaborative manner
- f. communicate effectively and appropriately with patients and their attendants.
- g. communicate with patients regarding common ENT problems, investigations and treatment .
- h. address common ethical issues in ENT practice

### **3. Attitude**

At the end of the course the student shall understand the need to have the following attitudes

- a. attitudes needed to work as a team member
- b. attitudes needed to lead a team
- c. attitudes needed to win patient confidence
- d. attitudes needed for continuing improvement of clinical knowledge and skills. The

undergraduate training in ear, nose and throat will provide an integrated approach towards disciplines, especially neurosciences, ophthalmology and general surgery.

- e. Attitudes for showing compassion to the hearing impaired, tracheostomised patients including assisting them in speech, patients with malignancies, including terminal malignancies

## C. Detailed syllabus

### 1. Overview of course

Duration of the course-2 months (distributed in 2 semesters - first half in 6<sup>th</sup> semester and second half in 7<sup>th</sup> semester)

<b>THEORY + INNOVATIVE SESSION</b>	<b>- 110 hrs</b>
<b>PRACTICALS</b>	<b>- 180 hrs</b>

### 2. Details of lectures

#### 2.1 Ear

2.1.1 Relevant anatomy of external middle and inner ears, auditory physiology including pathway of hearing

2.1.2 Assessment of hearing including types of audiometry. Special mention on pure tone audiometry, impedance audiometry, speech audiometry, otoacoustic emissions, BERA

2.1.3 Deafness - Classification, causes, investigations, disability calculation, early detection of deafness in children and rehabilitation. Special mention of otosclerosis - its clinical features and management, congenital deafness, cochlear implantation, learning and speech rehabilitation

2.1.4 Diseases of external ear: Wax, furuncle ear, otomycosis, foreign body, keratosis, exostosis and malignant otitis externa

2.1.5 Diseases of middle ear: Acute otitis media, otitis media with effusion, chronic suppurative otitis media - mucosal and squamous types, clinical features, management, complications of middle ear infections, mastoidectomy, tympanoplasty

2.1.6 Diseases of inner ear: Vertigo - classification, causes, investigations and management. Special mention of Meniere's disease, benign paroxysmal positional vertigo and acoustic neuroma

2.1.7 Miscellaneous conditions like otalgia, tinnitus, facial nerve anatomy and its disorders

#### 2.2 Nose and paranasal sinuses

2.2.1 Relevant anatomy of nose and physiology including pathway of smell

2.2.2 Disorders of external nose and vestibule

2.2.3 Disorders of nasal septum, sub-mucous resection and septoplasty. Mention rhinoplasty

2.2.4 Rhinitis - etiology, classification and management. Special mention of allergic rhinitis, vasomotor rhinitis, atrophic rhinitis and allergic fungal rhino-sinusitis, CSF rhinorrhoea.

2.2.5 Acute sinusitis (in detail) & chronic sinusitis (in detail). Complications of infections of

nose and paranasal sinuses

2.2.6 Facio-maxillary injuries in detail

2.2.7 Nasal polyposis with emphasis on FESS, Caldwell Luc

2.2.8 Epistaxis – causes & management, granulomatous conditions of nose

2.2.9 Tumours of nose and PNS (special mention of inverted papilloma, nasopharyngeal angiofibroma and malignancy of paranasal sinuses and nasopharynx)

### **2.3 Throat**

2.3.1 Relevant anatomy of pharynx, larynx, oesophagus, physiology of deglutition, phonation

2.3.2 Tonsils and adenoids and their infections in detail. Special mention of quinsy, patches in oral cavity and pharynx, tonsillectomy, adenoidectomy

2.3.3 Neck space infections - Ludwig's angina, retropharyngeal and parapharyngeal abscess, clinical features, management and complications

2.3.4 Acute and chronic infections of larynx, laryngeal paralysis, vocal nodule, vocal polyp

2.3.5 Hoarseness - diagnosis and management, direct laryngoscopy. Mention stroboscopy, micro-laryngeal surgery and video-laryngeal surgery

2.3.6 Stridor - diagnosis and management. Tracheostomy in detail including indications, tubes, procedure and complications

2.3.7 Benign and malignant lesions of larynx and laryngo-pharynx

2.3.8 Dysphagia - causes, investigations and management. Special mention of malignancy

2.3.9 Miscellaneous conditions like dry mouth, mouth care, oral candidiasis - prevalence, prevention, management, reflux diseases (GERD, LPR), Plummer Vinson, HIV in ENT.

2.3.10 Foreign bodies of aero-digestive tract - diagnosis, management and complications, endoscopies in ENT and their complications.

2.3.11 Rehabilitation - swallowing, speech (including assisted speech in tracheostomised patients) respecting and working with paramedical therapists

### **3. Details of practical**

#### **Clinical postings**

08:00 am - 09:00 am: Clinical lecture

09:00 am - 12:00 pm: Case demonstration in out-patient department, clinical discussions

12:00 pm - 01:00 pm: Clinical lecture, Minimum one day per week is devoted to live operative surgery, demonstration and discussion

**Separate clinical record books should be kept and at least ten cases to be included**

### **4. Text books recommended and other learning resources:**

#### **Prescribed text books**

1. Diseases of ear, nose and throat - P L Dhingra (Elsevier's publications)
2. Text book of ear, nose, throat and head and neck diseases - P Hazarika, D R Nayak, R Balakrishna (CBS publishers)
3. A short Practice of Otorhinolaryngology- Prof K K Ramalingam, Dr B Sriramamurthy,

Prof Ravi Ramalingam- All India Publishers and distributors

4. Essentials of Ear, Nose and Throat- Mohan Bansal- Jaypee Publishers
5. ENT simplified: Batchi Hathiram and D S Grewal. (Bhalani publishers)

#### Reference Books

6. Scot Brown's Otorhinolaryngology, Head and Neck surgery 7th edition - (Edward Arnold publishers limited)
7. Logan Turner's text book of Otorhinolaryngology
8. Other resource materials
  - 9.1.1.1 Skill laboratory
  - 9.1.1.2 CDs and DVDs
  - 9.1.1.3 Internet

#### D. Evaluation

Evaluation must be both formative and summative to achieve the objectives mentioned earlier.

There must be internal evaluation as well as external evaluation. Evaluation will be done through examinations.

##### 1. Internal Examinations

###### Theory - 2 numbers

**Exam 1:** After completion of the 6<sup>th</sup> semester postings in ENT

Duration: 2 hours      Topic: Otology      Marks: 40

**Exam 2:** After completion of the 7<sup>th</sup> semester postings in ENT

Duration: 2 hours      Topic: Whole subject of ENT      Marks: 40

###### Practical - 3 numbers

**Exams 1 & 2:** one each at the end of the 1 month posting in semester 6 and 7

Content: Long case and VIVA      Marks: 30 & 10

**Exam 3:** Final practical

Content: Same as university examination (Long case, OSCE & VIVA)  
Marks: 20, 10 & 10

##### 2. University examination

**Theory**      Total: 40 Marks

**VIVA**      Total: 10 Marks

**Practical**      Total: 30 Marks (Clinical (long case: 20 marks and OSCE: 10 marks)

##### 3. Final marks

**Theory**      University      : 40 Marks

	University VIVA	: 10 Marks
	Internal assessment	: 10 marks
	Total	: 60 Marks
<b>Practical</b>	University	: 30 Marks
	Internal assessment	: 10 marks
	Total	: 40 Marks
<b>Grand total</b>		<b>: 100 Marks</b>

## MEDICINE AND ITS ALLIED SPECIALITIES

### MEDICINE

#### A. GOAL

The broad goal of teaching of undergraduate students Medicine is to have the knowledge, skills and behavioural attributes to function effectively as the first contact physician/ family doctor.

#### B. OBJECTIVES (1)

##### Knowledge

At the end of the course, the student shall be able to:

- Diagnose common clinical disorders with special reference to infectious diseases, nutritional disorders, tropical and environmental diseases;
- Outline various modes of management including drug therapeutics especially dosage, side effects, toxicity, interaction, indications and contraindications;
- Propose diagnostic and investigative procedures and ability to interpret;
- Provide first level management of acute emergencies promptly and efficiently and decide the timing and level of referral of required.;
- Recognize geriatric disorders and their management
- Approach to terminal phase, end of life care, bereavement
- Current Laws relevant to end of life care decisions – withholding, withdrawing artificial life interventions

#### 2. Skills

At the end of the course, the student shall be able to:

- Develop clinical skills (history taking, clinical examination and other instruments of examination) in various common medical disorders and emergencies.
- Refer a patient to secondary and/or tertiary level of health care after having instituted primary care.
- Perform& interpret simple routine investigation like hemogram, stool, urine, sputum and biological examinations