

BACHELOR OF AUDIOLOGY AND SPEECH – LANGUAGE PATHOLOGY (BASLP)

SEMESTER SCHEME

PRACTICUM GUIDELINES

REHABILITATION COUNCIL OF INDIA

(Statutory body under Ministry of Social Justice & Empowerment)

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Note: Throughout the practicum

- **Demonstration to be made by the teacher or under the supervision of a teacher**
- **Identification, analysis, review, preparation, listing, labeling etc to be done by student under the guidance of a teacher**

SEMESTER I

B 1.1 INTRODUCTION TO HUMAN COMMUNICATION

(16 hrs.)

B.1.1 PRACTICUM

(Practicum Upto Sr. No. 5 below should be preceded by demonstration for at least one hour each)

1. Identify and label parts of Brain with the help of Charts, Models and Software.
2. Identify simple harmonic motion, spectrum, pitch variation, acoustic features of spectrum using softwares & musical instruments.
3. Label and identify structures of the speech mechanisms with the help of charts, models, specimens and computer software
4. Conduct Oral Peripheral Mechanism examination on at least 5 typically developing children/adults.
5. Demonstrate, identify and classify the following using live and/or pre-recorded samples:
 - Pitch – normal / high / low/monotone/pitch breaks
 - Loudness - normal / loud / soft
 - Quality – normal / hoarse / harsh / breathy / hyper - nasal / hypo –nasal
 - Rate of speech – normal / fast / slow
 - Articulation – normal / misarticulation
 - Fluency – normal / abnormal
 - Intelligibility – using the AYJNIIHH intelligibility rating scale or any other appropriate standard scale
6. Measure (Fundamental Frequency) F0, Vital capacity, phonation duration, rate of speech, DDK, s/z ratio in 5 normal individuals

SEMESTER I
B 1.2: INTRODUCTION TO HEARING & HEARING SCIENCES
(16 hrs)

B.1.2 PRACTICUM

1. Label & identify parts of Ear with the help of a models; charts and software programmes.
2. Examine outer ear of at least 5 individuals with normal outer ear structures.
3. dB Concept: Listen and verify the differences in HL and SPL output from audiometers using headphone, insert phone, loudspeaker and BC vibrator; Measure MAP and MAF; listen and verify differences in the output from hearing aids.
4. Study with the help of software such as Praat/ Adobe Audition or such other programmes the following: pitch of different tones, matching pitch; loudness of tones of different intensities, loudness matching (Phone & Sone).
5. Demonstrate and measure in normal hearing subjects: Difference Limen for Intensity (DLI) & Difference Limen for Frequency (DLF) using appropriate instruments.
6. Examine clinical records of minimum ten clients and enumerate causes of hearing impairment as given in Unit 4 of B.1.2.
7. Through role play, administer case history on 3 children and 3 elderly individuals with hearing impairment.
8. Test five normal hearing individuals using tuning fork of different frequencies and list the findings.
9. Demonstrate and to measure the skills of sound localization in normal hearing subjects at different horizontal and vertical azimuths and illustrate the cone of confusion.

SEMESTER I

B 1.3 SPEECH LANGUAGE DIAGNOSTICS AND THERAPEUTICS

(16 hrs)

B.1.3 PRACTICUM

1. Demonstrate on how to ask questions and to elicit responses from client parents and care givers through role play.
2. Recognize the difference between check list, inventory and questionnaire and developmental schedules.
3. Relate complaint to features presented and selecting appropriate tools for testing: recognize the difference between formal vs informal testing: structured vs unstructured interview.
4. Differentiate between speech, language and communication characteristics in a typically developing child.
5. Distinguish between segmental and suprasegmental aspects using pre recorded audio samples.
6. Distinguish between screening and diagnostic tests for language and articulation and list the standardized tests developed in India.
7. Demonstrate at least 5 earlier assessed individuals having communication disorders (live / recorded material) - deviations, delay and disorders.
8. Demonstrate speech language stimulation techniques on children having hearing impairment, mental retardation and SLI.

SEMESTER II

B 2.1 SPEECH, LANGUAGE DEVELOPMENT AND DISORDERS

(16 hrs)

B.2.1 PRACTICUM

1. Observe and examine language development in pre-schoolers below 3 years & L.K.G. & U.K.G. Document the comprehension and expression abilities of language in at least 2 children in each age and stage respectively.
2. Study and document the emergence of speech sounds and phonology across children of different ages.
3. Observe and compare comprehension and expression skills of children of 2 different age groups.
4. Identify & list the disordered speech from given pre recorded audio tapes/CDs.
5. Identify & list the delayed/deviant/disordered language using pre-recorded samples.

SEMESTER II

B 2.2 INTRODUCTION TO AUDIOLOGY & AUDITORY TESTS

(16 hrs)

B.2.2 PRACTICUM

1. Classify audiometers according to BSI/ ANSI standards.
2. Label and identify the functions of external parts of audiometers.
3. Note the effect of varying instructions on obtaining thresholds.
4. Plot the appropriate symbols on audiogram keeping in mind the test/ transducer/ ear.
5. Determine the effect of the following on thresholds: a) using ascending descending methods c) duration of presentation of stimuli d) type of stimuli.
6. Experience and measure various types of masking noises and its effect on pure tone threshold.
7. Calculate masking levels with various formulae used for AC and BC testing.
8. Carry out biologic calibration of audiometer for different stimuli and transducers.

SEMESTER II

B 2.3 PSYCHOLOGY RELATED TO SPEECH AND HEARING

(16 hrs)

B.2.3 PRACTICUM

1. Observe normal developmental milestones of particularly related to speech, language and hearing behaviour as well as attention and socialization.
2. Observe pre-recorded interactions of children and identify/label as emotional, socializing, attending, possessive behaviour and sharing behaviour seen in children of 0-2 years and above 2 years of age.
3. Identify temper tantrums, hyperactivity and aggressive behaviour in children presenting video clippings.
4. Identify the reinforcement strategies using practical demonstration or video recorded material (type of reinforcement and reinforcement schedules) for different age groups.
5. Demonstrate the following:
 - a) Tests commonly used for personality, intelligence, attitude and aptitude.
 - b) Performance vs. language based tests.
6. Demonstration of behaviour modification techniques and its application to speech and hearing disorders such as ADHD, Autism Spectrum Disorder, PDD and other childhood disorders.
7. Demonstrate testing of neurocognitive behaviours such as attention, motivation, comprehension, and cognition.
8. Demonstration of any two counselling techniques through role playing.

SEMESTER II
B 2.4 MANAGEMENT OF THE HEARING IMPAIRED

(16 hrs)

B.2.4 PRACTICUM

1. Review 10 audiograms and clients' history and classify hearing impairment according to:
 - Degree
 - Type
 - Configuration
 - Onset
 - Nature

identify the impact of the above on the activities and participation of the individuals with HI, role play counselling.

2. Observe and compare communication between normal hearing mothers and children with normal hearing and normal hearing mothers and children with hearing impairment.
3. Differentiate between unisensory, sensory and multi-sensory activity/approach with the use of pre-recorded sample/observation of case.
4. Observe and explain the method used for teaching pupil with hearing impairment in any school.
5. Recognize different parts of hearing aids and their functions.
6. Classify hearing aids according to type and style of hearing aids.
7. Identify different types of class room amplification devices.

SEMESTER III

B 3.1 ARTICULATION AND PHONOLOGICAL DISORDERS

(16 hrs)

B.3.1 PRACTICUM

1. Differentiate between articulation and phonological disorders in terms of consistency of errors, position of errors and type of error in minimum 3 subjects using pre-recorded audio video samples.
2. Administer and score a screening articulation test in a local language through role play.
3. Identify phonological processes/errors from a video clipping and differentiate them from articulation errors.
4. Review history of 5 individuals with HI and enumerate types of errors in articulation.
5. Demonstrate two methods of / approach to articulation therapy – phonetic placement method, phonological method, minimal pairs approach.
6. Transcribe a list of 100 words and a passage of 100 words in IPA in any appropriate Indian language.
7. Analyse vowels and consonants and variations amongst students.
8. Demonstrate and identify aperiodical noise vs. periodic voicing & vowels vs. consonants using a spectrogram.

SEMESTER III
B 3.2 MAXILLOFACIAL ANOMALIES

(16 hrs)

B.3.2 PRACTICUM

1. Classify at least 3 given pictures/plates showing individuals with CLP, glossectomy, maxillofacial and syndrome, using modified striped Y-classification.

Based on the above, explain the functions affected.

2. Identify from the above pictures/plates, the associated problems that could accompany or be present in the individuals.
3. Identify syndromic structural deformity from the pictures/plates & contrast it with non syndromic condition.
4. Identify typical cleft type errors from pre recorded samples.
5. Observe the perception and instrumental evaluation of VPD from pre recorded sample.
6. Demonstrate specific techniques used to correct articulation and resonance errors of individuals with CLP.
7. Develop lesson plans for a given profile of atleast 5 individuals with CLP/glossectomy.
8. Identify different prosthetic aids used with clients with CLP/glossectomy.
(Material can be procured from the Dept. of Audiology & Speech, Sri Ramachandra University, Chennai)

SEMESTER III

B 3.3 DIAGNOSTIC AUDIOLOGY: Part 1

(16 hrs)

B.3.3 PRACTICUM

1. Demonstrate difference in instructions and administration of ABLB/ MLB/TDT /STAT & SISI on normal hearing individuals.
2. Demonstrate difference in instructions and administration of PI/PB on normal hearing individuals.
3. Effect of type of stimulus, duration, frequency and intensity on the above tests.
4. Demonstrate using role-play the different procedures to identify pseudo hypacusis.
5. Demonstration of test findings and summary report of at least two referral sources.
6. Administer APD tests such as SPIN, dichotic tests, PPT/DDT/GDT amongst the students or normal hearing individuals.

SEMESTER III
B 3.4 REHABILITATIVE AUDIOLOGY

(16 hrs)

B.3.4 PRACTICUM

1. Make a list of speech sounds based on their visibility in each students' respective language and prepare word lists for speech reading material using the above information.
2. Administer any one of the speech reading tests available in Indian languages.
3. Demonstrate analytic vs. synthetic approach to speech reading through video or role play.
4. Analyze the content for available auditory learning / training packages developed in India and identify the approach used.
5. Prepare 3 lesson plans for auditory training / learning.
6. Through role play administer self-reporting inventories on two elderly persons with hearing impairment.
7. Identify different ALDs for communication and alerting.
8. Demonstrate Cochlear implant mapping.
9. Through role play, carryout AVT/Auditory Learning/Speech Reading/Communication strategies.

SEMESTER IV
B.4.1 VOICE AND LARYNGECTOMY

(16 hrs)

B.4.1 PRACTICUM

1. Perceptual analysis of subjects with normal voice, using pre-recorded samples of - 1 adult male, 1 adult female and 1 child
2. Perceptual voice analysis of hyper-hypo functional voice.
3. Students to determine own aerodynamic parameters using expirograph/ aerophone or any other appropriate equipments.
4. Acoustic analysis of own voice and compare with available norms.
5. Document acoustic and perceptual variations in individuals with hyper and hypo functional conditions.
6. Analyze perceptually pre-recorded sample of alaryngeal speech (TEP and esophageal speech and artificial larynx).
7. Demonstrate pre recorded/live endo-stroboscopic examination and relate the perceptual and instrumental findings.
8. Demonstrate therapy techniques such as yawn sigh, push pull, relaxation, Guttman and others and make the students practice on each other.

SEMESTER IV
B 4.2 MOTOR SPEECH DISORDERS IN CHILDREN

(16 hrs)

B.4.2 PRACTICUM

1. With the help of models, charts and softwares, identify:
 - a. motor control centres in the brain.
 - b. cranial nerves and their innervations and functions.
2. Identify reflex profile of spastics and athetoids.
3. Classify individuals into different categories of cerebral palsy from video recordings and list out associated problems found in each category.
4. Examine difference between:
 - hyper kinesia, dyskinesia and ataxia using video sample
 - identify apraxia of speech from pre recorded video.
5. Observe any two types of children with CP and record (a) physical status, (b) oral sensory motor abilities and vegetative skills, (c) respiration, (d) phonation, (e) resonance, (f) articulation and (g) language abilities.
6. Identify from video the AAC system such as low technology vs high technology systems and different symbol system, i.e. Bliss symbols, IICP symbols and different signing systems – Makaton, ISL, ASL.
7. Demonstrate RIPs with the assistance of physiotherapist or video.

SEMESTER IV
B 4.3 DIAGNOSTIC AUDIOLOGY: Part 2

(16 hrs)

B.4.3 PRACTICUM

1. Identify the external parts of equipment to measure immittance.
2. Practice ear examination and probe placement with fellow students.
3. Administer on fellow students and record tympanograms; measure acoustic reflexes and reflex decay test.
4. Classify different types of tympanograms from given samples.
5. Predict whether reflexes will be present/absent/elevated based on the audiograms given (at least 5 samples).
6. Demonstrate Eustachian Tube function tests.
7. List out electrode montage for single channel, double channel recording of ABR.
8. Practice electrode placement among classmates and record findings of 2 ABR on 2 classmates.
9. Identify variability in response with changing parameters and setting (polarity, repetition rate, filter setting, montage and intensity) for ABR in children and adults.
10. Identify response variability for different stimuli such as click, toneburst, speech while recording ABR.
11. Demonstrate ASSR and higher-level evoked potential.
12. Listen and learn difference in stimuli for Transient and Distortion product – OAEs.
13. Measure different types of OAE including contralateral suppression on each other.

SEMESTER IV
B 4.4 PEDIATRIC AUDIOLOGY

(16 hrs)

B.4.4 PRACTICUM

1. Track development of human auditory system in embryo using videos / slides.
2. Carryout and identify responses to different auditory stimuli in infants and toddlers in the following ages: 0 – 3 months, 3 – 6 months, 6 – 12 months and 12 – 24 months (through cross sectional exposure to real subjects or with video cassettes).
3. Administer HRR on at least 3 significant care givers and interpret responses.
4. Identify instruments required for hearing screening identification such as hand held screeners, reflectometer, screening OAE/impedance, screening ABR.
5. Administer hearing screening tests using instruments and noise makers in at least five children.
6. Demonstrate and make the students do on at least 2 age appropriate children the following:
 - BOA
 - VRA
 - Conditioned Audiometry
 - Speech Awareness Thresholds (SAT)
 - Speech Recognition Thresholds (SRT)
 - Speech Identification Scores (SIS)

SEMESTER V
B 5.1 FLUENCY AND ITS DISORDERS

(16 hrs)

B.5.1 PRACTICUM

1. Find out the baseline fluency of :
 - a) 5 of your class mates -
 - b) 2 pre-schoolers, 3-5 years
 - c) 2 primary school – 8 -10 years subjects.
2. Differentiate between prosody, fluency and rate of speech and calculate percentage of dysfluency and rate of speech (using recorded samples).
3. Analyze the pre-recorded video tapes/CDs available in terms of types of dysfluencies and describe them in terms of frequency and place of occurrence and identify secondary symptoms.
4. Demonstrate SSI rating and get each student rate for at least 3 samples.
5. Demonstrate airflow modification technique, prolongation, shadowing; cancellation, fluency shaping and various analogues for children with stuttering (CWS).
6. Ask students to practice through role play different techniques and use of differential reinforcement schedules, and counselling of caregivers.

SEMESTER V
B 5.2 MOTOR SPEECH DISORDERS IN ADULTS

(16 hrs)

B.5.2 PRACTICUM

1. Identify the signs of LMN & UMN disorders from video samples.
2. Role play the administration and interpretation of screening and diagnostic tests for assessing dysarthria and apraxia.
3. Analyze perceptually 5 samples of clients with dysarthria with reference to subsystem errors.
4. Differentiate the symptoms observed from the prerecorded video samples between dysarthria, apraxia and misarticulation.
5. Demonstrate facilitatory and compensatory therapy techniques commonly used for dysarthria.
6. Prepare a therapy plan for a given profile of an individual with motor dysarthria/aparaxia.
7. Counsel by role play for a given profile of an individual with motor speech disorder.
8. Demonstrate assessment of swallowing on a non-clinical subject.
10. Identify the swallowing difficulties observed in 3 clients with dysphagia using video samples

SEMESTER V
B 5.3 TECHNOLOGY & AMPLIFICATION DEVICES FOR
PERSONS WITH HEARING IMPAIRMENT

(16 hrs)

B.5.3 PRACTICUM

1. Identify the internal and external components of hearing aids.
2. Identify the external components of ALDs and Cochlear Implants.
3. Identify type of batteries used for hearing aids/ALD's and Cochlear Implant Processor.
4. Measure with the help of multimeter the following – resistance, current continuity of hearing aid cords, and voltage of batteries.
5. Identify instruments and setting needed for measurement of electro acoustic characteristics of hearing aids.
6. Interpret an Electro Acoustic (EA) Characteristics chart of at least three different hearing aids and compare it with available standards. Classify the hearing aids based on EA characteristics.
7. Identify instruments, material and tools for each stage of making custom ear-moulds.
8. Listen through hearing aids set at different volume / tone control settings.
9. Select appropriate ear-moulds (from a given sample having various types of ear moulds) for different styles of hearing aids.
10. List the hearing aids available under ADIP Scheme and give their electro acoustic characteristics.
11. Based on profile of a client with hearing impairment, pre-select hearing aid/s from specifications of different hearing aids.
12. Trouble shoot hearing aids; role-play of counselling for a child and adult regarding hearing aid usage.

13. Demonstrate the difference in setting the parameters of trimmer control hearing aids, digital programmable hearing aids using HiPro/NOAH LINK and other software as compared to conventional selection.
14. Set a selected hearing aid for MPO control, gain and frequency response as per 5 different audiograms (including trimmer controlled and software driven devices).

SEMESTER V

B 5.4 PROFESSIONAL PRACTICES IN SPEECH AND HEARING

(16 hrs)

B.5.4 PRACTICUM

1. Extract the incidence of hearing, language and speech disorders from Census carried out at National level, your State and your district.
2. Extract from RCI website: www.rehabcouncil.nic.in information on levels of training, human resource requirement from the IAMR Report, number of institutions engaged in training in speech and hearing in India.
3. Conduct audit for barrier free environment of your Centre/Institute for accessibility using check list available on CCD website for persons with disabilities.
4. List out the public awareness programmes of your Centre/Institute and compare it with one of the national/apex level institution in India.
5. List out aids, appliances, concessions, reservations available to persons with hearing impairment and speech and language disability as per your own State/Centre.
6. Work out a plan for conducting camp for creating public awareness in your area.
7. Work out details of requirement of speech & hearing camps in rural areas.
8. List out CBR activities for your area.
9. Apply ICF to classify a given profile of the client with reference to activity limitation and participation restriction.

SEMESTER VI

B 6.1 NEUROGENIC LANGUAGE DISORDERS IN ADULTS

(16 hrs)

B.6.1 PRACTICUM

1. Use diagrams and label various language areas of the brain and blood supply with the use of CDs.
2. Identify the various anatomical areas affected in individuals with aphasia using charts/models/videos.
3. Identify the errors and differentiate types of aphasia based on video sample.
4. Categorize the given list of skills based on whether it is controlled by right or left hemisphere.
5. Formulate activities to assess defects due to RHD, TBI, dementia, and acquired dyslexia.
6. Demonstrate administration through role play / live of tests such as WAB, LPT, RTT and Bedside evaluation of aphasia.
7. Role play commonly used therapy techniques for different types of aphasia.

SEMESTER VI
B 6.2 NOISE MEASUREMENTS AND HEARING CONSERVATION

B.6.2 PRACTICUM

1. Set the Sound Level Meter (SLM) to measure noise in closed environment, open environment, using octave and 1/3rd octave filter setting; selection of appropriate microphone and its accessories.
2. Demonstrate measurement of ambient noise, traffic noise, steady state noise, and impulse noise.
3. Demonstrate the settings on SLM / other appropriate instrument the following:
 - noise criteria curve (NCC)
 - noise reduction rating (NRR)
 - signal to noise ratio (SNR)
4. Identify the given audiograms indications of possible NIHL; and role-play counselling regarding hearing conservation program.
5. Documentation required for implementing a hearing conservation programme in an industry.
6. Measure attenuation characteristics of given Hearing Protection Devices (HPDs).
7. Demonstration of calibration of pure tone, speech and noise (NBN, WBN & Speech noise) stimuli for different transducers using appropriate instruments.
8. Identify different types of HPDs and give their characteristics.

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