

NISH

NATIONAL INSTITUTE OF SPEECH & HEARING

(An autonomous organisation under the Social Justice Department, Government of Kerala)

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PO CO MAPPING BASLP PROGRAM

	Courses		Course outcome	Program Specific Outcome	Cognitive Process	Knowledge Category	Session T L P
1.1.1	Communication Sciences : Speech Language Pathology	CO1	Understanding of the relationship between Communication, Speech and Language	PO2.	Understand	Factual	Lecture
		CO2	Knowledge of physical, biological, social, psychological and linguistic bases of speech	PO2.	Classify	Factual	Lecture
		CO3	Understanding of normal speech and language development	PO2.	Understand	Factual	Lecture+ Practicum
		CO4	Understanding of causes related to speech and language disorders	PO2.	Understand	Factual	Lecture+ Practicum
		CO5	Knowledge of characteristics of speech and language disorders	PO2.	Differentiate	Factual	Lecture+ Practicum
1.1.2	Communication	CO1	Explain the origin of audiology	PO2.	Understand	Conceptual	Lecture

	Sciences : Audiology						
		CO2	Take case history and explain the importance of case history in clinical diagnosis	PO2.	Apply	Procedural	Lecture+ Practicum
		CO3	Explain the physical properties of sound and its psychophysical correlates	PO2.	Differentiate	Factual	Lecture+ Practicum
		CO4	Explain the pathological conditions that would cause hearing loss	PO2.	Remember	Factual	Lecture+ Practicum
		CO5	Explain the usefulness of tuning fork tests in identification of different type of hearing loss.	PO2.	Apply	Procedural	Lecture+ Practicum
1.1.3	Anatomy, Physiology and Pathology related to Speech language and Hearing	CO1	Understand the Anatomy of speech, language and hearing mechanism	PO2.	Remember	Factual	Lecture
		CO2	Understand the Physiological system different systems in speech, language and hearing	PO2.	Remember	Factual	Lecture
		CO3	Understand the general pathological conditions causing speech, language and hearing disorders	PO2.	Understand	Conceptual	Lecture+ Practicum

1.1.4	Clinical Psychology	CO1	Understand the Scope of clinical psychology and its significance for speech and hearing	PO2.	Understand	Conceptual	Lecture
		CO2	Understand the Concept of normality, abnormality and classification of abnormal behaviour	PO2.	Understand	Conceptual	Lecture+ Practicum
		CO3	Understand the Cognitive, motor, emotional and social development	PO2.	Understand	Factual	Lecture+ Practicum
		CO4	Understand the Theories of learning and therapy techniques based on learning principles	PO2.	Classify	Factual	Lecture+ Practicum
		CO5	Understand Neuropsychological assessment and rehabilitation	PO2.	Differentiate	Procedural	Lecture+ Practicum
		CO6	Understand the Application of neuropsychology in the field of speech and hearing	PO2.	Understand	Conceptual	Lecture+ Practicum
1.2.1	Speech Language Pathology -Assessment and Management	CO1	Understand the different speech and language disorders	PO2.	Understand	Conceptual	Lecture+ Practicum
		CO2	Understand the basic concepts and tools required for diagnosing speech and language disorders	PO2.	Understand	Factual	Lecture+ Practicum

		CO3	Understand the basics of assessment procedures for speech and language disorders	PO2.	Understand	Factual	Lecture+ Practicum
		CO4	Understand the basic principles and intervention procedures for speech and language disorders	PO2.	Understand	Factual	Lecture+ Practicum
		CO5	Understand the clinical requirements to practice	PO2.	Classify	Factual	Lecture+ Practicum
		CO6	Understand the basic principles of providing counselling and guidance to clients and caregiver	PO2.	Understand	Conceptual	Lecture+ Practicum
1.2.2	Audiological Evaluation	CO1	Understand and carryout experiments to measure differential sensitivity, loudness and pitch	PO2.	Apply	Procedural	Lecture+ Practicum
		CO2	Take case history, administer the tuning fork tests and interpret the results	PO3.	Apply	Procedural	Lecture+ Practicum
		CO3	Administer pure tone audiometry including masking on clinical population and appreciate the theoretical background of it	PO3.	Apply	Procedural	Lecture+ Practicum
		CO4	Carryout different tests involved in speech audiometry and appreciate the theoretical background	PO3.	Evaluate	Metacognitive	Lecture+ Practicum

		CO5	Carryout subjective calibration and daily listening checks of the audiometer	PO3.	Analyse	Procedural	Lecture+ Practicum
		CO6	Get adequate theoretical information necessary to understand concepts involved in objective calibration	PO3.	Analyse	Metacognitive	Lecture+ Practicum
1.2.3	Linguistics and Phonetics	CO1	Different branches and aspects of linguistics	PO2.	Remember	Conceptual	Lecture
		CO2	Characteristics and functions of language	PO2.	Understand	Conceptual	Lecture
		CO3	Different branches of Phonetics, applied linguistics and Phonology, morphology, syntax, semantics, pragmatics	PO2.	Understand	Conceptual	Lecture+ Practicum
		CO4	Acquisition of language and factors affecting it	PO2.	Understand	Conceptual	Lecture
		CO5	Bi/multilingualism and related issues	PO2.			
1.2.4	Otolaryngology	CO1	Causes, signs, symptoms, pathophysiology and management of diseases of external, middle and inner ear leading to hearing loss.	PO2.	Remember	Factual	Lecture+ Practicum
		CO2	Causes, signs, symptoms, pathophysiology and management of diseases of laryngeal and articulatory system	PO2.	Understand	Factual	Lecture+ Practicum

1.2.5	Pediatrics and Genetics	CO1	A basic idea about the role of genetics in Speech-Language and Hearing	PO2.	Understand	Conceptual	Lecture
		CO2	Knowledge about the various concepts related to growth and development in pediatrics	PO2.	Understand	Conceptual	Lecture+ Practicum
2.3.1	Voice and Its Disorders	CO1	Describe characteristics of good, normal and abnormal voice and identify voice disorders	PO2.	Analyse	Factual	Lecture+ Practicum
		CO2	Explain etiology related to voice problems, and its pathophysiology.	PO2.	Understand	Factual	Lecture+ Practicum
		CO3	Assess good, normal and abnormal voice.	PO3.	Analyse	Procedural	Lecture+ Practicum
		CO4	Provide counselling and therapy to individuals with voice disorders	PO5.	Create	Procedural	Lecture+ Practicum
2.3.2	Speech Sound Disorders	CO1	Student will be able to describe normal speech sound development and characterization of individuals with speech sound disorders.	PO2, PO3,	Interpret	Conceptual	Lecture+ Practicum
		CO2	Perform phonological analysis and assessment of speech sound disorders	PO2, PO3,	Create	Procedural	Lecture+ Practicum

		CO3	Plan intervention for individuals with speech sound disorders	PO4	Create	Metacognitive	Practicum
2.3.3	Diagnostic Audiology-Behavioral tests	CO1	Choose individualized test battery for assessing cochlear pathology, retro cochlear pathology, functional hearing loss, CAPD, vestibular dysfunctions, tinnitus and hyperacusis	PO3.	Interpret	Metacognitive	Lecture+ Practicum
		CO2	Independently run the tests and interpret the results to identify the above conditions and also use the information for differential diagnosis	PO3.	Create	Metacognitive	Lecture+ Practicum
		CO3	Make adjustments in the test parameters to improve sensitivity and specificity of tests.	PO3.	Create	Metacognitive	Lecture+ Practicum
		CO4	Make appropriate diagnosis based on the test results and suggest referrals.	PO3.	Create	Metacognitive	Lecture+ Practicum
2.3.4	Educational Audiology	CO1	Realize the Effects of hearing loss on development and learning	PO2.	Evaluate	Conceptual	Tutorial
		CO2	To analyse the client scenarios and decide what kind of intervention to be provided to the child with hearing loss in the school	PO6.	Apply	Procedural	Lecture+ Practicum

		CO3	Become aware of criteria for selection of appropriate educational placement of the child	PO6.	Interpret	Metacognitive	Lecture+ Practicum
		CO4	To apply principles of effective management in classroom/school settings	PO6. PO5	Apply	Metacognitive	Lecture+ Practicum
		CO5	Roles of educational agencies and legal agencies for children with disability in India	PO 8.PO 10	Understand	Factual	Tutorial
2.3.5	Neurology	CO1	Understand Basic concepts, anatomy and physiology of nervous system related to speech and hearing	PO2.	Understand	Factual	Lecture
		CO2	Understand Neural organization –different structures and functions of various systems neurosensory and neuromotor controls in speech, language and hearing mechanisms	PO2.	Understand	Factual	Lecture
		CO3	Understand Cerebral plasticity and dominance and its relevance for speech, language and hearing disorders	PO2.	Understand	Factual	Lecture
		CO4	Understand Various neural diseases, lesions, nutritional and metabolic conditions affecting speech, language and hearing	PO2.	Classify	Factual	Lecture
		CO5	Understand various neural diseases, lesions, nutritional and metabolic conditions affecting	PO2.	Classify	Factual	Lecture

			speech, language and hearing				
		CO6	Understand Basic principles and management procedures used in speech, language and hearing disorders associated with neurological conditions	PO2.	Understand	Conceptual	Lecture
2.4.1	Fluency and its disorders	CO1	Understand the characteristics of fluency and its disorders.	PO2.	Understand	Conceptual	Lecture
		CO2	Able to Evaluate and diagnose fluency disorders.	PO3.	Create	Metacognitive	Lecture
		CO3	To learn and apply the techniques for the management of fluency disorders	PO6.	Evaluate	Metacognitive	Lecture+ Practicum
2.4.2	Child language disorders	CO1	Explain the process of acquisition of language and factors that influence its development in children.	PO2.	Interpret	Conceptual	Lecture
		CO2	Identify and assess language delay and deviance in children.	PO3.	Evaluate	Procedural	Lecture+ Practicum
		CO3	Select appropriate strategies for intervention.	PO4	Create	Metacognitive	Lecture+ Practicum
		CO4	Counsel and provide guidance to parents/caregivers of children with language disorders	PO5.	Create	Metacognitive	Lecture+ Practicum

2.4.3	Diagnostic Audiological tests	CO1	Justify the need for using the different physiological tests in the audiological assessment	PO3.	Interpret	Procedural	Lecture+ Practicum
		CO2	Independently run the tests and interpret the results to detect the middle ear, cochlear and retro cochlear pathologies and also differentially diagnose	PO3.	Differentiate	Metacognitive	Lecture+ Practicum
		CO3	Design tailor-made test protocols in immittance, AEP's and OAE's as per the clinical need	PO3.	Create	Metacognitive	Lecture+ Practicum
		CO4	Make appropriate diagnosis based on the test results and suggest referrals	PO3. PO5	Apply	Metacognitive	Lecture+ Practicum
2.4.4	Rehabilitative Audiology	CO1	List various types of auditory training approaches available for individuals with hearing impairment.	PO5, PO6	Interpret	Conceptual	Lecture
		CO2	Explain various types of speech reading tests and speech reading training procedures available.	PO5, PO6	Analyse	Conceptual	Lecture+ Practicum
		CO3	Select appropriate management option/s for Tinnitus and Hyperacusis.	PO5, PO6	Evaluate	Conceptual	Lecture+ Practicum

		CO4	Select appropriate management technique/s for children with special needs. Select appropriate management strategies for older adults with hearing impairment	PO5, PO6	Create	Procedural	Lecture+ Practicum
2.4.5	Research methods and Statistics	CO1	Basic concept of research in the field of audiology and speech-language pathology	PO2.	Understand	Conceptual	Lecture
		CO2	Design and execution of research	PO2.	Analyse	Conceptual	Lecture
		CO3	Ethical guidelines for conducting research	PO2.	Understand	Conceptual	Lecture
3.5.1	Motor speech disorders in Children	CO1	Describe the characteristics of motor speech disorders in children such as cerebral palsy, childhood apraxia of speech and other childhood dysarthrias	PO2.	Interpret	Conceptual	Lecture+ Practicum
		CO2	Assess the speech and non-speech aspects associated with the above conditions	PO2.	Apply	Procedural	Lecture+ Practicum
		CO3	Plan and execute therapy strategies for children with motor speech disorders	PO4	Apply	Procedural	Lecture+ Practicum
3.5.2	Maxillofacial	CO1	Understand the characteristics of	PO2.	Evaluate	Procedural	Lecture+ Practicum

	Anomalies and Laryngectomy		disorders with structural anomalies including speech				
		CO2	Evaluate and diagnose the speech characteristics seen in these disorders.	PO3.	Create	Procedural	Lecture+ Practicum
		CO3	Learn and apply the techniques for the management of speech disorders in these conditions	PO4, PO5	Create	Procedural	Lecture+ Practicum
3.5.3	Amplification Devices	CO1	Identify different types of hearing aids and explain their components	PO2.	Evaluate	Procedural	Lecture+ Practicum
		CO2	Carry out Electro-acoustic measurement and categorize the hearing aids accordingly	PO2.	Create	Procedural	Lecture+ Practicum
		CO3	Describe different signal processing strategies and their relevance in different listening conditions	PO2.	Analyse	Conceptual	Lecture
		CO4	Cross check whether the hearing aids meet the standards	PO2.	Evaluate	Conceptual	Lecture+ Practicum
3.5.4	Paediatric audiology	CO1	Will be able to Describe auditory development	PO2.	Understand	Factual	Lecture+ Practicum
		CO2	will be able to List etiologies and relate them to different types	PO3.	Analyse	Procedural	Lecture+ Practicum

			of auditory disorders that may arise				
		CO3	will be able to Explain different hearing screening/identification procedures and their application	PO3.	Understand	Factual	Lecture+ Practicum
		CO4	will be able to Elaborate on different aspects of pediatric behavioral and physiological/electrophysiological evaluation	PO2, PO3	Interpret	Factual	Lecture+ Practicum
3.5.5	Speech Language Pathology and Audiology in Practice	CO1	Able to List and describe the highlights of legislations relating to speech and hearing disabilities	PO 7.	Understand	Conceptual	Lecture
		CO2	Able to Incorporate ethical practices in professional activities	PO 8.	Apply	Factual	Lecture+ Practicum
		CO3	Able to Provide information on the facilities available for the speech and hearing disabled including welfare measures and policies of government	PO5.	Apply	Metacognitive	Lecture+ Practicum
		CO4	Able to Describe different strategies to create awareness of speech and hearing impairment and facilities available to take care of them	PO 9.	Apply	Metacognitive	Lecture+ Practicum

		CO5	Familiarizing different clinical setups for the rehabilitation of speech and hearing disorders, with reference to their requirement, protocols and role and responsibility of the professionals.	PO6	Analyse	Procedural	Lecture+ Practicum
		CO6	Familiarizing terminology, technology and methods used in public education, clinical practice including tele-practice and camps	PO1.	Apply	Procedural	Lecture+ Practicum
3.6.1	Motor speech disorders in Adults and dysphagia	CO1	Understand the characteristics of acquired motor speech disorders in adults .	PO4	Analyse	Conceptual	Lecture+ Practicum
		CO2	Evaluate and diagnose speech characteristics in acquired motor speech disorders .	PO3.	Apply	Procedural	Lecture+ Practicum
		CO3	Learn about the techniques for the management of speech and related errors in acquired motor speech disorders	PO6.	Understand	Conceptual	Lecture+ Practicum
3.6.2	Language Disorders in Adults	CO1	Understand the characteristics of language disorders in adults	PO2.	Analyse	Conceptual	Lecture+ Practicum
		CO2	Evaluate and diagnose speech characteristics in	PO1.	Analyse	Procedural	Lecture+ Practicum

			adults with language disorders				
		CO3	Learn about the techniques for the management of speech and related errors in language disorders seen in adults	PO6.	Evaluate	Procedural	Lecture+ Practicum
3.6.3	Environmental audiology	CO1	Explain the effects of noise on various systems in the body, with special reference to auditory system	PO2.	Analyse	Procedural	Lecture+ Practicum
		CO2	Select appropriate test/s and assess the effects of occupational noise.	PO3.	Evaluate	Metacognitive	Tutorial+Lecture+Practicum
		CO3	Independently assess various kinds of noise in the environment and its possible effects.	PO1.	Evaluate	Metacognitive	Tutorial+Lecture+Practicum
		CO4	Identify people at-risk of developing occupational hearing loss and plan effective hearing conservation program.	PO 9.	Evaluate	Metacognitive	Lecture+ Practicum
		CO5	Assess eligibility for compensation in individuals with NIHL	PO 10.	Create	Metacognitive	Tutorial+Lecture+Practicum
3.6.4	Implantable Hearing Devices and Hearing aid fitting	CO1	Select hearing aids based on pre selection factors and appropriate tests	PO1.	Evaluate	Metacognitive	Lecture+ Practicum

		CO2	Select different assistive listening devices	PO1.	Create	Metacognitive	Lecture+ Practicum
		CO3	Take ear impression and prepare the ear mould	PO1.	Apply	Procedural	Lecture+ Practicum
		CO4	Decide candidacy and select appropriate implantable device	PO6.	Create	Metacognitive	Lecture+ Practicum
		CO5	Trouble shoot hearing aids and counsel	PO5.	Create	Metacognitive	Lecture+ Practicum