



## **Department of OTORHINOLARYNGOLOGY/ ENT**

| <b>S.No</b> | <b>Name of the Fellowship</b>               | <b>Eligibility</b>   | <b>Duration</b> |
|-------------|---------------------------------------------|----------------------|-----------------|
| 01          | Fellowship in Otology                       | MS/DNB ENT           | 1 yr            |
| 02          | Fellowship in Rhinology                     | MS/DNB ENT           | 1 yr            |
| 03          | Fellowship in Pediatric Otorhinolaryngology | MS/DNB ENT           | 1 yr            |
| 04          | Fellowship in Cochlear Surgery              | MS/DNB ENT           | 1 yr            |
| 05          | Fellowship in Allergology                   | MS/DNB ENT           | 1 yr            |
| 06          | Fellowship in Laryngology                   | MS/DNB ENT           | 1 yr            |
| 07          | Fellowship in Head & Neck Surgery           | MS/DNB ENT, Gen surg | 1 yr            |



## Fellowship in Otology

### Course Overview

The Fellowship in Otology is a one-year advanced program designed for healthcare professionals who wish to specialize in the diagnosis and management of ear diseases, including hearing loss, balance disorders, and ear surgery. This fellowship provides comprehensive knowledge and hands-on experience in the medical and surgical treatment of otological conditions. The course focuses on enhancing practical skills, knowledge of ear anatomy, patient care, and the latest advancements in otology, including hearing restoration and middle ear surgery.

### Prerequisites

| Criteria      | Details                                                                          |
|---------------|----------------------------------------------------------------------------------|
| Eligibility   | MBBS or equivalent degree in medical field (ENT, Audiology, or General Medicine) |
| Duration      | 1 Year (Full-Time)                                                               |
| Mode of Study | Clinical, Theoretical, Hands-on Training                                         |
| Assessment    | Theory, Practical Exams, Clinical Logbook, Research Project                      |

### Course Objectives

- Master advanced diagnostic techniques in otology, including audiological assessments and imaging.
- Develop proficiency in managing hearing loss, balance disorders, and ear infections.
- Understand the surgical interventions in otology, including cochlear implants and tympanoplasty.
- Gain expertise in the treatment of pediatric and adult ear conditions.
- Improve patient consultation and communication skills to create individualized treatment plans.
- Engage in research to explore new methodologies in otology and hearing restoration.
- Stay updated on the latest advancements in ear diseases, treatments, and technologies.



# School of Medical Sciences & Technology

## Curriculum with Semester-wise Syllabus & Modules

### Semester 1: Fundamentals of Otology

| Module                                 | Topics Covered                                                                            |
|----------------------------------------|-------------------------------------------------------------------------------------------|
| Introduction to Otology                | History and evolution of otology, basic principles, and ethical considerations            |
| Ear Anatomy and Physiology             | Detailed anatomy and function of the outer, middle, and inner ear                         |
| Audiological Assessments               | Techniques in audiometry, tympanometry, and otoacoustic emissions                         |
| Hearing Loss and Its Management        | Classification, causes, and management strategies for hearing loss                        |
| Ear Infections and Disorders           | Medical treatment and management of otitis media, otitis externa, and other infections    |
| Clinical Rotations & Hands-on Training | Observation and hands-on experience in diagnosis and medical management of ear conditions |

### Semester 2: Advanced Otology Techniques and Research

| Module                                   | Topics Covered                                                                           |
|------------------------------------------|------------------------------------------------------------------------------------------|
| Surgical Interventions in Otology        | Tympanoplasty, mastoidectomy, and cochlear implantation procedures                       |
| Balance Disorders and Vestibular Testing | Diagnostic techniques for vertigo and management of vestibular disorders                 |
| Pediatric Otology                        | Management of ear diseases in children, including congenital hearing loss                |
| Cochlear Implants & Hearing Aids         | Indications, fitting, and follow-up care for hearing aids and cochlear implants          |
| Advanced Techniques in Otology           | Endoscopic ear surgery, minimally invasive techniques, and newer technologies            |
| Research Project & Case Studies          | Literature review, clinical case presentations, and preparation of research dissertation |



## School of Medical Sciences & Technology

### Program Outcomes

| Sr. No. | Program Outcome                                      | Description                                                                                        |
|---------|------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| 1       | Expertise in Otological Diagnosis                    | Master advanced diagnostic techniques in otology, including audiological assessments and imaging   |
| 2       | Advanced Surgical Skills                             | Gain proficiency in surgical interventions for hearing loss, balance disorders, and ear infections |
| 3       | Hearing Restoration Expertise                        | Expertise in cochlear implants, hearing aids, and other restoration procedures                     |
| 4       | Management of Pediatric & Adult Otological Disorders | Ability to diagnose and manage ear conditions in both pediatric and adult populations              |
| 5       | Patient Care & Consultation Skills                   | Develop effective communication and consultation skills for personalized treatment plans           |
| 6       | Otology Research                                     | Contribute to the field of otology through research and new methodologies                          |

### Course Outcomes

| Sr. No. | Course Outcome                                | Description                                                                                         |
|---------|-----------------------------------------------|-----------------------------------------------------------------------------------------------------|
| 1       | Mastery in Otological Diagnosis               | Ability to diagnose and manage otological disorders, including hearing loss and balance disorders   |
| 2       | Surgical Expertise in Otology                 | Proficiency in performing surgeries such as tympanoplasty, mastoidectomy, and cochlear implantation |
| 3       | Hearing Restoration Techniques                | Advanced knowledge of hearing aids and cochlear implants for patients with hearing loss             |
| 4       | Pediatric & Adult Otology Expertise           | Proficiency in diagnosing and treating ear conditions in pediatric and adult populations            |
| 5       | Effective Consultation and Treatment Planning | Ability to conduct consultations and create tailored treatment plans for ear health                 |
| 6       | Competence in Otology Research                | Conduct research that contributes to advancements in otological treatments and technologies         |



# School of Medical Sciences & Technology

## Credits & Assessment Methods

**Total Credits: 40**

| Component                         | Credits |
|-----------------------------------|---------|
| Theory & Lectures                 | 10      |
| Clinical Rotations & Case Studies | 10      |
| Hands-on Training & Procedures    | 10      |
| Research & Dissertation           | 10      |

## Assessment Pattern

| Assessment Type                                         | Weightage |
|---------------------------------------------------------|-----------|
| Theory Examination (MCQs, Long & Short Answer)          | 30%       |
| Clinical & Practical Exam (Case-Based Discussion, OSCE) | 30%       |
| Clinical Logbook & Case Reports                         | 20%       |
| Research Presentation & Dissertation                    | 20%       |

## Exam Pattern

### Theory Examination

- Section A (MCQs – 30 Marks)
- Section B (Short Answer Questions – 30 Marks)
- Section C (Long Answer Questions – 40 Marks)

### Practical Examination

| Component                          | Details                                                                    | Marks |
|------------------------------------|----------------------------------------------------------------------------|-------|
| Otoscopic Examination & Audiometry | Performing otoscopic examinations and audiological tests                   | 50    |
| Surgical Skills                    | Demonstrating surgical techniques (e.g., tympanoplasty, cochlear implants) | 50    |
| Balance Disorders Testing          | Conducting vestibular testing for balance disorders                        | 30    |
| OSCE                               | Simulated clinical scenarios and skills demonstration                      | 40    |



## School of Medical Sciences & Technology

### Viva Voce (Oral Examination)

| Component                          | Details                                      | Marks |
|------------------------------------|----------------------------------------------|-------|
| Case Presentations                 | Discussion on otology treatment cases        | 50    |
| Advances in Otology                | Discussion of recent advancements in otology | 20    |
| Ethical & Legal Aspects in Otology | Ethical considerations and patient care      | 30    |

### Research/Dissertation Submission

| Component                       | Marks |
|---------------------------------|-------|
| Originality & Scientific Merit  | 30    |
| Methodology & Data Analysis     | 30    |
| Presentation & Discussion       | 20    |
| Conclusion & Clinical Relevance | 20    |

### Final Weightage & Passing Criteria

| Exam Component         | Total Marks | Minimum Passing Marks         |
|------------------------|-------------|-------------------------------|
| Theory                 | 200         | 50% (100/200)                 |
| Practical Exam         | 200         | 50% (100/200)                 |
| Viva Voce              | 100         | 50% (50/100)                  |
| Dissertation           | 100         | 50% (50/100)                  |
| <b>Total (Overall)</b> | <b>600</b>  | <b>50% Aggregate Required</b> |

### Recommended Books & E-Resources

#### Textbooks:

- Diseases of the Ear, Nose and Throat – R. A. T. Williams
- Practical Otology: A Clinical Approach – A. G. Jenkins
- Cochlear Implantation: Principles and Practices – J. S. Wilson
- Pediatric Otolaryngology – Robert M. Mandel

#### Journals & E-Resources:

- Journal of Otology & Neurotology – <https://journals.lww.com/journalofotology>
- The Laryngoscope – <https://onlinelibrary.wiley.com/journal/1531496x>
- American Academy of Otolaryngology – Head and Neck Surgery – <https://www.entnet.org/>
- British Journal of Audiology – <https://www.tandfonline.com/toc/ibja20/current>



## Fellowship in Rhinology

### Course Overview

The Fellowship in Rhinology is a one-year advanced program designed for healthcare professionals who wish to specialize in the medical and surgical treatment of nasal and sinus disorders. This fellowship provides comprehensive training in the management of conditions such as chronic rhinosinusitis, nasal polyps, sinonasal tumors, and nasal airway obstruction. The course emphasizes both medical and surgical interventions, including endoscopic sinus surgery (ESS) and advanced diagnostic techniques for nasal and sinus diseases.

### Prerequisites

| Criteria      | Details                                                                               |
|---------------|---------------------------------------------------------------------------------------|
| Eligibility   | MBBS or equivalent degree in medical field (ENT, Otolaryngology, or General Medicine) |
| Duration      | 1 Year (Full-Time)                                                                    |
| Mode of Study | Clinical, Theoretical, Hands-on Training                                              |
| Assessment    | Theory, Practical Exams, Clinical Logbook, Research Project                           |

### Course Objectives

- Master the diagnostic tools and techniques for evaluating nasal and sinus conditions.
- Gain expertise in managing chronic rhinosinusitis, nasal polyps, and other sinonasal disorders.
- Learn advanced surgical techniques in endoscopic sinus surgery (ESS), septoplasty, and nasal reconstruction.
- Understand the management of sinonasal tumors, both benign and malignant, and their surgical treatment.
- Develop skills for managing nasal airway obstruction and enhancing nasal breathing.
- Improve patient consultation and communication skills to formulate individualized treatment plans.
- Engage in research to explore new methodologies in rhinology and innovations in sinus surgery.



# School of Medical Sciences & Technology

## Curriculum with Semester-wise Syllabus & Modules

### Semester 1: Fundamentals of Rhinology

| Module                                 | Topics Covered                                                                                                |
|----------------------------------------|---------------------------------------------------------------------------------------------------------------|
| Introduction to Rhinology              | History, principles, and ethical considerations in rhinology                                                  |
| Nasal Anatomy and Physiology           | Detailed anatomy and function of the nasal cavity, paranasal sinuses, and their clinical relevance            |
| Rhinosinusitis and Nasal Polyps        | Classification, pathophysiology, medical management, and surgical options for rhinosinusitis and nasal polyps |
| Diagnostic Tools in Rhinology          | Diagnostic imaging (CT, MRI), nasal endoscopy, and functional assessments of nasal airway                     |
| Sinonasal Tumors                       | Identification, diagnostic techniques, and management strategies for benign and malignant sinonasal tumors    |
| Clinical Rotations & Hands-on Training | Observation and hands-on experience in diagnosing and treating common rhinological conditions                 |

### Semester 2: Advanced Rhinological Techniques and Research

| Module                           | Topics Covered                                                                                               |
|----------------------------------|--------------------------------------------------------------------------------------------------------------|
| Endoscopic Sinus Surgery (ESS)   | Techniques, indications, and post-operative care for ESS and other sinus surgeries                           |
| Nasal Airway Surgery             | Management of nasal septum deviations, turbinate hypertrophy, and techniques in septoplasty and turbinectomy |
| Sinonasal Reconstruction         | Surgical options for nasal reconstruction and advanced nasal techniques                                      |
| Management of Sinonasal Tumors   | Surgical and medical management of benign and malignant sinonasal tumors                                     |
| Rhinoplasty and Cosmetic Surgery | Advanced techniques in functional and aesthetic nasal surgery                                                |
| Research Project & Case Studies  | Literature review, clinical case presentations, and preparation of research dissertation                     |



## School of Medical Sciences & Technology

### Program Outcomes

| Sr. No. | Program Outcome                                | Description                                                                                                             |
|---------|------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|
| 1       | Expertise in Rhinological Diagnosis            | Master advanced diagnostic techniques, including nasal endoscopy and imaging for nasal and sinus conditions             |
| 2       | Proficiency in Endoscopic Sinus Surgery        | Gain expertise in performing advanced endoscopic sinus surgeries for rhinosinusitis, nasal polyps, and sinonasal tumors |
| 3       | Surgical Expertise in Nasal Airway Obstruction | Master the surgical management of nasal airway obstruction, including septoplasty and turbinate reduction               |
| 4       | Competence in Sinonasal Tumor Management       | Ability to diagnose and surgically treat benign and malignant sinonasal tumors                                          |
| 5       | Nasal Reconstruction and Aesthetic Surgery     | Develop skills in reconstructive and aesthetic nasal surgery, including rhinoplasty                                     |
| 6       | Rhinology Research                             | Contribute to the field of rhinology through innovative research and new methodologies                                  |

### Course Outcomes

| Sr. No. | Course Outcome                                 | Description                                                                                                                     |
|---------|------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|
| 1       | Mastery in Rhinological Diagnosis              | Ability to diagnose and manage various nasal and sinus conditions, including rhinosinusitis and nasal obstruction               |
| 2       | Proficiency in Endoscopic Sinus Surgery        | Expertise in performing endoscopic sinus surgery (ESS) and handling complex sinus procedures                                    |
| 3       | Surgical Expertise in Nasal Airway Obstruction | Ability to perform nasal airway surgeries such as septoplasty, turbinate reduction, and nasal reconstruction                    |
| 4       | Management of Sinonasal Tumors                 | Competence in diagnosing and treating sinonasal tumors through medical and surgical interventions                               |
| 5       | Effective Consultation and Treatment Planning  | Ability to perform thorough consultations and create individualized treatment plans for patients with nasal and sinus disorders |
| 6       | Competence in Rhinology Research               | Conduct high-level research and contribute to advancing knowledge and techniques in rhinology                                   |



## School of Medical Sciences & Technology

### Credits & Assessment Methods

**Total Credits: 40**

| Component                         | Credits |
|-----------------------------------|---------|
| Theory & Lectures                 | 10      |
| Clinical Rotations & Case Studies | 10      |
| Hands-on Training & Procedures    | 10      |
| Research & Dissertation           | 10      |

### Assessment Pattern

| Assessment Type                                         | Weightage |
|---------------------------------------------------------|-----------|
| Theory Examination (MCQs, Long & Short Answer)          | 30%       |
| Clinical & Practical Exam (Case-Based Discussion, OSCE) | 30%       |
| Clinical Logbook & Case Reports                         | 20%       |
| Research Presentation & Dissertation                    | 20%       |

### Exam Pattern

#### Theory Examination

- Section A (MCQs – 30 Marks)
- Section B (Short Answer Questions – 30 Marks)
- Section C (Long Answer Questions – 40 Marks)

#### Practical Examination

| Component                      | Details                                                                 | Marks |
|--------------------------------|-------------------------------------------------------------------------|-------|
| Nasal Endoscopy & Imaging      | Performing diagnostic nasal endoscopy and imaging for sinus conditions  | 50    |
| Endoscopic Sinus Surgery (ESS) | Performing endoscopic sinus surgery for rhinosinusitis and nasal polyps | 50    |
| Nasal Airway Surgery           | Performing septoplasty, turbinate reduction, and other nasal surgeries  | 30    |
| OSCE                           | Simulated clinical scenarios and skill demonstration                    | 40    |



## School of Medical Sciences & Technology

### Viva Voce (Oral Examination)

| Component                            | Details                                                           | Marks |
|--------------------------------------|-------------------------------------------------------------------|-------|
| Case Presentations                   | Discussion on rhinological treatment cases                        | 50    |
| Advances in Rhinology                | Discussion of recent advancements in rhinology                    | 20    |
| Ethical & Legal Aspects in Rhinology | Ethical considerations and patient care in rhinological practices | 30    |

### Research/Dissertation Submission

| Component                       | Marks |
|---------------------------------|-------|
| Originality & Scientific Merit  | 30    |
| Methodology & Data Analysis     | 30    |
| Presentation & Discussion       | 20    |
| Conclusion & Clinical Relevance | 20    |

### Final Weightage & Passing Criteria

| Exam Component         | Total Marks | Minimum Passing Marks         |
|------------------------|-------------|-------------------------------|
| Theory                 | 200         | 50% (100/200)                 |
| Practical Exam         | 200         | 50% (100/200)                 |
| Viva Voce              | 100         | 50% (50/100)                  |
| Dissertation           | 100         | 50% (50/100)                  |
| <b>Total (Overall)</b> | <b>600</b>  | <b>50% Aggregate Required</b> |

### Recommended Books & E-Resources

#### Textbooks:

- Rhinology: Diseases of the Nose, Sinuses, and Nasopharynx – Peter A. Wormald
- Endoscopic Sinus Surgery: Anatomy, Function, and Surgery – N. K. S. Batra, M. H. H. Albu
- Manual of Endoscopic Sinus Surgery – A. V. P. V. Rao
- Nasal and Sinus Disorders: Diagnosis and Management – Richard M. Rosenfeld

#### Journals & E-Resources:

- American Journal of Rhinology & Allergy – <https://journals.sagepub.com/home/arh>
- International Forum of Allergy & Rhinology – <https://onlinelibrary.wiley.com/journal/20422021>
- British Journal of Otolaryngology – <https://www.bjo.com/>



## Fellowship in Pediatric Otorhinolaryngology

### Course Overview

The Fellowship in Pediatric Otorhinolaryngology is a one-year advanced program designed for healthcare professionals who wish to specialize in the diagnosis and treatment of ear, nose, and throat (ENT) disorders in children. This fellowship offers an in-depth understanding of pediatric ENT conditions, focusing on the medical and surgical management of common childhood disorders, including congenital anomalies, airway diseases, hearing loss, and disorders of the nasal and paranasal sinuses. The program emphasizes both clinical knowledge and practical experience with pediatric patients in a multidisciplinary healthcare setting.

### Prerequisites

| Criteria      | Details                                                                           |
|---------------|-----------------------------------------------------------------------------------|
| Eligibility   | MBBS or equivalent degree in medical field (ENT, Pediatrics, or General Medicine) |
| Duration      | 1 Year (Full-Time)                                                                |
| Mode of Study | Clinical, Theoretical, Hands-on Training                                          |
| Assessment    | Theory, Practical Exams, Clinical Logbook, Research Project                       |

### Course Objectives

- Master the diagnosis and management of common pediatric ENT conditions such as otitis media, tonsillitis, and airway disorders.
- Gain expertise in the surgical treatment of pediatric conditions, including pediatric ear surgery, adenoidectomy, and tonsillectomy.
- Learn advanced diagnostic techniques for pediatric hearing loss, including audiology tests and imaging.
- Develop proficiency in managing congenital ENT anomalies, including cleft palate, craniofacial anomalies, and choanal atresia.
- Understand the unique challenges of pediatric airway management and interventions.
- Improve patient consultation and communication skills when dealing with children and their families.
- Engage in research to contribute to new methodologies in pediatric otorhinolaryngology and enhance pediatric ENT care.



# School of Medical Sciences & Technology

## Curriculum with Semester-wise Syllabus & Modules

### Semester 1: Fundamentals of Pediatric Otorhinolaryngology

| Module                                  | Topics Covered                                                                                                          |
|-----------------------------------------|-------------------------------------------------------------------------------------------------------------------------|
| Introduction to Pediatric ENT           | Overview of pediatric otorhinolaryngology, ethical considerations, and pediatric anatomy                                |
| Pediatric Otitis Media and Hearing Loss | Diagnosis, management, and surgical interventions for otitis media and pediatric hearing loss                           |
| Pediatric Airway Diseases               | Diagnosis and treatment of airway disorders, including laryngomalacia, stridor, and pediatric sleep apnea               |
| Congenital ENT Anomalies                | Diagnosis and management of congenital conditions such as cleft palate, choanal atresia, and craniofacial malformations |
| Pediatric Sinusitis and Rhinosinusitis  | Management of pediatric rhinosinusitis, nasal obstruction, and the role of adenoidectomy                                |
| Clinical Rotations & Hands-on Training  | Observation and hands-on experience in managing pediatric ENT conditions, surgeries, and interventions                  |

### Semester 2: Advanced Pediatric ENT Techniques and Research

| Module                                     | Topics Covered                                                                                                      |
|--------------------------------------------|---------------------------------------------------------------------------------------------------------------------|
| Pediatric Ear Surgery                      | Techniques and indications for pediatric ear surgeries, including tympanoplasty, myringotomy, and grommet insertion |
| Adenoidectomy and Tonsillectomy            | Surgical management of adenoid and tonsil disorders in children                                                     |
| Pediatric Laryngology and Phonosurgery     | Advanced management of pediatric voice disorders, laryngomalacia, and congenital laryngeal abnormalities            |
| Pediatric Otology and Audiology            | Diagnostic audiological testing, management of hearing loss, and fitting hearing aids in children                   |
| Pediatric Facial Trauma and Reconstruction | Management of facial trauma, fractures, and reconstruction in pediatric patients                                    |
| Research Project & Case Studies            | Literature review, clinical case presentations, and preparation of research dissertation                            |



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### Program Outcomes

| Sr. No. | Program Outcome                          | Description                                                                                                                        |
|---------|------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|
| 1       | Expertise in Pediatric ENT Diagnosis     | Master the diagnostic techniques for pediatric ear, nose, and throat conditions                                                    |
| 2       | Surgical Expertise in Pediatric ENT      | Gain proficiency in performing pediatric ENT surgeries, including tonsillectomy, adenoidectomy, and ear surgeries                  |
| 3       | Management of Pediatric Hearing Loss     | Expertise in managing pediatric hearing loss, including diagnostic tests, audiological interventions, and cochlear implantation    |
| 4       | Management of Pediatric Airway Disorders | Ability to diagnose and treat pediatric airway disorders such as laryngomalacia and obstructive sleep apnea                        |
| 5       | Proficiency in Pediatric ENT Anomalies   | Develop skills in the diagnosis and management of congenital ENT conditions, including cleft palate and craniofacial malformations |
| 6       | Pediatric ENT Research                   | Conduct research and contribute to advancements in pediatric otorhinolaryngology                                                   |

### Course Outcomes

| Sr. No. | Course Outcome                                    | Description                                                                                                     |
|---------|---------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|
| 1       | Mastery in Pediatric ENT Diagnosis                | Ability to diagnose and manage pediatric ENT conditions including otitis media, sinusitis, and airway diseases  |
| 2       | Proficiency in Pediatric ENT Surgeries            | Ability to perform pediatric surgeries such as tonsillectomy, adenoidectomy, and ear surgeries                  |
| 3       | Expertise in Hearing Loss Management              | Proficiency in diagnostic audiology tests, fitting hearing aids, and cochlear implantation in children          |
| 4       | Advanced Knowledge in Pediatric Airway Management | Ability to diagnose and treat pediatric airway conditions, including laryngomalacia and obstructive sleep apnea |
| 5       | Competence in Managing Pediatric ENT Anomalies    | Skills in diagnosing and treating congenital ENT anomalies like cleft palate and choanal atresia                |
| 6       | Pediatric ENT Research Competence                 | Ability to contribute to research in pediatric otorhinolaryngology and improve treatment outcomes               |



## Credits & Assessment Methods

**Total Credits: 40**

| Component                         | Credits |
|-----------------------------------|---------|
| Theory & Lectures                 | 10      |
| Clinical Rotations & Case Studies | 10      |
| Hands-on Training & Procedures    | 10      |
| Research & Dissertation           | 10      |

## Assessment Pattern

| Assessment Type                                         | Weightage |
|---------------------------------------------------------|-----------|
| Theory Examination (MCQs, Long & Short Answer)          | 30%       |
| Clinical & Practical Exam (Case-Based Discussion, OSCE) | 30%       |
| Clinical Logbook & Case Reports                         | 20%       |
| Research Presentation & Dissertation                    | 20%       |

## Exam Pattern

### Theory Examination

- Section A (MCQs – 30 Marks)
- Section B (Short Answer Questions – 30 Marks)
- Section C (Long Answer Questions – 40 Marks)

### Practical Examination

| Component                     | Details                                                              | Marks |
|-------------------------------|----------------------------------------------------------------------|-------|
| Pediatric Ear Surgery         | Techniques in ear surgeries (e.g., tympanoplasty, grommet insertion) | 50    |
| Adenoidectomy & Tonsillectomy | Performing adenoidectomy and tonsillectomy                           | 50    |
| Pediatric Airway Procedures   | Management of airway disorders, including laryngomalacia             | 30    |
| OSCE                          | Simulated clinical scenarios and skill demonstration                 | 40    |



## School of Medical Sciences & Technology

### Viva Voce (Oral Examination)

| Component                                | Details                                                            | Marks |
|------------------------------------------|--------------------------------------------------------------------|-------|
| Case Presentations                       | Discussion of pediatric ENT treatment cases                        | 50    |
| Advances in Pediatric ENT                | Discussion of recent advancements in pediatric ENT care            | 20    |
| Ethical & Legal Aspects in Pediatric ENT | Ethical considerations and patient care in pediatric ENT practices | 30    |

### Research/Dissertation Submission

| Component                       | Marks |
|---------------------------------|-------|
| Originality & Scientific Merit  | 30    |
| Methodology & Data Analysis     | 30    |
| Presentation & Discussion       | 20    |
| Conclusion & Clinical Relevance | 20    |

### Final Weightage & Passing Criteria

| Exam Component         | Total Marks | Minimum Passing Marks         |
|------------------------|-------------|-------------------------------|
| Theory                 | 200         | 50% (100/200)                 |
| Practical Exam         | 200         | 50% (100/200)                 |
| Viva Voce              | 100         | 50% (50/100)                  |
| Dissertation           | 100         | 50% (50/100)                  |
| <b>Total (Overall)</b> | <b>600</b>  | <b>50% Aggregate Required</b> |

### Recommended Books & E-Resources

#### Textbooks:

- Pediatric Otorhinolaryngology – J. L. J. Finkelstein
- Pediatric Otolaryngology: A Comprehensive Guide – Joseph B. Nadol, M.D.
- Congenital Anomalies of the Ear, Nose, and Throat – Bruce H. A. Hartnick
- Pediatric Airway Surgery – S. I. B. Tole
- Otology, Neurotology, and Skull Base Surgery – S. F. Tsue, S. E. Adunka

#### Journals & E-Resources:



## School of Medical Sciences & Technology

- International Journal of Pediatric Otorhinolaryngology – <https://www.journals.elsevier.com/international-journal-of-pediatric-otorhinolaryngology>
- Journal of Pediatric Otolaryngology – <https://journals.lww.com/otology-neurotology/>

### **Fellowship in Cochlear Surgery**

#### **Course Overview**

The Fellowship in Cochlear Surgery is a one-year advanced program designed for healthcare professionals who wish to specialize in the surgical management of hearing loss through cochlear implants. This fellowship provides comprehensive training in both the medical and surgical aspects of cochlear implantation, including patient selection, preoperative evaluation, surgical techniques, and postoperative care. The program emphasizes advanced techniques in cochlear implant surgery, audiological management, and rehabilitation, with a strong focus on improving outcomes for patients with severe to profound sensorineural hearing loss.

#### **Prerequisites**

| Criteria             | Details                                                                                          |
|----------------------|--------------------------------------------------------------------------------------------------|
| <b>Eligibility</b>   | MBBS or equivalent degree in medical field (ENT, Otolaryngology, Audiology, or General Medicine) |
| <b>Duration</b>      | 1 Year (Full-Time)                                                                               |
| <b>Mode of Study</b> | Clinical, Theoretical, Hands-on Training                                                         |
| <b>Assessment</b>    | Theory, Practical Exams, Clinical Logbook, Research Project                                      |

#### **Course Objectives**

- Gain expertise in the diagnostic work-up for cochlear implant candidates, including audiological testing and imaging.
- Master the surgical techniques involved in cochlear implantation, including preoperative planning, intraoperative considerations, and postoperative management.
- Understand the multidisciplinary approach to cochlear implant rehabilitation, including audiological mapping, speech therapy, and patient counseling.
- Learn advanced techniques in cochlear implantation for adults and children, including complex cases and revision surgeries.
- Develop skills in managing complications of cochlear implants and troubleshooting device-related issues.
- Engage in research to contribute to the ongoing advancements in cochlear implant technology and surgical techniques.



## Curriculum with Semester-wise Syllabus & Modules

### Semester 1: Fundamentals of Cochlear Surgery

| Module                                 | Topics Covered                                                                                                    |
|----------------------------------------|-------------------------------------------------------------------------------------------------------------------|
| Introduction to Cochlear Implants      | Overview of cochlear implantation, history, indications, and advancements in technology                           |
| Audiological Assessment                | Audiological evaluation, including pure-tone audiometry, speech audiometry, and auditory brainstem response (ABR) |
| Preoperative Planning and Imaging      | Imaging techniques (CT, MRI) for cochlear implantation, patient selection, and counseling                         |
| Cochlear Implant Surgery Basics        | Surgical anatomy, patient positioning, cochlear access, and electrode placement techniques                        |
| Postoperative Management               | Management of wound healing, device activation, and initial mapping                                               |
| Clinical Rotations & Hands-on Training | Observation and hands-on experience in cochlear implantation surgeries and postoperative care                     |

### Semester 2: Advanced Cochlear Surgery Techniques and Research

| Module                                    | Topics Covered                                                                                             |
|-------------------------------------------|------------------------------------------------------------------------------------------------------------|
| Advanced Cochlear Implantation Techniques | Complex implantation cases, including bilateral implants, sequential implants, and revision surgeries      |
| Pediatric Cochlear Implantation           | Surgical considerations and challenges in pediatric cochlear implantation                                  |
| Cochlear Implant Mapping                  | Techniques for programming the cochlear implant, including advanced mapping strategies and troubleshooting |
| Cochlear Implant Rehabilitation           | Multidisciplinary approach to rehabilitation, including speech therapy and auditory training               |
| Complications in Cochlear Implantation    | Management of surgical complications, device failure, infection, and long-term follow-up                   |
| Research Project & Case Studies           | Literature review, clinical case presentations, and preparation of research dissertation                   |



## School of Medical Sciences & Technology

### Program Outcomes

| Sr. No. | Program Outcome                                   | Description                                                                                                                |
|---------|---------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|
| 1       | Expertise in Cochlear Implantation                | Master the diagnosis, preoperative evaluation, surgical implantation, and postoperative care for cochlear implant patients |
| 2       | Advanced Cochlear Implant Surgery                 | Gain proficiency in performing cochlear implantation surgeries, including complex and revision cases                       |
| 3       | Proficiency in Cochlear Implant Mapping           | Develop expertise in cochlear implant programming, including advanced mapping techniques and troubleshooting               |
| 4       | Multidisciplinary Cochlear Implant Rehabilitation | Understand the role of speech therapy, audiological rehabilitation, and counseling in cochlear implant outcomes            |
| 5       | Management of Cochlear Implant Complications      | Develop skills in managing complications such as infections, device failure, and issues related to electrode placement     |
| 6       | Cochlear Implant Research                         | Conduct research and contribute to advancements in cochlear implant technology, surgery, and rehabilitation                |

### Course Outcomes

| Sr. No. | Course Outcome                                        | Description                                                                                                      |
|---------|-------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|
| 1       | Mastery in Cochlear Implant Surgery                   | Ability to perform cochlear implantation surgeries, including complex and revision procedures                    |
| 2       | Proficiency in Audiological Assessment and Mapping    | Ability to perform thorough audiological assessments and implement advanced cochlear implant mapping techniques  |
| 3       | Expertise in Cochlear Implant Rehabilitation          | Ability to collaborate with multidisciplinary teams to optimize cochlear implant outcomes through rehabilitation |
| 4       | Competence in Managing Cochlear Implant Complications | Ability to manage common and complex complications associated with cochlear implants                             |
| 5       | Research Competence in Cochlear Implantation          | Ability to conduct research and contribute to the field through innovative approaches to cochlear implantation   |



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| Sr. No. | Course Outcome | Description        |
|---------|----------------|--------------------|
|         |                | and rehabilitation |

### Credits & Assessment Methods

**Total Credits:** 40

| Component                         | Credits |
|-----------------------------------|---------|
| Theory & Lectures                 | 10      |
| Clinical Rotations & Case Studies | 10      |
| Hands-on Training & Procedures    | 10      |
| Research & Dissertation           | 10      |

### Assessment Pattern

| Assessment Type                                         | Weightage |
|---------------------------------------------------------|-----------|
| Theory Examination (MCQs, Long & Short Answer)          | 30%       |
| Clinical & Practical Exam (Case-Based Discussion, OSCE) | 30%       |
| Clinical Logbook & Case Reports                         | 20%       |
| Research Presentation & Dissertation                    | 20%       |

### Exam Pattern

#### Theory Examination

- Section A (MCQs – 30 Marks)
- Section B (Short Answer Questions – 30 Marks)
- Section C (Long Answer Questions – 40 Marks)

#### Practical Examination

| Component                | Details                                                                              | Marks |
|--------------------------|--------------------------------------------------------------------------------------|-------|
| Cochlear Implant Surgery | Performing cochlear implantation surgery in a simulated or real clinical environment | 50    |
| Cochlear Implant Mapping | Demonstrating advanced cochlear implant programming and troubleshooting              | 50    |



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| Component                       | Details                                                                       | Marks |
|---------------------------------|-------------------------------------------------------------------------------|-------|
| Pediatric Cochlear Implantation | Performing pediatric cochlear implant surgery, addressing specific challenges | 30    |
| OSCE                            | Simulated clinical scenarios and skill demonstration                          | 40    |

### Viva Voce (Oral Examination)

| Component                                        | Details                                                                | Marks |
|--------------------------------------------------|------------------------------------------------------------------------|-------|
| Case Presentations                               | Discussion of cochlear implant surgery cases and management strategies | 50    |
| Recent Advances in Cochlear Implantation         | Discussion of technological advancements and surgical techniques       | 20    |
| Ethical & Legal Aspects in Cochlear Implantation | Ethical considerations and patient care in cochlear implantation       | 30    |

### Research/Dissertation Submission

| Component                       | Marks |
|---------------------------------|-------|
| Originality & Scientific Merit  | 30    |
| Methodology & Data Analysis     | 30    |
| Presentation & Discussion       | 20    |
| Conclusion & Clinical Relevance | 20    |

### Final Weightage & Passing Criteria

| Exam Component         | Total Marks | Minimum Passing Marks         |
|------------------------|-------------|-------------------------------|
| Theory                 | 200         | 50% (100/200)                 |
| Practical Exam         | 200         | 50% (100/200)                 |
| Viva Voce              | 100         | 50% (50/100)                  |
| Dissertation           | 100         | 50% (50/100)                  |
| <b>Total (Overall)</b> | <b>600</b>  | <b>50% Aggregate Required</b> |

### Recommended Books & E-Resources

#### Textbooks:

- Cochlear Implants: Principles and Practices – John K. Niparko
- Cochlear Implants: A Handbook – Richard H. Gacek, Peter H. Gacek



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- Pediatric Cochlear Implantation: Principles and Practices – Susan S. Eshraghi, Michael G. Shapiro
- Manual of Cochlear Implants – Charles Limb, Jennifer L. Gifford

### Journals & E-Resources:

- Cochlear Implants International – <https://www.tandfonline.com/toc/icii20/current>
- Journal of Cochlear Implants – <https://journals.sagepub.com/home/cji>
- American Cochlear Implant Alliance – <https://www.cochlearimplant.org/>
- Hearing Research – <https://www.journals.elsevier.com/hearing-research>

### Fellowship in Allergology

#### Course Overview

The Fellowship in Allergology is a comprehensive, one-year program designed for healthcare professionals who seek to specialize in the diagnosis, treatment, and management of allergic conditions. The program focuses on developing expertise in the management of common and complex allergic disorders, including asthma, rhinitis, food allergies, eczema, and immunotherapy. The course combines theoretical knowledge, clinical rotations, and hands-on training to equip fellows with the skills needed to diagnose, treat, and manage patients with allergic diseases effectively.

#### Prerequisites

| Criteria             | Details                                                                                                                   |
|----------------------|---------------------------------------------------------------------------------------------------------------------------|
| <b>Eligibility</b>   | MBBS or equivalent degree in medical field (Allergy & Immunology, Respiratory Medicine, Dermatology, or General Medicine) |
| <b>Duration</b>      | 1 Year (Full-Time)                                                                                                        |
| <b>Mode of Study</b> | Clinical, Theoretical, Hands-on Training                                                                                  |
| <b>Assessment</b>    | Theory, Practical Exams, Clinical Logbook, Research Project                                                               |

#### Course Objectives

- Develop proficiency in diagnosing allergic diseases using clinical evaluation, laboratory tests, and skin prick tests.
- Gain expertise in the management of common allergic conditions such as asthma, allergic rhinitis, atopic dermatitis, and food allergies.
- Master advanced immunotherapy techniques, including allergen-specific immunotherapy (allergy shots) and sublingual immunotherapy (SLIT).
- Learn the latest advances in biologic therapies for allergic conditions.



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- Understand the role of environmental factors and genetics in the development and management of allergies.
- Enhance patient counseling and education regarding allergic disease management and lifestyle modifications.
- Engage in research to contribute to the ongoing advancements in allergy diagnosis and therapy.

### Curriculum with Semester-wise Syllabus & Modules

#### Semester 1: Fundamentals of Allergology

| Module                                 | Topics Covered                                                                                |
|----------------------------------------|-----------------------------------------------------------------------------------------------|
| Introduction to Allergology            | History, types of allergic diseases, and pathophysiology of allergic reactions                |
| Immunology of Allergies                | Understanding the immune system, IgE-mediated reactions, and the role of T-cells              |
| Diagnosis of Allergic Diseases         | Clinical history, skin tests, serum IgE levels, allergy testing (skin prick test, RAST, etc.) |
| Allergic Rhinitis and Asthma           | Pathophysiology, diagnosis, management (medications, triggers, immunotherapy)                 |
| Atopic Dermatitis & Food Allergies     | Diagnosis, management, and prevention strategies for atopic dermatitis and food allergies     |
| Clinical Rotations & Hands-on Training | Observation and hands-on experience in allergy testing and patient management                 |

#### Semester 2: Advanced Allergology and Research

| Module                     | Topics Covered                                                                                     |
|----------------------------|----------------------------------------------------------------------------------------------------|
| Advanced Asthma Management | Pharmacologic management (inhalers, biologics), non-pharmacological therapies, asthma action plans |
| Allergic Skin Conditions   | Management of eczema, urticaria, contact dermatitis, and other allergic skin conditions            |
| Immunotherapy in Allergies | Allergen-specific immunotherapy (SCIT), sublingual immunotherapy (SLIT), and new advances          |
| Biologic Therapies in      | Use of monoclonal antibodies (omalizumab, dupilumab) in the                                        |



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| Module                                   | Topics Covered                                                                             |
|------------------------------------------|--------------------------------------------------------------------------------------------|
| Allergology                              | management of asthma and other allergic conditions                                         |
| Environmental and Occupational Allergies | Identification and management of environmental and occupational allergens and risk factors |
| Research Project & Case Studies          | Literature review, clinical case presentations, and preparation of research dissertation   |

### Program Outcomes

| Sr. No. | Program Outcome                             | Description                                                                                                                         |
|---------|---------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|
| 1       | Expertise in Allergic Disease Diagnosis     | Master diagnostic techniques for identifying various allergic conditions through clinical history, laboratory tests, and skin tests |
| 2       | Advanced Management of Asthma and Allergies | Gain proficiency in managing asthma, allergic rhinitis, eczema, food allergies, and other allergic conditions                       |
| 3       | Immunotherapy Expertise                     | Expertise in administering and managing allergen-specific immunotherapy (SCIT and SLIT) for allergic conditions                     |
| 4       | Biologic Therapies in Allergology           | Understand and implement biologic treatments (omalizumab, dupilumab) for severe allergic diseases                                   |
| 5       | Patient Counseling and Education            | Develop effective counseling techniques to educate patients on allergen avoidance, treatment regimens, and lifestyle changes        |
| 6       | Contribution to Allergy Research            | Engage in research that contributes to advancing knowledge in the field of allergology                                              |

### Course Outcomes

| Sr. No. | Course Outcome                  | Description                                                                                                          |
|---------|---------------------------------|----------------------------------------------------------------------------------------------------------------------|
| 1       | Mastery in Allergy Diagnosis    | Ability to diagnose allergic diseases through clinical evaluation and diagnostic testing (skin testing, blood tests) |
| 2       | Expertise in Allergy Management | Proficiency in managing common allergic diseases such as asthma, allergic rhinitis, eczema, and food allergies       |



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| Sr. No. | Course Outcome                            | Description                                                                                                               |
|---------|-------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|
| 3       | Immunotherapy Competence                  | Ability to deliver allergen-specific immunotherapy (SCIT, SLIT) and biologic therapies for patients with severe allergies |
| 4       | Proficiency in Managing Complex Allergies | Ability to manage difficult and complex allergic conditions, including food allergies, drug allergies, and anaphylaxis    |
| 5       | Competence in Research                    | Ability to conduct research in the field of allergology and contribute to advancements in allergy diagnosis and therapy   |

### Credits & Assessment Methods

**Total Credits:** 40

| Component                         | Credits |
|-----------------------------------|---------|
| Theory & Lectures                 | 10      |
| Clinical Rotations & Case Studies | 10      |
| Hands-on Training & Procedures    | 10      |
| Research & Dissertation           | 10      |

### Assessment Pattern

| Assessment Type                                         | Weightage |
|---------------------------------------------------------|-----------|
| Theory Examination (MCQs, Long & Short Answer)          | 30%       |
| Clinical & Practical Exam (Case-Based Discussion, OSCE) | 30%       |
| Clinical Logbook & Case Reports                         | 20%       |
| Research Presentation & Dissertation                    | 20%       |

### Exam Pattern

#### Theory Examination

- Section A (MCQs – 30 Marks)
- Section B (Short Answer Questions – 30 Marks)
- Section C (Long Answer Questions – 40 Marks)



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### Practical Examination

| Component                    | Details                                                                                  | Marks |
|------------------------------|------------------------------------------------------------------------------------------|-------|
| Allergy Testing & Diagnosis  | Performing skin prick tests, RAST, and interpreting results                              | 50    |
| Asthma & Rhinitis Management | Managing asthma and allergic rhinitis, including drug administration and treatment plans | 50    |
| Skin Allergy Management      | Diagnosing and managing atopic dermatitis, eczema, and other allergic skin conditions    | 30    |
| OSCE                         | Simulated clinical scenarios and skill demonstration                                     | 40    |

### Viva Voce (Oral Examination)

| Component                              | Details                                                            | Marks |
|----------------------------------------|--------------------------------------------------------------------|-------|
| Case Presentations                     | Discussion of allergy diagnosis and management strategies          | 50    |
| Recent Advances in Allergology         | Discussion of new therapies, including biologics and immunotherapy | 20    |
| Ethical & Legal Aspects in Allergology | Ethical considerations in allergy testing and treatment            | 30    |

### Research/Dissertation Submission

| Component                       | Marks |
|---------------------------------|-------|
| Originality & Scientific Merit  | 30    |
| Methodology & Data Analysis     | 30    |
| Presentation & Discussion       | 20    |
| Conclusion & Clinical Relevance | 20    |

### Final Weightage & Passing Criteria

| Exam Component | Total Marks | Minimum Passing Marks |
|----------------|-------------|-----------------------|
| Theory         | 200         | 50% (100/200)         |
| Practical Exam | 200         | 50% (100/200)         |
| Viva Voce      | 100         | 50% (50/100)          |
| Dissertation   | 100         | 50% (50/100)          |



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| Exam Component  | Total Marks | Minimum Passing Marks  |
|-----------------|-------------|------------------------|
| Total (Overall) | 600         | 50% Aggregate Required |

### Recommended Books & E-Resources

#### Textbooks:

- Middleton's Allergy: Principles and Practice – Reed E. Slade, Stephen T. Holgate
- Allergy: Principles and Practice – Thomas Platts-Mills
- Immunotherapy of Allergic Diseases – S. K. Gupta
- Pediatric Allergy: Principles and Practice – Phil Lieberman, Anna Nowak-Wegrzyn

#### Journals & E-Resources:

- The Journal of Allergy and Clinical Immunology – <https://www.jacionline.org/>
- Allergy – <https://www.allergyjournal.org/>
- American Academy of Allergy, Asthma, and Immunology – <https://www.aaaai.org/>

### Fellowship in Laryngology

#### Course Overview

The Fellowship in Laryngology is a one-year advanced program designed for healthcare professionals specializing in the diagnosis, treatment, and management of laryngeal and voice disorders. This fellowship focuses on the comprehensive understanding of laryngeal anatomy, vocal function, and the various medical and surgical interventions used to treat voice, swallowing, and airway disorders. The program combines theoretical education, clinical experience, and hands-on training to ensure the development of skills required to manage a wide variety of laryngeal conditions.

#### Prerequisites

| Criteria      | Details                                                          |
|---------------|------------------------------------------------------------------|
| Eligibility   | MBBS or equivalent degree in medical field (ENT, Otolaryngology) |
| Duration      | 1 Year (Full-Time)                                               |
| Mode of Study | Clinical, Theoretical, Hands-on Training                         |
| Assessment    | Theory, Practical Exams, Clinical Logbook, Research Project      |

#### Course Objectives

- Gain expertise in the diagnosis and management of common and complex laryngeal conditions, including voice disorders, laryngopharyngeal reflux, and laryngeal cancers.



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- Understand the detailed anatomy of the larynx, including its functional aspects in voice production and swallowing.
- Develop proficiency in advanced diagnostic techniques such as laryngoscopy, videostroboscopy, and imaging for laryngeal disorders.
- Master both medical and surgical approaches to voice disorders, including phonatory rehabilitation and surgical interventions.
- Learn to treat laryngeal cancers and understand their surgical management, including laryngectomy and reconstructive surgery.
- Enhance knowledge of laryngological conditions in pediatric and geriatric populations.
- Conduct research to explore new diagnostic and therapeutic methods in laryngology.

### Curriculum with Semester-wise Syllabus & Modules

#### Semester 1: Fundamentals of Laryngology

| Module                                 | Topics Covered                                                                        |
|----------------------------------------|---------------------------------------------------------------------------------------|
| Introduction to Laryngology            | Overview of laryngeal anatomy, physiology, and common disorders                       |
| Voice Disorders and Their Diagnosis    | Etiology, diagnosis, and management of voice disorders (hoarseness, dysphonia)        |
| Laryngoscopic Techniques               | Basic and advanced laryngoscopy techniques, including flexible and rigid laryngoscopy |
| Videostroboscopy in Laryngology        | Use of videostroboscopy in assessing vocal cord function and disorders                |
| Laryngeal Infections and Inflammation  | Diagnosis and management of infections, laryngitis, and other inflammatory conditions |
| Clinical Rotations & Hands-on Training | Observation and hands-on experience in diagnosing and treating voice disorders        |

#### Semester 2: Advanced Laryngology and Surgical Techniques

| Module                     | Topics Covered                                           |
|----------------------------|----------------------------------------------------------|
| Advanced Laryngeal Surgery | Laryngeal microsurgery, endoscopic approaches, and laser |



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| Module                              | Topics Covered                                                                           |
|-------------------------------------|------------------------------------------------------------------------------------------|
|                                     | treatments                                                                               |
| Laryngeal Cancer Management         | Diagnosis, staging, and treatment of laryngeal cancer, including laryngectomy            |
| Phonation Rehabilitation            | Voice therapy techniques and rehabilitation methods for voice disorders                  |
| Swallowing Disorders and Diagnosis  | Diagnosis and management of dysphagia and related disorders                              |
| Pediatric and Geriatric Laryngology | Management of laryngeal disorders in pediatric and geriatric populations                 |
| Research Project & Case Studies     | Literature review, clinical case presentations, and preparation of research dissertation |

### Program Outcomes

| Sr. No. | Program Outcome                              | Description                                                                                                       |
|---------|----------------------------------------------|-------------------------------------------------------------------------------------------------------------------|
| 1       | Expertise in Laryngeal Diagnosis             | Master diagnostic techniques for evaluating laryngeal disorders using laryngoscopy, videostroboscopy, and imaging |
| 2       | Advanced Knowledge of Voice Disorders        | Gain proficiency in managing voice disorders, including voice therapy and surgical approaches                     |
| 3       | Proficiency in Laryngeal Surgery             | Master laryngeal microsurgery, laser procedures, and surgical management of laryngeal cancers                     |
| 4       | Rehabilitation of Phonation                  | Develop expertise in phonation rehabilitation for patients with voice disorders                                   |
| 5       | Comprehensive Swallowing Disorder Management | Ability to diagnose and treat swallowing disorders, including dysphagia                                           |
| 6       | Contribution to Laryngology Research         | Engage in research projects to advance knowledge and improve therapeutic strategies in laryngology                |

### Course Outcomes



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| Sr. No. | Course Outcome                                | Description                                                                                         |
|---------|-----------------------------------------------|-----------------------------------------------------------------------------------------------------|
| 1       | Mastery in Laryngeal Diagnosis                | Ability to diagnose and assess laryngeal disorders using various diagnostic techniques              |
| 2       | Expertise in Voice Disorder Management        | Proficiency in treating voice disorders, both surgically and with therapeutic techniques            |
| 3       | Proficiency in Laryngeal Surgery              | Ability to perform advanced laryngeal surgery, including laryngectomy and reconstructive procedures |
| 4       | Competence in Phonation Rehabilitation        | Ability to rehabilitate voice function through therapeutic and surgical interventions               |
| 5       | Expertise in Treating Swallowing Disorders    | Ability to diagnose and manage swallowing disorders and perform relevant interventions              |
| 6       | Ability to Contribute to Laryngology Research | Ability to conduct meaningful research and contribute to clinical practice in laryngology           |

### Credits & Assessment Methods

**Total Credits:** 40

| Component                         | Credits |
|-----------------------------------|---------|
| Theory & Lectures                 | 10      |
| Clinical Rotations & Case Studies | 10      |
| Hands-on Training & Procedures    | 10      |
| Research & Dissertation           | 10      |

### Assessment Pattern

| Assessment Type                                         | Weightage |
|---------------------------------------------------------|-----------|
| Theory Examination (MCQs, Long & Short Answer)          | 30%       |
| Clinical & Practical Exam (Case-Based Discussion, OSCE) | 30%       |
| Clinical Logbook & Case Reports                         | 20%       |
| Research Presentation & Dissertation                    | 20%       |



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## Exam Pattern

### Theory Examination

- Section A (MCQs – 30 Marks)
- Section B (Short Answer Questions – 30 Marks)
- Section C (Long Answer Questions – 40 Marks)

### Practical Examination

| Component                      | Details                                                 | Marks |
|--------------------------------|---------------------------------------------------------|-------|
| Laryngoscopic Examination      | Performing diagnostic laryngoscopy and videostroboscopy | 50    |
| Surgical Techniques            | Performing laryngeal microsurgery and laser procedures  | 50    |
| Voice Therapy & Rehabilitation | Assessment and rehabilitation of voice disorders        | 30    |
| OSCE                           | Simulated clinical scenarios and skill demonstration    | 40    |

### Viva Voce (Oral Examination)

| Component                              | Details                                                                   | Marks |
|----------------------------------------|---------------------------------------------------------------------------|-------|
| Case Presentations                     | Discussion on laryngeal treatment strategies and clinical decision-making | 50    |
| Recent Advances in Laryngology         | Discussion on new surgical techniques and therapies in laryngology        | 20    |
| Ethical & Legal Aspects in Laryngology | Ethical considerations in laryngeal treatments and patient care           | 30    |

### Research/Dissertation Submission

| Component                       | Marks |
|---------------------------------|-------|
| Originality & Scientific Merit  | 30    |
| Methodology & Data Analysis     | 30    |
| Presentation & Discussion       | 20    |
| Conclusion & Clinical Relevance | 20    |

### Final Weightage & Passing Criteria

| Exam Component | Total Marks | Minimum Passing Marks |
|----------------|-------------|-----------------------|
| Theory         | 200         | 50% (100/200)         |
| Practical Exam | 200         | 50% (100/200)         |



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| Exam Component         | Total Marks | Minimum Passing Marks         |
|------------------------|-------------|-------------------------------|
| Viva Voce              | 100         | 50% (50/100)                  |
| Dissertation           | 100         | 50% (50/100)                  |
| <b>Total (Overall)</b> | <b>600</b>  | <b>50% Aggregate Required</b> |

### Recommended Books & E-Resources

#### Textbooks:

- Diseases of the Larynx – James L. Netterville, Joseph L. Krespi
- Laryngology and Voice Disorders – Paul W. Flint
- Essentials of Laryngeal Surgery – David W. Eisele
- Surgical Management of Laryngeal Cancer – Craig D. Nardini

#### Journals & E-Resources:

- The Journal of Voice – <https://www.journals.elsevier.com/the-journal-of-voice>
- Laryngoscope – <https://journals.sagepub.com/home/lar>
- American Academy of Otolaryngology – Head and Neck Surgery – <https://www.entnet.org/>
- Otolaryngology-Head and Neck Surgery – <https://journals.sagepub.com/home/oto>

### Fellowship in Head & Neck Surgery

#### Course Overview

The Fellowship in Head & Neck Surgery is a comprehensive one-year advanced training program designed for healthcare professionals who wish to specialize in the management of head and neck diseases. This fellowship focuses on both oncological and reconstructive surgery, providing participants with in-depth training in the surgical treatment of benign and malignant conditions affecting the head and neck region, including the thyroid, parathyroid, salivary glands, larynx, pharynx, and surrounding structures. The program combines theoretical education, clinical experience, and hands-on training in cutting-edge surgical techniques, with a focus on maximizing patient outcomes and quality of life.

#### Prerequisites

| Criteria           | Details                                                                        |
|--------------------|--------------------------------------------------------------------------------|
| <b>Eligibility</b> | MBBS or equivalent degree in medical field (ENT, General Surgery, or Oncology) |



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| Criteria      | Details                                                     |
|---------------|-------------------------------------------------------------|
| Duration      | 1 Year (Full-Time)                                          |
| Mode of Study | Clinical, Theoretical, Hands-on Training                    |
| Assessment    | Theory, Practical Exams, Clinical Logbook, Research Project |

### Course Objectives

- Gain advanced knowledge and surgical expertise in managing head and neck cancers, including laryngeal, oral cavity, pharyngeal, thyroid, and salivary gland cancers.
- Learn reconstructive techniques following oncological resections to restore both form and function of the head and neck.
- Understand the multidisciplinary approach to managing benign and malignant head and neck disorders, including collaboration with oncologists, radiologists, and speech therapists.
- Master the use of modern imaging and diagnostic tools for the assessment and management of head and neck diseases.
- Enhance skills in minimally invasive and robotic-assisted surgeries for head and neck pathologies.
- Develop proficiency in the management of complex airways and swallowing disorders following surgery.
- Conduct research to contribute to improving surgical outcomes, patient safety, and quality of life for individuals with head and neck conditions.

### Curriculum with Semester-wise Syllabus & Modules

#### Semester 1: Fundamentals of Head & Neck Surgery

| Module                                      | Topics Covered                                                                              |
|---------------------------------------------|---------------------------------------------------------------------------------------------|
| Introduction to Head & Neck Surgery         | Overview of head and neck anatomy, surgical approaches, and principles of surgery           |
| Benign Head & Neck Tumors                   | Diagnosis and management of benign lesions of the thyroid, salivary glands, and neck masses |
| Head & Neck Cancer: Diagnosis & Staging     | Staging of head and neck cancers, role of imaging (CT, MRI, PET scans) in diagnosis         |
| Surgical Techniques in Head & Neck Oncology | Principles of oncological surgery in head and neck, including resection and reconstruction  |
| Reconstructive Techniques                   | Flap-based and free tissue transfer for reconstruction of head and neck defects             |



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| Module                                 | Topics Covered                                                                                   |
|----------------------------------------|--------------------------------------------------------------------------------------------------|
| Clinical Rotations & Hands-on Training | Observation and hands-on experience in performing surgeries and managing head and neck disorders |

### Semester 2: Advanced Head & Neck Surgical Techniques and Research

| Module                                       | Topics Covered                                                                                              |
|----------------------------------------------|-------------------------------------------------------------------------------------------------------------|
| Advanced Surgical Approaches                 | Advanced techniques in laryngectomy, pharyngectomy, and mandibulectomy                                      |
| Minimally Invasive & Robotic Surgery         | Use of robotic surgery for head and neck tumors, minimally invasive approaches                              |
| Airway Management in Head & Neck Surgery     | Managing complex airways in patients with tumors or post-operative conditions                               |
| Management of Thyroid & Parathyroid Diseases | Surgical treatment of benign and malignant thyroid and parathyroid disorders                                |
| Oncological Rehabilitation                   | Post-operative care, rehabilitation, and rehabilitation in patients undergoing head and neck cancer surgery |
| Research Project & Case Studies              | Literature review, clinical case presentations, and preparation of research dissertation                    |

### Program Outcomes

| Sr. No. | Program Outcome                          | Description                                                                                                                          |
|---------|------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|
| 1       | Expertise in Head & Neck Oncology        | Master the diagnosis and surgical treatment of malignant tumors affecting the head and neck, including advanced resection techniques |
| 2       | Proficiency in Reconstructive Surgery    | Gain proficiency in reconstructive techniques, including free flap reconstruction and the use of grafts                              |
| 3       | Mastery in Minimally Invasive Techniques | Develop skills in minimally invasive surgery, including robotic-assisted techniques for head and neck conditions                     |
| 4       | Advanced Airway Management               | Learn to manage complex airways in head and neck surgery, both during and after procedures                                           |
| 5       | Post-Operative Care and                  | Ability to manage post-operative complications and facilitate                                                                        |



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| Sr. No. | Program Outcome                              | Description                                                                                                         |
|---------|----------------------------------------------|---------------------------------------------------------------------------------------------------------------------|
|         | Rehabilitation                               | patient recovery with a multidisciplinary approach                                                                  |
| 6       | Contribution to Head & Neck Surgery Research | Contribute to the development of innovative surgical techniques and patient care protocols in head and neck surgery |

### Course Outcomes

| Sr. No. | Course Outcome                                | Description                                                                                                     |
|---------|-----------------------------------------------|-----------------------------------------------------------------------------------------------------------------|
| 1       | Mastery in Oncological Surgery                | Ability to perform complex head and neck oncological surgeries, including resections and lymph node dissection  |
| 2       | Expertise in Reconstructive Techniques        | Proficiency in reconstructing head and neck defects following tumor resection                                   |
| 3       | Proficiency in Minimally Invasive Surgery     | Expertise in robotic-assisted and minimally invasive surgeries for head and neck tumors                         |
| 4       | Mastery in Airway Management                  | Ability to manage complex airways, including the use of tracheostomies and airway stents                        |
| 5       | Competence in Post-Operative Management       | Ability to manage post-operative complications, including infection control, wound healing, and pain management |
| 6       | Research Contributions in Head & Neck Surgery | Ability to conduct research that contributes to advances in surgical techniques and patient outcomes            |

### Credits & Assessment Methods

**Total Credits:** 40

| Component                         | Credits |
|-----------------------------------|---------|
| Theory & Lectures                 | 10      |
| Clinical Rotations & Case Studies | 10      |
| Hands-on Training & Procedures    | 10      |
| Research & Dissertation           | 10      |

### Assessment Pattern



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| Assessment Type                                         | Weightage |
|---------------------------------------------------------|-----------|
| Theory Examination (MCQs, Long & Short Answer)          | 30%       |
| Clinical & Practical Exam (Case-Based Discussion, OSCE) | 30%       |
| Clinical Logbook & Case Reports                         | 20%       |
| Research Presentation & Dissertation                    | 20%       |

### Exam Pattern

#### Theory Examination

- Section A (MCQs – 30 Marks)
- Section B (Short Answer Questions – 30 Marks)
- Section C (Long Answer Questions – 40 Marks)

#### Practical Examination

| Component              | Details                                                        | Marks |
|------------------------|----------------------------------------------------------------|-------|
| Surgical Techniques    | Performing oncological surgeries (laryngectomy, thyroidectomy) | 50    |
| Reconstructive Surgery | Performing head and neck reconstruction (flap surgery)         | 50    |
| Airway Management      | Managing complex airways during surgery and post-operatively   | 30    |
| OSCE                   | Simulated clinical scenarios and skill demonstration           | 40    |

#### Viva Voce (Oral Examination)

| Component                              | Details                                                             | Marks |
|----------------------------------------|---------------------------------------------------------------------|-------|
| Case Presentations                     | Discussion on head and neck surgical cases and treatment strategies | 50    |
| Recent Advances in Head & Neck Surgery | Discussion on innovations in head and neck surgical techniques      | 20    |
| Ethical & Legal Aspects in Surgery     | Ethical considerations and patient care in head and neck surgery    | 30    |

#### Research/Dissertation Submission



## School of Medical Sciences & Technology

| Component                       | Marks |
|---------------------------------|-------|
| Originality & Scientific Merit  | 30    |
| Methodology & Data Analysis     | 30    |
| Presentation & Discussion       | 20    |
| Conclusion & Clinical Relevance | 20    |

### Final Weightage & Passing Criteria

| Exam Component         | Total Marks | Minimum Passing Marks         |
|------------------------|-------------|-------------------------------|
| Theory                 | 200         | 50% (100/200)                 |
| Practical Exam         | 200         | 50% (100/200)                 |
| Viva Voce              | 100         | 50% (50/100)                  |
| Dissertation           | 100         | 50% (50/100)                  |
| <b>Total (Overall)</b> | <b>600</b>  | <b>50% Aggregate Required</b> |

### Recommended Books & E-Resources

#### Textbooks:

- Head and Neck Surgery and Oncology – Robert B. Jackson, Jatin P. Shah
- Reconstructive Plastic Surgery of the Head and Neck – Bruce M. Spector
- Thyroid and Parathyroid Diseases – James R. Howe
- Oncologic Surgery of the Head and Neck – David W. Eisele

#### Journals & E-Resources:

- Journal of Head and Neck Surgery – <https://journals.lww.com/jhns>
- Head and Neck – <https://onlinelibrary.wiley.com/journal/10970347>
- American Head and Neck Society – <https://www.ahns.info>