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

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CURRICULUM

PG Diploma in **OTO-RHINO-LARYNGOLOGY / ENT**

Attested CTC

azaner 5/2/2021

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POST GRADUATE CURRICULUM IN ENT Diploma in OTORHINOLARYNGOLOGY (DLO)

Programme outcome PG DIPLOMA

The purpose of PG Diploma education is to create specialists who would provide high quality health care and advance the cause of science through research & training.

Programme specific outcome PG DIPLOMA

POS 1. A post graduate diploma student after undergoing the required training should be able to deal effectively with the needs of the community and should be competent to handle the problems related o his specialty including recent advances.

POS 2. He should also acquire skill in teaching of medical/paramedical students.

POS 3. Practice the specialty concerned ethically and in step with the principles of primary health care.

POS 4. Demonstrate sufficient knowledge of the basic sciences relevant to the concerned specialty.

COURSE OUTCOME (CO) : The goal of the Diploma course in Otorhinolaryngology is to produce a competent scholars who can:

- 1. Practice his specialty ethically keeping in mind the requirement of the patient, community and people at large.
- 2. Demonstrate sufficient understanding of basic sciences related to his specialty and be able to integrate such knowledge in his Clinical practice.
- 3. Diagnose and manage majority of conditions in his specialty (clinically and with the help of relevant investigations)
- 4. Plan and advise measures for the promotive, preventive, curative and rehabilitative aspects of health and diseases in the specialty of ENT.
- 5. Should be able to demonstrate his cognitive skills in the field of ENT and its ancillary branches during the formative and summative evaluation processes.
- 6. Play the assigned role in the implementation of National Health Programs
- 7. Demonstrate competence in basic concepts of research methodology and writing thesis and research papers.
- 8. Develop good learning, communication and teaching skills.
- 9. Demonstrate sufficient understanding of basic sciences and the clinical applications related to the specialty to be able to integrate this knowledge into Clinical practice. Acquire in-depth knowledge in the subject including recent advances.

10 Demonstrate that he is fully conversant with the latest diagnostics & therapeutics available.

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Goals

The goals of PG Diploma 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 PG Diploma 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.

and to plan rehabilitation according

• Diagnose ENT problems based on the analysis of history, physical examination and investigative work up.

Attested rand deliver comprehensive treatment for ENT pathologies. .

• Plan and advice measures for the prevention of deafness, allergies, head neck cancers

• 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.

• 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.

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Syllabus

The syllabus of a PG Diploma 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 faciomaxilllary structure
- o Embryology/anatomy and physiology of salivary glands

Pharynx and oesophagus

o Anatomy, embryogensis and physiology of pharynx

o Anatomy and embryogenesis of eosophagus and its relations

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Larynx and tracheobronchial tree

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

Skull base

- o Surgical anatomy
- o Clinical neuroanotomy

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

Minciples 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 Otalgia 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 Rehablitation of hearing impaired
- o Reconstruction of ear

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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
- 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

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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

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

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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 Vesitublar disorder in children
- o Speech and language development
- o Foreign body in ear and nose
- o Congential anomalies in nose
- o Craniofacial anomalies
- o Nasal obstruction , rhinnohrea in infants and children
- o Tonsils and adenoids
- o Dental development ,orthodontics, cleft lip and palate
- o Sleep apnea
- 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

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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 fibreoptic 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.

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Therapeutic skills

- _ Tracheostomy,
- _ Anterior/posterior nasal packing
- _ Ear packing, syringing,
- _ Foreign body removal from ear/nose/throat,
- _ Airway management
- _ 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.

- Diseases of ear, nose and throat.
- Head and Neck surgery.
- Surgery of the Ear.
- Otolaryngology Head &Neck Surgery.
- Diseases of ear, nose and throat.
- Diseases of ear, nose andthroat.
- Audiological assessment.

Reference Books:

Name of Books. Author • Otolary gology, Otology &Neurotology. Paprella & Micheal. • Essentials of endoscopic sinus surgery. S. Stamberger • Colour Atlas of Head & Neck Surgery. S. Stamberger • Colour Atlas of Head & Neck Surgery. P Shah • Vice-Chancellor Sumandeep Vidyapeeth Institution Deemed to be University • Otopanolis.

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Author

Scott Brown PM Stell & AGD Maran

Glasscock & Shambaugh

Cummings.

Logan Turner

PL Dhingra

Anirban Biswas

Journals

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

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:

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- Orientation Workshop
- Teaching Technology workshop
- Didactic lectures (With UG students) -
- Seminar Presentations
- Case Presentations
- Grand Rounds
- Journal clubs
- Death Review
- Clinicopathological Conferences
- Formative assessments

- At the beginning of the course
- In second year
- As and when possible
- Once a week
- Once a week
- Once a week
- Once a week
- Once a month
 - Once a month
 - 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.

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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.

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 imbibing 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 appraisat of journal articles in EBM. Thus repeated hands on application hones the critical appraisal skills of the stopent

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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.

The Examination consists of two parts:

1. Theory

Paper I: Basic Sciences in relation to ENT (at the end of first year)

Paper II: Oto-rhinolarynogology including Audiology and Neuro-otology

Paper III: Oto-rhinolaryngology including Head and Neck Oncology and Endoscopy

2. Practical/Clinical and Oral Examination:

Practical Examination consists of:

Clinical Examination - 2-3 clinical cases, imaging and its techniques, instruments,

clinical exercise

Oral /Viva-voce Examination

Oral examination shall be comprehensive enough to test the post graduate student's

overall knowledge of the subject.

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