

## **M.Sc. Speech Language Pathology**

The objectives of the M.Sc. (SLP) program are to equip the students with knowledge and skills to

- i. Function as teachers and researchers in institutions of higher learning,
- ii. Diagnose and manage disorders of speech and language across life span,
- iii. Counsel and guide persons with disorders of speech and language as well as their family members,
- iv. Implement rehabilitation programs for persons with Communication disorders
- v. To function as the disability certification authority in the field,
- vi. Liaise with professionals in allied fields and other stake holders,
- vii. Implement prevention and public education programs,
- viii. Undertake advocacy measures on behalf of and for persons with communication disorders,
- ix. Advise government and other institutions on legal and policy issues related to persons with speech and language disorders, and
- x. To establish and administer institutions of higher learning in the area.

### **SLP 101: Research Methods, Statistics & Epidemiology**

After completing this course, the student will be able to understand

1. clinical research designs and statistical methods,
2. epidemiological issues and its relevance in speech-language research,
3. evidence based practice in speech and language pathology, and
4. ethical practices in research

### **SLP 102: Speech Science and Speech Production Hours**

At the end of the course, the students will be able to

1. describe the physiology of speech production,
2. discuss acoustic theories of speech production,
3. describe the acoustic characteristics of speech sounds,
4. Know the application of acoustic analysis and speech synthesis.

### **SLP 103: Language Disorders in Children**

Objectives: At the end of the course, the student will be able to

1. know various theories and models of language acquisition in monolingual /bi/ multilingual children,
2. describe developmental and acquired language disorders in children,
3. discuss issues related to differential diagnosis and assessment of child language disorders,
4. Describe various management approaches for child language disorders, and
5. critically evaluate research articles in the area of child language disorders

### **SLP 104 -Technology in Speech-Language Pathology**

**objectives** After going through this course the student will be able to explain:

1. Latest technology involved in speech Acoustics, Signal processing, Instrumentation etc

2. fundamental concepts of the technology used in the instruments for diagnostics and therapeutics in Speech Language Sciences and Pathology the foundation of ICT (Information and Communication Technology) concepts and
3. illustrate the applications of ICT in Speech & Language Sciences & Pathology

### **SLP 105: Clinical Linguistics and Multilingual Issues**

Objectives: At the end of the course, the student will be able to

1. understand aspects of clinical linguistics relevant to speech-language pathology,
2. discuss the acquisition process and related disorders pertaining to various components of language,
3. discuss general concepts, theoretical background and issues related to socio-linguistics,
4. discuss the multilingual and multicultural issues in rehabilitation with reference to India, and
5. undertake research in the area of clinical linguistics related and relevant to speech language pathology.

### **Semester II**

#### **SLP 201: Advances in Speech Sound Disorders**

At the end of the course, the students will be able to

1. describe recent theories and concepts related to phonological development and its disorders, b) diagnose and manage children with speech sound disorders,
2. provide comprehensive care including speech therapy for persons with CLP as a member of the cleft palate team, and
3. guide and counsel families of children with CLP.

#### **SLP 202: Voice: Science and Disorders**

Objectives: At the end of the course, the student will be able to

1. understand the bio-mechanics of voice production in normal individuals and in those with voice disorders,
2. explain and assess the roles of breathing mechanism, vocal fold vibration, vocal tract resonance and enunciation in voice production,
3. delineate the varying roles and responsibilities of a SLP in a trans-disciplinary (medical) team to assess and treat voice disorders in children, adults, geriatrics and specific population including professional voice users, and
4. appraise different service delivery models and procedures to run a voice clinic

#### **SLP 203: Speech Language Processing and Prosody**

Objectives: After going through this course the student will be able to explain

1. Fundamentals of Speech and language processing
2. Theoretical understanding of speech language processing
3. Methods used in research on speech and language processing
4. Speech and language processing in clinical population
5. Models of intonation, rhythm, and stress
6. Methods used in research on suprasegmentals

## 7. Aprosodia in clinical population

### SLP 204: Neurobiology of Speech-Language and Cognition

Objectives: At the end of the course, the student will be able to

1. explain the anatomy and physiology of nervous system and role of neurotransmitters in relation to speech-language and its disorders,
2. know the laboratory - based procedures in understanding neural bases of speech language,
3. discuss and interpret the neuro-diagnostic findings,
4. describe the neural bases of speech-language,
5. know the effect of aging on CNS structures, and
6. discuss research relevant to neuroscience of speech-language.

### SLP 106 and SLP 205: Clinical Practicum

Know how

1. Perform acoustic analysis of speech including FFT, LPC, cepstrum and inverse filtering; acoustic analysis of vowels, diphthongs, plosives, nasals, fricatives, Affricates and other speech sounds using spectrograms on PRAAT
2. Vowel synthesis using parametric and analysis by synthesis; demonstration of articulatory synthesis
3. Observation of stroboscopic evaluation of persons with voice disorders as part of team assessment
4. Observation of endoscopic examination of persons with cleft lip and palate as part of team assessment
5. Differential diagnosis of conditions relevant to speech and hearing as per DSM-V and ICD 10 classifications

## Semester III

### SLP 301 Neurogenic Speech Disorders

At the end of the course, the student will be able to

1. describe the neuroanatomical bases of speech motor control,
2. explain the models relevant to speech motor control, and
3. know the methods for assessment and management of neuromotor speech disorders.

### SLP 302: Disorders of Fluency

At the end of the course, the students will be able

1. explain the nature, types and bases of fluency and its disorders,
2. discuss the theories and models of stuttering,
3. describe, diagnose and manage persons with different types of fluency disorders
4. implement a team of professional for evaluation and management of fluency disorders,
5. counsel the clinical clientele, their family members and others to manage the problem, and
6. evaluate research output in the area of fluency and its disorders

### SLP 303: Aphasia

At the end of the course, the student will be able to

1. describe the history and classification systems in aphasia,
2. acquire skills in understanding the linguistic and non-linguistic impairments in aphasia
3. acquire skills in differential diagnosis and assessment of different types of aphasia
4. acquire skills in management of persons with aphasia, and
5. critically analyze scientific articles related to aphasia

### **SLP 304: Language and Literacy Disorders**

At the end of the course, the student will be able to

1. explain the relationships among language, literacy, and cognition and specifically the role of oral language in acquisition of literacy skills,
2. discuss the development and related disorders pertaining to language and literacy among children,
3. discuss evidence based assessments of language and literacy skills, and
4. plan evidence based intervention for children with a focus on oral language based interventions

### **SLP 305: Cognitive-Communication Disorders**

At the end of the course, the student will be able to

1. describe various conditions in adults leading to cognitive communication disorders,
2. acquire skills in issues related to assessment of cognitive communication disorders,
3. acquire skills in management of cognitive communication disorders, and
4. critically evaluate research articles related to cognitive communication disorders.

## **Semester IV**

### **SLP 401: Practices in Speech-Language Pathology**

At the end of the course, the students should be able

1. know the role of a speech-language pathologist in different set-ups.
2. liaise with other professionals in setting-up a speech-language clinic.
3. audit speech-language practices in existing set-ups. \
4. implement acts and legislations relating to persons with speech-language impairment
5. advise Governments and other agencies on the formulation of policies and legislative acts relating to speech-language disability
6. understand the legal implications of practice in speech-language pathology.

### **SLP 402: Augmentative and Alternative Communication**

**Objectives:** At the end of the course, the student will be able to

1. identify and describe various approaches and methods used in augmentative and alternative communication (AAC)
2. select appropriate AAC strategies and assessment procedures for individuals with complex communication needs,
3. describe the treatment plan for implementation of AAC with evidence based rationale,
4. discuss the current status of the use of technology and practice of AAC for intervention in the Indian context, and

5. identify issues for research.

### **SLP 403: Dysphagia**

**Objectives:** At the end of the course, students shall be able to

1. understand the neuroanatomical and neurophysiological bases of normal and abnormal swallowing in children and adults,
2. appreciate the varying roles and responsibilities of a SLP in a interdisciplinary team to assess and treat swallowing disorders across the lifespan (neonates, infants, children, adults and geriatrics),
3. appraise different service delivery models, and
4. understand ethical, cultural and professional considerations in the management of dysphagia.

### **SLP306 and SLP 405: Clinical Practicum**

Knowhow

1. Observation of modified barium swallow and/or flexible endoscopic examination of swallowing as part of team assessment
2. Observe and identify reports of persons with neurogenic communication disorders in tests such as EEG, CT Scan, MRI etc.
3. Reversible and irreversible conditions that cause neurogenic communication disorders.
4. Certification procedures
5. Rights and privileges of persons with communication disorder
6. Ethics in clinical practices