UNIVERSITY OF MYSORE REGULATIONS AND SYLLABUS

BACHELOR OF AUDIOLOGY AND SPEECH- LANGUAGE PATHOLOGY (B.ASLP)

FOUR-YEAR DURATION

SYLLABUS – 2025

UNIVERSITY OF MYSORE

BACHELOR IN AUDIOLOGY AND SPEECH-LANGUAGE PATHOLOGY (**B.ASLP)**
DEGREE PROGRAMME STRUCTURE AND REGULATIONS - 2025

1.0 GENERAL REQUIREMENTS

1.1 Title and commencement:

These regulations shall be called the University of Mysore Regulations and Continuous Assessment Grading Pattern (CAGP) for Bachelor in Audiology and Speech-Language Pathology (B.ASLP) program. These Regulations shall come into force from the academic year **2025-26**.

1.2 Duration of the Program:

The B.ASLP program will be of 8 semesters with the last two semesters being internship. Each academic year will consist of two semesters, i.e. one odd and one even semester. A semester will extend over a period of 20 weeks inclusive of theory classes/clinical and examination.

1.3 Definitions

Course: Every course offered will have three components associated with the teaching-learning process of the course, namely:

a) Lecture - L
b) Tutorial- T
c) Practicum (Clinical) - P

where,

L stands for Lecture session.

T stands for Tutorial session consisting of the participatory discussion / self-study/ desk work/ brief seminar presentations by students and such other novel methods that make a student to absorb and assimilate more effectively the contents delivered in the Lecture classes.

P stands for Practicum (Clinical) which would involve hands-on experience involving persons with communication disorders in clinical and other setups such as hospitals/clinics/ outreach centers.

A course shall have either or all the above components.

A credit means the unit by which the course work is measured. The total credits earned by a student at the end of the semester upon successfully completing the course are L+T+P. The credit pattern of the course is indicated as L:T:P.

Different courses of study are labelled and defined as follows:

a) DSC: Discipline Specific Core Course;
b) AEC: Ability Enhancement Courses
c) AECC: Ability Enhancement Compulsory Course;
d) SEC: Skill Enhancement Course;
e) DSE: Discipline Specific Elective;
f) GE: Generic Elective.

1.4 Definitions

a. In the CAGP system, program means a degree and a subject means audiology and speech-language pathology.
b. DSC: Discipline specific core course, which should compulsorily be studied by a candidate.
c. AEC: These may be of two types:
    - AECC: Ability enhancement compulsory course based upon the content that leads to knowledge enhancement, viz. Environmental Science, Indian Constitution and English/Kannada/Communication skills.
    - SEC: Skill enhancement courses are value-based and/or skill-based and are aimed at providing hands-on-training, competencies, skills, etc.
d. DSE: Discipline specific elective courses may be offered by the main discipline/subject of study or the University/Institute may also offer discipline related Elective courses of interdisciplinary nature (to be offered by main discipline/subject of study).
e. GE: An elective course chosen generally from an unrelated discipline/subject, with an intention to seek exposure beyond discipline/subject is called a Generic Elective.

2.0 Eligibility for admission

2.1 The Eligibility for Admission is as given in **Annexure – I**

2.2 Candidates with the benchmark disabilities listed in the schedule of the RPWD Act, 2016 (UDID/competent medical board certification) are eligible to avail PWD quota for admission at AIISH, provided:

a. With the aid of assistive devices, the specified disability is brought to 40% or below.
b. Speech, Language and Hearing disability are brought to 20% or below with the aid of assistive devices & / or training. Speech, Language and Hearing disability should be assessed by a duly constituted board by the Director, AIISH.

2.3 Candidates with less than benchmark disabilities listed in the schedule of the RPWD Act, 2016 can be admitted to the program (however, not under PWD quota) courses at AIISH, provided:

a. Speech, Language and Hearing disability is brought to 20% or below with the aid of assistive devices & / or training. Speech, Language and

Hearing disability should be assessed by a duly constituted board by the Director, AIISH.

3.0 Attendance

3.1 Each course/subject shall be taken as a unit for calculating attendance and a candidate shall be considered to have put in the required attendance for the course, if he/she has attended not less than 80% in theory and 90% in clinical practicum for each course/subject.

3.2 If a candidate represents his/her Institution/ University/ Karnataka State/ Nation in Sports/NCC/NSS/Extension program/conferences or any official activities, he/she is permitted to avail a maximum of 15 days in a semester, based on the recommendation and prior permission from the Head of the Institution.

3.3 A candidate who does not satisfy the requirement of attendance shall not be eligible to take examination of the concerned course for that semester.

3.4 A candidate who fails to satisfy the requirement of attendance in a course may repeat that course when offered in the immediate subsequent year (this facility shall be available only for **two** times in the entire programme).

4.0 Medium of Instruction

The medium of instruction shall be English. A candidate shall write the examination in English language only.

5.0 Courses of Study

5.1 Courses of study shall be as those shown in the structure of B.ASLP program **Annexure-II.**

5.2 The minimum duration for the completion of B.ASLP program is eight semesters (including 2 semesters of internship). As per norms of the University of Mysore, a candidate shall complete the course within a maximum period of sixteen semesters counting from the first semester of the candidate

5.3 VII and VIII semesters taken together shall constitute the **internship year,** during which the candidates may be posted in any speech and hearing or related institutions including the parent institution. The candidates shall abide by the Internship Programme Rules framed by the concerned institution from time to time.

5.4 A student should earn 180 credits for the successful completion of the B.ASLP program.

6.0 Change of Course

6.1 Once chosen, change of course is not permissible under any circumstances during that or subsequent semesters.

7.0 Appearance for the Examination

A candidate shall apply for one or all the courses of a semester when he/she wants to appear for the examination of that semester for the first time.

8.0 Scheme of Examination

A course of 3-6 credits shall be evaluated for 100 marks. A course of less than 3 credits shall be evaluated for 50 marks.

8.1 There shall be an examination at the end of each semester conducted by the University.

8.2 Duration of examination per theory course carrying 60 marks, with 3 or more credits, shall be for 2:30 hours. The duration of the examination per theory course carrying 30 marks, of less than 3 credits, shall be for 1.30 minutes.

8.3 The first and the second components, C1 and C2, respectively, will be for 20% each. C1 must be completed by the 8^{th} week of the semester after completion of 50% of the syllabus. C2 will be based on remaining 50% of the syllabus and must be completed during 16^{th} week of the semester.

8.4 For component C3, every question paper of a theory course shall comprise of FOUR questions with internal choice covering the entire syllabus.

8.5 For a theory course carrying 60 marks, each question shall carry 15 marks each with internal division as shown in Annexure IIIa. For the theory course of 30 marks, each question shall carry 7 marks with internal division as shown in Annexure IIIb. Maximum number of subdivisions shall be FOUR. Model Question paper is as given in Annexure IIIa and IIIb.

8.6 In practical, the C1 (20 marks) and C2 (20 marks), student will be assessed for clinical skill repertoire, planning for assessment & management, preparation & maintenance of clinical documents (test protocols, diary, lesson plans and progress report), Efficient use of time/skills in clinical work and Professional attitude/motivation/ aptitude for clinical work.

8.7 In practical, C3 (60 marks) will be based on clinical viva-voce. In **I, III, V and VII Semesters**, viva-voce shall be conducted by two **internal examiners consisting of *clinical staff and faculty***, who shall examine the clinical skills of students (prior to the commencement of the theory examination). In the II, IV, VI and VIII **Semesters**, viva-voce will be conducted by one internal faculty and one external faculty to examine the **students'** clinical skills (prior to the commencement of the theory examination).

8.8 The internal evaluation can be based on attendance, clinical diary, OSCE, log book, and learning conference and external evaluation can be based on Spot test, OSCE, Record, Viva-voce, and casework

9.0 Question paper setting, Valuation, etc.:

As per University of Mysore UG Regulations from time-to-time.

10.0 Photo copy, Seeing, Retotaling and Revaluation

As per University of Mysore UG Regulations from time-to-time.

11.0 Classification of successful candidates

11.1 Passing Criterion: A student is considered to have passed the course, only on securing

a minimum of 50% from C1, C2 and C3 put together. A student can take C3 exam irrespective of the marks scored in C1 and C2 for a course. In case a student secures less than 40% in C3 or absent for C3, the student is said to have not completed the course. The student shall complete the course by reappearing only for the C3 component for the course when University conducts the examination. The student carries the marks already awarded in C1 and C2.

11.2 Percentage to grade point: As per University of Mysore UG Regulations from time-to-time.

11.3 Class declaration: As per University of Mysore UG Regulations from time-to-time.

12. 0 Provision for Repeaters

As per University of Mysore UG Regulations from time-to-time

13.0 Declaration of Rank

As per University of Mysore UG Regulations from time-to-time

14.0 Marks Cards

As per University of Mysore UG Regulations from time-to-time

15.0 Barring of Simultaneous Study

As per University of Mysore UG Regulations from time-to-time

16.0 **Eligibility for Internship**

16.1 All candidates shall complete a clinical internship of one academic year (10 months) after the 6th semester provided they have passed in all the examinations up to 5th semester.

16.2 Such of those students who have started their clinical internship, but later are found to have failed in some examination of the 6th semester shall discontinue clinical internship. They can continue their internship only after they pass all the courses in which they have failed. However, the duration of clinical internship completed before they discontinue shall be considered and counted when they resume their clinical internship.

17.0 Miscellaneous

17.1 These revised regulations will apply to candidates admitted for the academic year 2025-26 and onwards for the Program B.ASLP. As per the Regulations of RCI, no lateral entry and exit shall be allowed for the program.

17.2 Other regulations not specifically mentioned above shall be as per the Regulations of the University as applicable from time to time.

17.2 The University shall award the degree to successful candidates only after completion of internship.

Note: Any other issue not envisaged above, shall be resolved by the Vice Chancellor in consultation with the appropriate Bodies of the University, which shall be final and binding.

REGISTRAR **VICE CHANCELLOR**

Guidelines for Implementation of Clinical Internship of B.ASLP Program
(Effective from the Academic Session 2024-25)

Objectives of the clinical internship are to:

a) Facilitate transition from academic training to independent practice,

b) Provide additional inputs to students to attain and maintain competence in the clinical management of persons with communication disorders,

c) Equip students with skills to initiate group and individual action focusing on prevention/early identification and intervention in individuals with speech, hearing and language impairments at the level of the individual, family and community, and

d) Provide training to understand professional responsibilities and ethical practices including:

i) Rights and dignity of patients

ii) Consultation and referral to other professionals

iii) Conduct and professional obligations to peers/patients/families and the community at large.

Guidelines

1) Internship is mandatory

2) Duration: One academic year (10 months) split into two semesters (7 and 8).

3) Eligibility: Clinical internship will start immediately after the candidate completes the academic and clinical training till the 6th semester. However, this clause on eligibility shall be read and interpreted in consonance with Clause 9.2 under Clinical Internship of the Rules and Regulations (Page 6)

4) Structure and duration of posting

a) The respective parent institutions shall decide on the institutions where their students will be posted for internship. However, students can be posted for internship only at those institutions approved by the Rehabilitation Council of India.

b) Students shall do their clinical internship at an institute(s) outside the parent institute for the duration of at least one semester. Internship can be done at institutes like hospitals, special educational centers/schools, centers where clinical facilities for management of ASD, cochlear implantation, AVT etc. are available, centers which undertake empowering of mothers, centers for CP, and centers for LD, etc. Attempts must be made to provide clinical training to students in a variety of set ups.

c) The institutions shall attempt to provide additional clinical training to students in such areas as management of neurologically afflicted persons, prevention and early intervention programs, community based rehabilitation, occupational health programs, structural abnormalities related to speech and hearing, etc.

5) Mode of supervision during internship: A speech-language pathologist and audiologist shall generally supervise students even in outside postings. However, a specialist from an allied area like otolaryngology, neurology, mental health, pediatrics, among others, can supervise the students in the absence of a speech-language pathologist/audiologist.

6) Maintenance of records by students: Every student shall maintain records of the number of hours of clinical work in different areas, clinical statistics, and work carried out in each institute. This should be certified by the head of the institution or his/her nominee where the student is undergoing internship.

7) Leave: Candidates should have an attendance of at least 90% during the internship period. Internship shall be extended by the number of days the student falls short of 90% attendance. Compensatory work for shortage of attendance, if feasible, must be completed before the final clinical exams at the end of 8th semester.
8) Stipend and fees: As per the norms of the parent as well as receiving institute.
9) Grading and evaluation of student: All internees will be assessed based on their attendance, performance in the postings and presentation of log books. The mode of assessment and frequency of assessment will be prescribed by the institute. The student is required to repeat those postings in which his/her performance is below 40%.
10) Certification: The parent institute will award a certificate after successful completion of the internship and clinical examination (7.1 and 7.2 in the Scheme of examination). Supervised clinical hours spent during internship shall be included in the clinical competence certificate issued to students.
11) The University shall award the degree only after the successful completion of clinical internship and the final clinical exams thereafter.

Annexure – I ELIGIBILITY FOR ADMISSION

Bachelor in Audiology and Speech-Language Pathology/ B.ASLP

1. Admission to B.ASLP is open to candidates who have passed the 2-year Pre-University examination conducted by the Pre-University Board of the State of Karnataka or any other examination (10+2) considered as equivalent thereto by the University of Mysore.
2. Candidates who have obtained a minimum of 50% (45% for SC/ST) in the PCMB group or combinations thereof, in their II PUC or qualifying examination are eligible for admission.
3. Only those candidates who have studied **at least three subjects** from among Physics, Chemistry and Biology / Mathematics / Computer Science / Statistics / Electronics / Psychology are eligible for admission.

REGISTRAR **VICE CHANCELLOR**

ANNEXURE II

B.ASLP Degree Program Structure

1 credit L =1 hour; 1 credit T = 2 hours; 1 credit P = 3 hours

Sem	No.	Type of Course	Credits	Pattern L:T:P	Hours per Week = Total	Title of the paper	C1	C2	C3	Total
I	1.1.	DSC	4	4:0:0	4:0:0 = 4	Introduction to Speech-Language Pathology	20	20	60	100
	1.2.	DSC	4	4:0:0	4:0:0 = 4	Introduction to Audiology	20	20	60	100
	1.3.	AECC	2	2:0:0	2:0:0 = 2	Anatomy and Physiology of Speech and Swallowing	10	10	30	50
	1.4.	AECC	2	2:0:0	2:0:0 = 2	Anatomy and Physiology of Auditory and Vestibular System	10	10	30	50
	1.5.	SEC	3	0:1:2	0:2:6 = 8	Clinicals in Speech-Language Pathology - I	20	20	60	100
	1.6.	SEC	3	0:1:2	0:2:6 = 8	Clinicals in Audiology - I	20	20	60	100
	1.7.	AECC	1	1:0:0	1:0:0 = 1	Indian Constitution	10	10	30	50
	1.8.	AECC	3	3:0:0	3:0:0 = 3	Language I	20	20	60	100
	1.9.	OE	3	3:0:0	3:0:0 = 3	Prenatal Development and Care	20	20	60	100
			25	**19:2:4**	**19 + 4 + 12 = 35**		**150**	**150**	**450**	**750**
II	2.1.	DSC	4	4:0:0	4:0:0 = 4	Child Language Disorders	20	20	60	100
	2.2.	DSC	4	4:0:0	4:0:0 = 4	Diagnostic Audiology- Basic	20	20	60	100
	2.3.	AECC	3	3:0:0	3:0:0 = 3	Linguistics and Phonetics	20	20	60	100
	2.4.	AECC	3	3:0:0	3:0:0 = 3	Otolaryngology	20	20	60	100

	2.5.	OE	3	3:0:0	3:0:0 = 3	Basics of Sign Language	20	20	60	100
	2.6.	SEC	3	0:1:2	0:2:6 = 8	Clinicals in Speech-Language Pathology - II	20	20	60	100
	2.7.	SEC	3	0:1:2	0:2:6 = 8	Clinicals in Audiology - II	20	20	60	100
	2.8.	AECC	3	3:0:0	3:0:0 = 3	Language II	20	20	60	100
			26	**20:2:4**	**20 + 4 + 12 = 36**		**160**	**160**	**480**	**800**
III	3.1.	DSC	4	4:0:0	4:0:0 = 4	Structural Anomalies and Speech Sound Disorders	20	20	60	100
	3.2.	DSC	4	4:0:0	4:0:0 = 4	Diagnostic Audiology – Advanced	20	20	60	100
	3.3.	DSC	4	4:0:0	4:0:0 = 4	Aural Habilitation	20	20	60	100
	3.4.	AECC	3	3:0:0	3:0:0 = 3	Electronics and Acoustics	20	20	60	100
	3.5.	AECC	3	3:0:0	3:0:0 = 3	Psychology for Speech and Hearing	20	20	60	100
	3.6.	SEC	3	0:1:2	0:2:6 = 8	Clinicals in Speech-Language Pathology - III	20	20	60	100
	3.7.	SEC	3	0:1:2	0:2:6 = 8	Clinicals in Audiology - III	20	20	60	100
	3.8.	OE	3	3:0:0	3:0:0 = 3	Environmental Studies	20	20	60	100
			27	**21:2:4**	**21 + 4 + 12 = 37**		**160**	**160**	**480**	**800**
IV	4.1.	DSC	4	4:0:0	4:0:0 = 4	Voice Disorders and Laryngectomy	20	20	60	100
	4.2.	DSC	4	4:0:0	4:0:0 = 4	Amplification Devices	20	20	60	100
	4.3.	AECC	4	4:0:0	4:0:0 = 4	Neurology	20	20	60	100
	4.4.	AECC	4	4:0:0	4:0:0 = 4	Research Methods and Statistics	20	20	60	100

	4.5.	AECC	3	3:0:0	3:0:0 = 3	Vestibular Disorders	20	20	60	100
	4.6.	SEC	3	0:1:2	0:2:6 = 8	Clinicals in Speech-Language Pathology - IV	20	20	60	100
	4.7.	SEC	3	0:1:2	0:2:6 = 8	Clinicals in Audiology - IV	20	20	60	100
			25	**19:2:4**	**19 + 4 + 12 = 35**		**140**	**140**	**420**	**700**
V	5.1.	DSC	4	4:0:0	4:0:0 = 4	Fluency and Its Disorders	20	20	60	100
	5.2.	DSC	4	4:0:0	4:0:0 = 4	Motor Speech Disorders- Children	20	20	60	100
	5.3.	DSC	4	4:0:0	4:0:0 = 4	Paediatric Audiology	20	20	60	100
	5.4.	AECC	3	3:0:0	3:0:0 = 3	Educational Audiology	20	20	60	100
	5.5.	AECC	3	3:0:0	3:0:0 = 3	ASLP in Practice	20	20	60	100
	5.6.	SEC	3	0:1:2	0:2:6 = 8	Clinicals in Speech-Language Pathology - V	20	20	60	100
	5.7.	SEC	3	0:1:2	0:2:6 = 8	Clinicals in Audiology - V	20	20	60	100
			24	**18:2:4**	**18 + 4 + 12 = 34**		**140**	**140**	**420**	**700**
VI	6.1.	DSC	4	4:0:0	4:0:0 = 4	Adult Language Disorders	20	20	60	100
	6.2.	DSC	4	4:0:0	4:0:0 = 4	Motor Speech Disorders - Adults	20	20	60	100
	6.3.	DSC	4	4:0:0	4:0:0 = 4	Implantable Hearing Devices and ALDs	20	20	60	100
	6.4.	DSC	4	4:0:0	4:0:0 = 4	Audiology in Practice	20	20	60	100
	6.5.	AECC	3	3:0:0	3:0:0 = 3	RCI Course	20	20	60	100
	6.6.	SEC	3	0:1:2	0:2:6 = 8	Clinicals in Speech-Language Pathology - VI	20	20	60	100
	6.7.	SEC	3	0:1:2	0:2:6 = 8	Clinicals in Audiology - VI	20	20	60	100

			25	**19:2:4**	**19 + 4 + 12 = 35**		**140**	**140**	**420**	**700**
VII	7.1.	SEC	14	0:2:12	0:4:36 = 40	Clinicals in Speech-Language Pathology and Audiology (Internship)	--	--	100	100
			14		**40**				**100**	**100**
VIII	8.1.	SEC	14	0:2:12	0:4:36 = 40	Clinicals in Speech-Language Pathology and Audiology (Internship)	--	--	100	100
			14		**40**				**100**	**100**
			180		**292**		**890**	**890**	**2870**	**4650**

ANNEXURE III

MODEL QUESTION PAPER PATTERN

Paper Title: ……. **Marks: 60**
Paper Code: ……. **Time: 2 ½ Hours**

Unit No.	Question Number	Question/s	Marks
I	1	A) xxxxxxxxxxxxxxxxxxxxxxxxxxxx	15
		OR	
	2	a) xxxxxxxxxxxxxxxxxxxxxxxxxxxx	5
		b) xxxxxxxxxxxxxxxxxxxxxxxxxxxx	5
		c) xxxxxxxxxxxxxxxxxxxxxxxxxxxx	5
II	3	a) xxxxxxxxxxxxxxxxxxxxxxxxxxxx	10
		b) xxxxxxxxxxxxxxxxxxxxxxxxxxxx	5
	4	OR	
		a) xxxxxxxxxxxxxxxxxxxxxxxxxxxx	10
		b) xxxxxxxxxxxxxxxxxxxxxxxxxxxx	5
III	5	a) xxxxxxxxxxxxxxxxxxxxxxxxxxxx	10
		b) xxxxxxxxxxxxxxxxxxxxxxxxxxxx	5
	6	OR	
		a) xxxxxxxxxxxxxxxxxxxxxxxxxxxx	10
		b) xxxxxxxxxxxxxxxxxxxxxxxxxxxx	5
IV	7	a) xxxxxxxxxxxxxxxxxxxxxxxxxxxx	15
		OR	
	8	a) xxxxxxxxxxxxxxxxxxxxxxxxxxxx	10
		b) xxxxxxxxxxxxxxxxxxxxxxxxxxxx	5

ANNEXURE III-A

MODEL QUESTION PAPER PATTERN

Paper Title: ……. **Marks: 30**
Paper Code: ……. **Time: 1 ½ Hours**

Unit No.	Question Number	Question/s	Marks
I	1	xxxxxxxxxxxxxxxxxxxxxxxxxxxxxx	10
		OR	
	2	xxxxxxxxxxxxxxxxxxxxxxxxxxxxxx	10
II	3	xxxxxxxxxxxxxxxxxxxxxxxxxxxxxx	10
		OR	
	4	xxxxxxxxxxxxxxxxxxxxxxxxxxxxxx	10
III	5	xxxxxxxxxxxxxxxxxxxxxxxxxxxxxx	05
		OR	
	6	xxxxxxxxxxxxxxxxxxxxxxxxxxxxxx	05
IV	7	xxxxxxxxxxxxxxxxxxxxxxxxxxxxxx	05
		OR	
	8	xxxxxxxxxxxxxxxxxxxxxxxxxxxxxx	05

B.ASLP Syllabus 2025

Course: 1.1 (DSC) **Introduction to Speech Language Pathology**		
Objectives	After completing this course, the student will be able to: a) understand the relationship between Communication, Speech and Language b) know physical, biological, social, psychological and linguistic bases of speech c) understand normal speech and language development d) understand causes related to speech and language disorders e) understand basic skills of assessment and evaluation of speech, language and swallowing disorders, and f) know of the nature and scope of the field of speech-language pathology.	
Unit 1	**Introduction to Speech-language Pathology** a) History and development of speech-language pathology in Indian and Global context. b) Definition and functions of speech, language, communication, and their components c) Basic models of speech communication: Speech and hearing as a servo system, Shannon-Weaver model, Lasswell model, and Berlo model, Bloom & Lahey model, SLPM model d) Speech chain and Speech as an overlaid function e) Bases of speech and language – anatomical, physiological, neurological, physical, aerodynamic, linguistic, psychological, socio-cultural and genetic f) Introduction to Speech-Language Disorders g) Incidence and prevalence of speech and language h) Definition and descriptions of delay, deviancy, and disorders; impairment, disability and handicap.	**15 Hours**
Unit 2	**Normal Development of Speech-language and Basics of assessment and Management** a) Development of speech-language b) Pre-requisites and factors affecting speech-language development c) Basic concepts in speech assessment and management	**15 Hours**

	d) General principles of assessment and management e) Individual and group therapy f) Approaches to speech-language therapy – formal, informal, and eclectic approaches g) Planning for speech and language therapy – goals, steps, procedures, and activities. h) Importance of reinforcement principles and strategies in speech and language therapy, types and schedules of rewards and punishment.	
Unit 3	**Assessment and Management of Speech and Swallowing Disorders** a) Causes of speech disorders b) Speech disorders - Fluency disorders, Voice disorders, Phonological disorders, c) Feeding and swallowing disorders d) Overview of assessment procedures for voice disorders; articulation and phonological disorders; and fluency disorders e) Overview of management procedures for voice disorders; articulation and phonological disorders; and fluency disorders f) Basic concepts in assessment and management of swallowing disorders	**15 Hours**
Unit 4	**Assessment and Management of Language Disorders and Speech-Language Pathology as a Profession** a) Types, characteristics, causes, and classification of language disorders b) Issues related to bi/multilingualism c) Overview of assessment and management procedures for child language disorders; adult language disorders; and neurogenic language disorders d) Documentation of diagnostic, therapeutic and referral reports e) Evaluation of therapy outcome and follow up f) Early identification and prevention of speech and language disorders g) Professional code of conduct – social, cultural and other ethical issues h) Interdisciplinary nature and scope of practice in speech-language pathology i) Evidence-based practice	**15 Hours**

	j) Community-based rehabilitation k) Role of itinerant speech therapist, Anganwadis, and resource teachers l) Facilities and concessions available for speech and hearing disability.	
References	**Common** • Robb, M. P. (2023). *INTRO: A guide to communication sciences and disorders* (4th ed.). Plural Publishing. • Brookshire, R. H. (2003). Introduction to neurogenic communication disorders (6th ed.). St. Louis, Mo: Mosby. • Hegde, M. N., & Davis, D. (2005). Clinical methods and practicum in speech- language pathology (4th ed.). Australia; Clifton Park, NY: Thomson Delmar Learning. • Hulit, L.M., Marle. R., Kathleen, R. H., & Fowey (2010). Born to Talk. Pearson Communication Science and Disorders Series 5th Ed. • Owens. Jr, Kimberly, A. Metz, F.E. (2014). 5th Ed. Introduction to Communication Disorders: A life span based Perspective. Pearson Communication Science and Disorders Series. • Roth, F. P., & Worthington, C. K. (2005). Treatment resource manual for speech language pathology (3rd ed.). Australia; Clifton Park, NY: Thomson Delmar Learning. • Shipley, K. G., & McAfee, J. G. (2004). Assessment in speech-language pathology: A resource manual (3rd ed.). Australia; Clifton Park, NY: Delmar Learning. • Shipley, K. G., & Roseberry-McKibbin, C. (2006). Interviewing and counselling in communicative disorders : Principles and procedures (3rd ed.). Austin, Tex: Pro-Ed. • Ysseldyke, J. E., & Algozzine, R. (2006). Teaching students with communication disorders: A practical guide for every teacher. Thousand Oaks, Calif.: Corwin Press. • Angell, C.A. (2010). Language development and disorders: A case study approach, Jones & Bartlett publishers, LLC. • Fogle, P.T. (2013). Essentials of communication sciences & disorders, Delmar, Cengage learning. **Unit 1** • Mandke, K., & Rajshekhar , B. (2024). Genesis of the Speech and Hearing Profession in India and its Growth.,	

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<u>Course: 1.2 (DSC)</u>		

	Introduction to Audiology	
Objectives	After completing this course, the student will be able to: a) describe the basic concepts of hearing sensitivity and acoustics b) describe the characteristics and causes of different types of hearing loss c) take a case history, administer and interpret tuning fork tests d) carryout pure tone audiometry with masking on a clinical population e) carryout subjective calibration and daily listening checks of the audiometer	
Unit 1	**Historical Aspects of Audiology, Scope of Audiology, and Causes of Hearing Loss** a) History of Audiology, development of instrumentation in audiology b) Development of the field of audiology: Indian and global context c) Branches of audiology and scope of audiology d) Multidisciplinary inputs to audiology e) Hearing loss and related terminologies f) Importance of case history taking in audiology practice g) Essential factors to be included in case history for adults and children h) Interpretation of case history information i) Classification of hearing loss: conductive, sensorineural, mixed, and central j) Characteristics of different types of hearing loss k) Causes of different types of hearing loss: Adult and children: Congenital and acquired: Pre-natal, natal, and post-natal causes: Genetic and environmental causes	**15 Hours**
Unit 2	**Normal Aspects of Hearing** a) Sound intensity and concept of decibel; Acoustic energy and power, absolute and relative units – the importance of reference: Sound intensity and intensity levels – absolute and relative measurements: Bel – decibels and its application: the relationship between intensity and pressure b) Audibility and hearing: Hearing range – intensity and frequency: Minimum audible pressure and field: Estimation of minimum audible levels: Missing six dB: Reference equivalent threshold sound pressure levels	**15 Hours**

	and hearing levels: Sensation levels, threshold of pain, most comfortable levels c) Differential sensitivity: Concept of just noticeable difference and its applications: Intensity, frequency, and duration discrimination: Magnitude estimation and production: Loudness – equal loudness level contours and its application: Scales of pitch and loudness scales	
Unit 3	**Pure Tone Audiometry** a) Principles, procedure, interpretation, advantages and disadvantages of different tuning fork tests – Rinne, Schwabach, Weber and Bing tests b) Audiometric version of Weber and Bing test c) Classification of audiometers, Parts of an audiometer, characteristics and specifications of transducers used (earphones, bone vibrators, loud speakers) d) Audiogram- concept and symbols used e) Clinical method of threshold estimation f) Factors affecting air conduction threshold g) Bone conduction thresholds- measurements, factors affecting. Rainville test, and Sensori-neural acuity level (SAL). h) Permissible noise levels in the audiometric room i) Calculation of the percentage of hearing loss	**15 Hours**
Unit 4	**Pure tone audiometry – Masking and Subjective calibration** a) Purpose and rationale of clinical masking: Interaural attenuation and factors affecting interaural attenuation, b) Different types of stimuli employed in clinical masking, minimum and maximum masking levels for masking c) Different procedures for masking during pure tone audiometry d) Definition and purpose of calibration, Daily listening checks, and subjective calibration	**15 Hours**
Practicum	a) Getting familiar with different clinical audiometers, parts of audiometers, and their functions b) Familiarization with different types of transducers – earphones/ear cushion combination, speakers, insert earphones, bone vibrators c) Familiarization with different symbols used on audiograms for unmasked and masked AC, BC, SRT, and SIS	

	for different transducers for the right and left ear. d) Familiarization with different equipment used for objective calibration of audiometers e) Get familiar with instructions for carrying out pure tone audiometry and masking in 5 individuals f) Familiarization with different types of stimuli used in audiometry g) To observe the counseling before and after audiological testing h) Observation of objective calibration procedure for audiometers as per standards i) Daily listening check and troubleshooting of different clinical audiometers j) Preparation of correction factor chart after biological calibration on individuals with normal hearing k) Appropriate placement of various transducers on clients during Audiometry, including masking l) Establishment of PT thresholds (AC & BC) using ascending, descending, and modified Hughson Westlake procedures in 5 individuals with normal hearing m) Estimation of bone conduction threshold with forehead and mastoid placements in 5 individuals with normal hearing n) Establishing UCL, MCL, and DR on 5 individuals with normal hearing o) Administration of SAL and Rainville on 5 individuals with normal hearing p) Calculation of the percentage of hearing loss	
References	**Unit 1** • Martin, F. N., & Clark, J. G. (2018). Introduction to Audiology. 13th Edition. Boston: Pearson. • Katz, J. (2014). Handbook of Clinical Audiology (7th International edition.). Lippincott Williams and Wilkins. • Hall, J.W. (2014). Introduction to Audiology today. Boston. Pearson • Stach, B. A. (2021). Clinical Audiology: An Introduction (3rd Edition). Plural Publishing Inc. • Gelfand, S. A. (2017). Essentials of Audiology (4th Edition). Thieme Publishers. **Unit 2** • Speaks, C. E. (2017). Introduction to Sound: Acoustics for the Hearing and Speech Sciences (4th Edition). Plural Publishing Inc.	

	• Martin, F. N., & Clark, J. G. (2018). Introduction to Audiology. 13th Edition. Boston: Pearson. • Gelfand, S. A. (2017). Hearing: An Introduction to Psychological and Physiological Acoustics (6th edition.). London: CRC Press. • Durrant, J. D., & Feth, L. L. (2012). Hearing Sciences: A Foundational Approach (1 Edition.). Boston: Pearson. **Unit 3** • Katz, J. (2014). Handbook of Clinical Audiology (7th International edition.). Lippincott Williams and Wilkins. • Silman, S., & Silverman, C. A. (1997). Auditory Diagnosis: Principles and Applications (Reissue Edition.). San Diego: Singular Publishing Group • Stach, B. A. (2021). Clinical Audiology: An Introduction (3rd Edition). Plural Publishing Inc. • Gelfand, S. A. (2017). Essentials of Audiology (4th Edition). Thieme Publishers. **Unit 4** • Katz, J. (2014). Handbook of Clinical Audiology (7th International edition.). Lippincott Williams and Wilkins. • Silman, S., & Silverman, C. A. (1997). Auditory Diagnosis: Principles and Applications (Reissue Edition.). San Diego: Singular Publishing Group • Stach, B. A. (2021). Clinical Audiology: An Introduction (3rd Edition). Plural Publishing Inc. • Gelfand, S. A. (2017). Essentials of Audiology (4th Edition).	
Course: 1.3 (AECC) **Anatomy and Physiology of Speech and Swallowing**		
Objectives	After completion of the course students shall have the understanding of: a) Embryonic development of structures sub-serving speech, & swallow b) Anatomy of speech, & swallow systems	

	c) Physiology of speech & swallow systems d) General pathological conditions causing speech & swallow disorders	
Unit 1	**Introduction to Anatomy, Physiology and embryological development** a) Orientation to anatomical terms–Planes of reference, terms related to positions, directions and locations, types of cells, and tissues of the human body. b) Embryological development of • nervous system for speech, and swallowing • speech sub-systems: respiratory, phonatory, resonatory and articulatory systems • Embryological development of swallowing function	**5 Hours**
Unit 2	**Anatomy of Speech and Swallowing** a) Lower airway: trachea, lungs. Blood and neural supply b) Anatomy of larynx, vocal folds. Blood and neural supply c) Anatomy: oral and nasal cavity, pharynx, and esophagus. Blood and neural supply	**10 Hours**
Unit 3	**Physiology of Speech and Swallowing** a) Physiology of breathing, volumes and capacities b) Physiology of larynx, theories of voice production. c) Physiology of resonance, transfer function d) Mechanisms of articulation and production of speech sounds e) Stages and processes of swallowing	**10 Hours**
Unit 4	**Pathology of Speech and Swallowing functions** a) Five examples of embryonic anomalies affecting speech and swallowing b) Disorders of Speech; fluency disorders, voice disorders, articulatory and resonatory disorders c) Feeding and Swallowing Disorders: types, signs and symptoms	**5 Hours**

References	**Recommended Reading** • Seikel, J. A., King, D. W., & Drumright, D. G. (2010). Anatomy & Physiology for Speech, Language, and Hearing (4th edition). Delmar, Ceenage Learning, Division of Thomson Learning. NY. • Zemlin, W. R. (2010). Speech and Hearing Science: Anatomy and Physiology: International Edition (4 edition.). Boston: Pearson. • Chaurasia, B.D (2004). Human Anatomy, vol 3. Head Neck and Brain 4 th Eds, CBS Publishers and Distributors, New Delhi. • Kelley, M., Wu, D., & Fay, R. R. (Eds.). (2005). Development of the Inner Ear (2005 edition.). New York: Springer. • Culbertson, W. R., Cotton, S. S., & Tanner, D. C. (2013). Anatomy and physiology study guide for speech and hearing. **Unit 1** • Fuller, D. R., Pimentel, J. T., & Peregoy, B. M. (2012). Applied Anatomy and Physiology for Speech Language Pathology & Audiology. Lippincott Williams & Wilkins, Baltimore, MD • Jones, S. M., & Jones, T. A. (2011). Genetics, Embryology and Development of Auditory and Vestibular Systems. Plural Publishing, San Diego. • Seikel, J., King, D., & Drumright, D. (2015). Anatomy & Physiology for Speech, Language, and Hearing, V Edition. Cengage Learning • Zemlin, W. R. (1998). Speech and Hearing Science: Anatomy and Physiology. Allyn & Bacon, Needham Heights, Massachusetts • Fuller, D. R., Pimentel, J. T., & Peregoy, B. M. (2012). Applied Anatomy and Physiology for Speech Language Pathology & Audiology. Lippincott Williams & Wilkins, Baltimore, MD • Musiek, F. E., & Baran, J. A. (2007). The Auditory System: Anatomy, Physiology and Clinical Correlates. Pearson Education, Inc. • Plack, C. J. (2014). The sense of Hearing, II Edition. Psychology Press, New York • Love, R. J., & Webb, W. G. (2013). Neurology for the speech-language pathologist. Butterworth-Heinemann.	

Unit 2

- Culbertson, W. R., Cotton, S. S., & Tanner, D. C. (2006). Anatomy and Physiology Study Guide for Speech and Hearing. Plural Publishing, San Diego.
- Fuller, D. R., Pimentel, J. T., & Peregoy, B. M. (2012). Applied Anatomy and Physiology for Speech Language Pathology & Audiology. Lippincott Williams & Wilkins, Baltimore, MD
- Seikel, J., King, D., & Drumright, D. (2015). Anatomy & Physiology for Speech, Language, and Hearing, V Edition, Cengage Learning
- Zemlin, W. R. (1998). Speech and Hearing Science: Anatomy and Physiology. Allyn & Bacon, Needham Heights, Massachusetts

Unit 3

- Culbertson, W. R., Cotton, S. S., & Tanner, D. C. (2006). Anatomy and Physiology Study Guide for Speech and Hearing. Plural Publishing, San Diego.
- Rouse, M. H. (2016). Neuroanatomy for Speech Language Pathology and Audiology. Jones & Bartlett Learning, LLC
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- Zemlin, W. R. (1998). Speech and Hearing Science: Anatomy and Physiology. Allyn & Bacon, Needham Heights, Massachusetts.

Unit 4

- Fuller, D. R., Pimentel, J. T., & Peregoy, B. M. (2012). Applied Anatomy and Physiology for Speech Language Pathology & Audiology. Lippincott Williams & Wilkins, Baltimore, MD
- Musiek, F. E., & Baran, J. A. (2007). The Auditory System: Anatomy, Physiology and Clinical Correlates. Pearson Education, Inc.
- Plack, C. J. (2014). The Sense of Hearing, II Edition. Psychology Press, New York

	• Seikel, J., King, D., & Drumright, D. (2015). Anatomy & Physiology for Speech, Language, and Hearing, V Edition. Cengage Learning • Zemlin, W. R. (1998). Speech and Hearing Science: Anatomy and Physiology. Allyn & Bacon, Needham Heights, Massachusetts	
Course: 1.4 (AECC) **Anatomy and Physiology of Auditory and Vestibular System**		
Objectives	After completing this course, the student will be able to a) understand the embryology and anatomy of the auditory system, including neural supply b) describe the anatomy and functioning of the external ear c) describe the anatomy and functioning of the middle ear system d) describe the anatomy and functioning of the inner ear e) describe the functional anatomy of the central auditory pathway	
Unit 1	**Introduction to General Anatomy and Embryology** a) General anatomical terms b) Development of external ear c) Development of middle ear d) Development of inner ear e) Five examples of embryonic anomalies affecting the auditory system: Usher syndrome, Pendred syndrome, Mondini Dysplasia, Microtia/Anotia	7 **Hours**
Unit 2	**Anatomy and Physiology of External ear and Middle ear** a) Anatomy of the pinna and external auditory canal b) Auditory and non-auditory functions of the external ear, including localization c) Head shadow effect, inter-aural intensity, and time differences. d) Brief anatomy of the temporal bone e) Anatomy of middle ear, including tympanic membrane	8 **Hours**

	f) Auditory and non-auditory functions of the middle ear g) Middle ear transformer action h) Anatomy and physiology of Eustachian tube	
Unit 3	**Anatomy and Physiology of Labyrinth** a) Anatomy of the bony and membranous labyrinth b) Overview of Micro and macro anatomy of cochlea, semicircular canals, utricles, and saccule. c) Innervations and blood supply to cochlea d) Physiology of cochlea e) Electrical potentials of the cochlea: cochlear microphonics, summating potential f) Modes of bone conduction g) Overview of the physiology of balancing mechanisms: semicircular canals, utricles, saccule	8 **Hours**
Unit 4	**Auditory Nerve and Central Auditory and Vestibular pathway- 7 hours** a) Overview of Anatomy and Physiology of the cochlea-vestibular nerve b) Action potential. c) Overview of functional anatomy of the central auditory and vestibular pathway and their physiology d) Overview to anatomy of the afferent and efferent auditory pathway	7 **Hours**
References	• Seikel, J. A., King, D. W., & Drumright, D. G., & Hudock D. J. (2019). Anatomy & Physiology of Speech, Language, and Hearing (6th edition). Plural Publishing, Inc. NY. • Zemlin, W. R. (2010). Speech and Hearing Science: Anatomy and Physiology: • International Edition (4 edition.). Boston: Pearson. • Gelfand, S. A. (2017). Hearing: An Introduction to Psychological and Physiological Acoustics (6th edition.). London: CRC Press. • Chaurasia, B.D (2022). Human Anatomy, vol 3. Head Neck and vol 4. Brain (9th Edition) CBS Publishers	

	• Culbertson, W. R., Cotton, S. S., & Tanner, D. C. (2006). Anatomy and Physiology Study Guide for Speech and Hearing. Plural Publishing, San Diego. • Fuller, D. R., Pimentel, J. T., & Peregoy, B. M. (2012). Applied Anatomy and Physiology for Speech Language Pathology & Audiology. Lippincott Williams & Wilkins, Baltimore, MD • Zemlin, W. R. (1998). Speech and Hearing Science: Anatomy and Physiology. Allyn & Bacon, Needham Heights, Massachusetts • Clark, W. W., & Ohlemiller, K. K. (2008). Anatomy and physiology of hearing for audiologists. Thomson Delmar. • Musiek, F. E., & Baran, J. A. (2007). The auditory system: Anatomy, physiology and clinical correlates. Pearson. • Hoit, J. D., & Weismer, G. (2018). Foundations of speech and hearing: Anatomy and physiology. Plural Publishing. • Møller, A. R. (2003). Sensory systems: Anatomy and physiology. Academic Press. • Rousseau, B., & Branski, R. C. (Eds.). (2018). Anatomy and physiology of speech and hearing. Thieme. • Tellis, G. M., & Manasco, H. (2025). Fundamentals of anatomy and physiology of speech, language, and hearing. Plural Publishing.	
Course: 1.5 (SEC) **Clinicals in Speech-Language Pathology - I**		
Objectives	The objectives of the course are to provide skills to: a) identify normal speech and language development b) list various parameters of speech and language skills c) gather case history, and conduct oral peripheral examination d) differentiate normal versus disordered speech and language skills in children and adults e) list strategies/tools for assessment and techniques for therapy to facilitate speech and language skills in children and adults.	

	Know a) List the available clinical facilities and clinical activities of the Department/Institute. b) List the sources of referral for speech and language disorders (to and from the Department/Institute) and a response letter to the referral source. c) List various public education materials/ videos that are available in the Department/Institute). d) List frequently used assessment materials available for the evaluation of speech-language disorders. – Ex: Assessment of Language Development, ComDEALL Developmental Checklist (CDDC), Language Assessment Tool (LAT). e) Prepare a chart and show the developmental stages of speech and language behaviour. f) Compile the normative data available in Indian languages with reference to speech sound acquisition. g) List and demonstrate components of case history for communication disorders. h) Record the following reports for various speech and language disorders: checklist for parent counselling, diagnostic report, baseline report, lesson plan, progress report, and discharge report. i) List the commonly used speech language stimulation techniques and perform a role play. j) List reinforcement strategies. Prepare some reinforcers that can be used in diagnostics or therapy k) Observe the assessment and counseling of different speech and language disorders in children and adults. l) Observe the speech and language therapy of different speech and language disorders in children and adults. m) Observe the use of various software and instruments used for the assessment and management of speech and language disorders. n) Document ICF classification of various speech-language disorders. o) Document DSM V and ICD 11 classification of various speech-language disorders. **Do** a) Record a neurotypical speech sample and analyse the parameters (voice, articulation, fluency, stress, rhythm, resonance). b) Record a neurotypical child's language sample and analyse various parameters of language. c) Record a standard passage, count the number of syllables and words, and identify syllable structure.	

	d) Perform oral mechanism examination on two neurotypical children and adults. e) Perceptual analysis of speech parameters in persons with communication disorders – fluency, articulation, voice (3 adults, 3 children). f) Administer frequently used speech-language test on a typically developing child and one child with language disorder. g) Prepare diagnostic and therapy kits.	
Course: 1.6 (SEC) **Clinicals in Audiology - I**		
	General Considerations After completion of clinical postings in Audiology in the first semester, the student will have the concept (Know), the ability to apply (Know-how), and perform (Do) the following:	
	Know Getting familiar with different clinical audiometers, parts of audiometers, and their functions a) Familiarization with different types of transducers – earphones/ear cushion combination, speakers, insert earphones, bone vibrators b) Familiarize with audiogram symbols for unmasked and masked AC, BC, SRT, and SIS for different right and left ear transducers. c) Materials commonly employed in speech audiometry. **Know-how** Get familiar with instructions for carrying out pure tone audiometry and masking in 5 individuals a) Familiarization with different types of stimuli used in audiometry b) To observe the counseling before and after audiological testing **Show** a) Daily listening check and troubleshooting of different clinical audiometers	

	b) Preparation of correction factor chart after biological calibration on individuals with normal hearing c) Appropriate placement of various transducers on clients during Audiometry, including masking **Do** a) Establishment of PT thresholds (AC & BC) using ascending, descending, and modified Hughson Westlake procedures in 5 individuals with normal hearing b) Estimation of bone conduction threshold with forehead and mastoid placements in 5 individuals with normal hearing c) Establishing UCL, MCL, and DR on 5 individuals with normal hearing d) Administration of SAL and Rainville on 5 individuals with normal hearing e) To calculate the percentage of hearing disability	
Course: 1.7 (AECC) **Indian Constitution**		
Objectives	After completing this course, the student will be able to: a) Understand the significance, development, and key elements of the Indian Constitution b) Explain the structure, composition, powers, and functions of the Union Government c) Analyze the roles and responsibilities of major constitutional functionaries	
Unit 1	a) Meaning and importance of constitution b) Making of Indian Constitution c) Salient Features and the preamble	**4 Hours**
Unit 2	a) Fundamental Rights b) Fundamental Duties c) Directive Principles	**3 Hours**

Unit 3	**Union Government** a) Lok Sabha and Rajya Sabha (Composition powers & Functions) b) President & Prime Minister (Powers, Function, Positions) c) Supreme Court - Composition, Powers & Functions	**4 Hours**
Unit 4	**Major Functionaries** a) Union Public Service Commission b) Election Commission c) Planning Commission (NITI)	**4 Hours**
Course: 1.8 (AECC) **Language I - English Language Skills**		
Objectives	After completing this course, the student will be able to: d) Develop functional spoken and written English skills e) Understand the process of writing f) Implement strategies to improve reading skills	
Unit 1	**Functional English Grammar -1** a) Grammar of Spoken and Written English b) Basic Sentence Patterns in English — Analysis of Sentence Patterns (SVO, SV, SVOC, SVOA, SVOA/C) c) Functions of Various Types of Phrases: Noun Phrases, Verb Phrases, Adjective Phrases, Adverbial Phrases, Prepositional Phrases	**10 Hours**
Unit 2	**Functional English Grammar -2** a) Functions of Clauses: Noun Clause, Adjective Clause and Adverbial Clause and Prepositional Clauses b) Verbs — Tense and Aspects, Modal Verbs, Functions and Uses	**07 Hours**

Unit 3	**Writing Skills** a) Writing as a Skill — Its Importance, Mechanism of Writing, Words and Sentences, Paragraph as a Unit of Structuring the Whole Text, Analysis of Paragraph b) Functional Uses of Writing: Personal, Academia and Business c) Writing Process: Planning a Text, Finding Materials, Drafting, Revising, Editing, Finalizing Draft d) Models of Writing: Expansion of Ideas, Dialogue Writing, Drafting an Email	**14 Hours**
Unit 4	**Reading skills** a) Meaning and Process of Reading b) Strategies and Methods to Improve Reading Skill c) Sub-skills of Reading: Skimming, Scanning, Extensive Reading, Intensive Reading	**14 Hours**
References	**Suggested Reading** • A Communicative Grammar of English - Geoffrey Leech and Jan Svartvik, Pearson • English Grammar for Today — Geoffrey Leech, Palgrave • The Functional Aspects of Communicative Skills — Prasad P, S.K. Kataria & Sons • Communication Skills - Leena Sen, Princeton Hall • The Written Word - Vandana Singh., OUP	
Course: 1.9 (OE) **Prenatal Development and Care**		
Objectives	At the end of the course the student should be able to: a) Understand prenatal development, factors affecting growth and development of fetus, prenatal assessment and screening, etc. b) Identify the prenatal complication and care c) Apply the knowledge to help the pregnant women to adopt healthy lifestyle	

Unit 1	**Introduction to Prenatal stage** a) Preparation and Pre-pregnancy Status, Conception – Meaning and Process of Conception b) Prenatal stage – Concept and Significance, Stages of Prenatal Development - Germinal stage, Embryonic stage, Fetal stage	**11 Hours**
Unit 2	**Factors Affecting and Prenatal Assessment** a) Factors affecting Prenatal growth and development – Maternal, Paternal Factors, Genetical and Environmental Factors b) Prenatal Screening and Assessment, Genetic screening tests and Counseling	**12 Hours**
Unit 3	**Complications during Prenatal stage** a) Miscarriages and Abortions, Intrauterine growth retardation, Low pregnancy weight gain, Health Issues b) Infertility and Assisted Reproduction	**10 Hours**
Unit 4	**Prenatal Care and Adaptation to Pregnancy** a) Prenatal care – Healthy eating and nutrition requirement, physical and emotional fitness, regular Medical check-ups and Monitoring b) Care for High-risk pregnancy	**12 Hours**
References	• Berk, L.C. (2008). Child Development, New Delhi: Prentice Hall of India (Pvt.) Ltd. • Craig, G. (1999). Human Development, N.J.; Prentice Hall. • Feldman Robert S. (2013). Development Across the Life Span, 7th edition, United States, Pearson Education • Hurlock Elizabeth B. (2001). Child Development, 6th Edition, New Delhi, McGraw Hill Education. • Papalia, D.E. (2004). Human Development. 9th Edition, New Delhi: Tata McGraw Hill. • Rice Philip. K (2001) Human development, Prentice Hall, New Jersey • Barbara.M, Newmann & Philip. R. Newman (2015) Theories of Human Development, Psychology press.	

	• Naresh Gupta (2019). Human Development in India, Emerald Publisher • Suhasis Bhandra, Sibnath Deb and Seema Sahay, (2019), Childhood to Adolescence Issues and Concerns, First Edition, Pearson Publisher • Bridget A. Walsh, Lydia DeFlorio, Melissa M. Burnham, Dana A. Weiser (2017) Introduction to Human Development and Family Studies, Taylor and Francis • Laura E, Adena B. Meyers (2015) Infants, Children and Adolescents, 8th Edition Pearson Publisher. • Laurence Steinberg, Marc H. Bornstein, Deborah Lowe Vandell, Karen S. Rook (2010) Life Span Development: Infancy Through Adulthood, Wadsworth Cengage Learning	
Course: 2.1 (DSC) **Child Language Disorders**		
Objectives	After completing this course, the student will be able to: a) Explain the process of acquisition of language and factors that influence its development in children, b) Identify and assess language delay and deviance in children, c) Select appropriate strategies for intervention, d) Counsel and provide guidance to parents/caregivers of children with language disorders, and e) Initiate advocacy programs for children with language disorders	
Unit 1	**Bases of Language Acquisition and Development** a) Theories of language acquisition in children - biological maturation, cognitive theories, linguistic theories, information processing theories, behavior theories, social interaction theories, pragmatic/ discourse theories b) Development of components of language (oral and written) from • birth to two years (pre- linguistic/presymbolic to symbolic) • preschool period • during early school age and beyond c) Language acquisition including bilinguals/ multilinguals - types (based on age, manner of acquisition, factors affecting language acquisition). d) Factors affecting language development in children including environmental factors like language environment	**15 Hours**

	and effects of neglect and abuse, socioeconomic status and biological factors like twins and multiple pregnancies, genetic factors etc.	
Unit 2	**Language Disorders and their Characteristics** a) DSM 5, DSM -TR, ICD 10, ICD 11 & ASHA 2025 (updated versions) classification of language disorders b) Definition, General characteristics, language characteristics, causes and co morbidities in the following conditions: • Hearing impairment • Intellectual disability • Syndromes associated with child language disorders - Down Syndrome, Fragile-X Syndrome, William's Syndrome, Klinefelter's Syndrome, • Autism Spectrum Disorders, • Specific language impairment/developmental language disorders • Attention deficit hyperactive disorder • Acquired Childhood Aphasia • Specific Learning disability • Other developmental disabilities: deaf-blind, cerebral palsy and multiple disabilities.	**15 Hours**
Unit 3	**Assessment of Children with Language Disorders** a) Preliminary components of assessment: Case history, screening, evaluation of environmental, linguistic & cultural variables. b) Methods to assess children with language disorder: Formal versus informal assessment; types of assessment materials: assessment scales, observational checklists, developmental scales; standardization, reliability, validity, sensitivity and specificity of test materials. c) Informal assessment-pre-linguistic behavior, play, mother-child interaction. d) Language sampling: planning and collecting representative sample; strategies to collecting language sample, audio-video recording, transcription	**15 Hours**

	e) Analysis of language sample: Specific to various components of language such as phonology, morphology, syntax, semantics and pragmatics. f) Test materials for assessing language skills in English and Indian language, Assessment of Language Development, 3-Dimensional Language Acquisition Test, Linguistic Profile Test, Com-DEALL checklist, g) Overview of tests used by clinical psychologists for assessment of children with developmental delay and intellectual disability: e.g Madras Developmental Program Scale, Bayley's Scale for infant and toddler development and others h) Overview of tests used by speech-language pathologists/ psychologists/ clinical psychologists/ developmental and behavioral pediatricians for assessment and diagnosis of children with autism spectrum disorder: Modified-Checklist for Assessment of Autism in Toddlers, Indian Scale for Assessment of Autism (ISAA), INCLEN Diagnostic Tool, Autism Diagnostic Observation Schedule (ADOS) i) Overview of tests used by psychologists/ clinical psychologists/Developmental & Behavioral pediatricians for children with ADHD - DSM 5 checklist, Connors Rating scales and others j) Overview of tests for assessment of language for children with Acquired childhood aphasia (CAAST), k) Overview of tests for assessment of language and literacy for children with learning disability (Early Reading skills, Early Literacy Screening Test, NIMH battery for assessment of Learning Disability and others), Dyslexia assessment for languages in India (DALI) and others l) Documenting assessment results: diagnostic report, summary report and referral report specific to disorder. m) Differential diagnosis of language disorders in children.	
Unit 4	**Management of Language Disorders in Children** a) General principles and strategies of intervention in children with language impairment–purpose of intervention, basic approaches to language intervention (developmental or normative approach, functional approach). b) Choice of language for intervention, incorporating principles of multiculturalism into treatment activities. c) Overview of approaches and techniques of intervention for to address language disorders in children with different developmental disorders d) Description and steps involved in specific language intervention techniques: Incidental teaching, self-talk, parallel talk, expansion, extension, recasting, joint routines, joint book reading, whole language, modifying	**15 Hours**

	linguistic input, communicative temptations drill, modeling, Focused stimulation, vertical structuring, milieu teaching, Redundancy, chunking, chaining, Lovaas, TEACCH, Com-DEALL, ABA. e) Overview of Augmentative and alternative communication–types (aided such as PECS and unaided) and application in child language disorders. f) Importance of team approach – Functions of professional team members like medical/ surgical/ Physiotherapy/ Occupational therapy/ psychologists etc. g) Importance and role of caregivers and family in intervention h) Rights, privileges and certification including for children with language disorders i) Use of technology and tele-rehabilitation in language intervention	
Practicum	a) Record mother-child interaction of one typically developing child each in the age range of 0-1, 1-2, 2-4, 4-6 and 6-8 years of age. Compare linguistically the out puts from the mother and the child across the age groups. Make inferences on sociocultural influences in these interactions. b) Make a list of loan words in two familiar languages based on interaction with 10 typically developing children each in the age range of 2-4, 4-6, 6-8 and 8-10years. Discuss the influence of bi-or multilingualism on vocabulary. c) Make a flier/ Powerpoint/ video for creating awareness on language disorders in children. d) Record a conversation and narration sample from 3 children, one child each who are in preschool, kindergarten, and primary school. Perform a language transcription and analyze for form, content and use. e) Administer 3D LAT, ALD, LPT, ComDEALL checklist on any 2 typically developing children. f) Draft a diagnostic report and referral letter for a child with language disorder. g) Demonstrate general language stimulation techniques and discuss the clinical application. h) Demonstrate specific language stimulation techniques with appropriate materials and discuss its clinical applications. i) Draft Subjective Objective Assessment Plan (SOAP) for a pre-recorded sample of a 45minute session of intervention for a child with language disorder. j) Draft a lesson plan for a child with language disorder. k) Draft a discharge summary report for a child with language disorder	

References	**Common** • Roseberry-McKibbin, C. (2007). Language Disorders in Children: A multicultural and case perspective. Boston: Pearson Education, Inc. • Paul, R. (2013). Language disorders from infancy through adolescence (4th ed.). St.Louis, MO: Mosby. • Dwight, D.M. (2006). Here's how to do therapy: Hand-on core skills in speech language pathology. San Diego, CA: Plural Publishing • Hegde, M.N. (2005). Treatment protocols for language disorders in children – Vol. 1 & 2. San Diego: Plural Publishing • Owens, R.E. (2008). Language development: An introduction (7th ed.). Boston: Pearsons • Reed, V.A. (2004). An Introduction to children with language disorders (3rd Ed.) New York: Allyn & Bacon • Rout, N and Kamraj, P (2014). Developing Communication - An Activity Book, A publication by NIEPMED, Chennai. Freely downloadable from http://niepmd.tn.nic.in/publication.php. ISBN 978-81-928032-41. **Unit 1** • Bhatia, T. K. & Ritchie, W. C. (2014). Handbook of Bilingualism and multilingualism. 2nd Ed. East Sussex, Wiley Blackwell. • Bialystok, E. (2001). Bilingualism in Development: Language, Literacy and Cognition. New Delhi, Cambridge University Press. • DeHouwer, A. (2000). An Introduction to Bilingual Development. Bristol, Multilingual Matters. • Gleason, J. B. (2005). The Development of Language, 6th Ed, Pearson Education, Inc • Hulit, L. M. & Howard, M. R. (2006). Born To Talk: A Introduction to Speech and Language Development, 4th Ed, Boston: Pearson Education, Inc. • Ingram, J. C. L. (2007). Neurolinguistics- An Introduction to Spoken Language Processing and its Disorders, Melbourne: Cambridge University Press. • Levey, S. (2014). Introduction to Language development. San Diego: Plural Publishing Inc.	

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- Owens, J. R., Metz, D.E. & Farinella, K.A. (2011). Introduction to Communication Disorders-A Lifespan Evidence Based Perspective. Upper Saddle River, NJ: Pearson Education, Inc.
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Course: 2.2 (DSC) **Diagnostic Audiology- Basic**		
Objectives	After completing this course, the student will be able to a) explain speech masking and carry out speech audiometry with masking b) apply appropriate test battery of behavioural tests to differentially diagnose cochlear and retrocochlear pathology, c) apply appropriate test battery of behavioural tests to identify functional hearing loss d) assess and diagnose auditory processing using tests for central auditory processing	
Unit 1	**Speech Audiometry and Clinical Masking in Speech Audiometric Tests** a) Terminology, need for speech audiometry and types of stimuli used in speech audiometry, Test materials available in Indian languages b) Speech reception thresholds – procedures and application c) Word recognition scores –procedure and applications d) Other measures of speech audiometry: Speech detection threshold, most comfortable level, uncomfortable level, e) PIPB function – procedure and applications f) Factors affecting speech audiometry, Bone conduction speech audiometry Clinical masking of speech audiometric tests	15 Hours

Unit 2	**Behavioural tests to diagnose Cochlear Pathology and Retrocochlear Pathology** a) Concept of clinical decision analysis (sensitivity, specificity, true positive, true negative, false positive, false negative, and hit rate), Characteristics of a good diagnostic test: behavioural and physiological, Screening tests for hearing loss, the difference between screening and diagnostic test b) Need for test battery approach in auditory diagnosis and integration of the audiological tests results, Cross-check principle c) Behavioral and Clinical indications for cochlear pathology, retro-cochlear pathology; Physiological bases of recruitment/softness imperception and adaptation Behavioural tests of recruitment/softness imperception: ABLB, MLB, dynamic range, SISI, Tests of adaptation, PIPB function, Brief tone audiometry, Bekesy audiometry, Test to identify dead regions of the cochlea.	15 Hours
Unit 3	**Behavioral Tests to Diagnose Functional Hearing Loss** a) Behavioural and clinical indicators of functional hearing loss b) Pure tone tests including tone in noise test, Stenger test, Bekesy audiometry, Brief tone audiometry, pure tone DAF c) Speech tests including Lombard test, Stenger test, lip-reading test, Doerfler-Stewert test, Low level PB word test, Yes-No test, DAF test d) Identification of functional hearing loss in children: Swinging story test, Pulse tone methods e) Counselling clients with functional hearing loss	10 Hours
Unit 4	**Assessment of Central Auditory Processing Disorder (CAPD)** a) Definition of (CAPD, processes involved in auditory processing. b) Behavioral and clinical indicators of central auditory processing disorders c) Principles and rationale of test to identify central auditory processing disorders (concept of redundancy, bottleneck, and subtlety principles d) Monaural low redundancy tests, Dichotic speech tests, Binaural interaction tests, Tests of Temporal	20 Hours

	processing, testing of binaural integration, and binaural separation Interpretation of tests used for assessment of CAPD (site of lesion, processes involved), Team involved in assessment and management of CAPD	
Practicum	a) Perform speech audiometry tests (SDT, SRT, SIS, UCL) on 5 individuals with conductive, 5 individuals SN hearing loss, and 3 individuals with unilateral/asymmetric hearing loss (with appropriate clinical masking) and document them. b) Administer tests for CP on at least 5 cases with sensorineural hearing loss and document the results c) Administer tests for RCP on at least 5 cases with sensorineural hearing loss and document the results. d) Administer tests for functional hearing loss in at least two individuals and document the results. e) Administer a test battery of CAPD tests in at least one child and three adults with CAPD (SPIN, GDT, Dichotic CV/Digit, MLD, Pitch/Duration pattern test) and document the results	
References	**Unit 1** • Katz, J. (2014). *Handbook of clinical audiology* (7th ed.). Lippincott Williams and Wilkins. • Silman, S., & Silverman, C. A. (1997). *Auditory diagnosis: Principles and applications* (Reissue ed.). Singular Publishing Group. • Stach, B. A. (2021). *Clinical audiology: An introduction* (3rd ed.). Plural Publishing, Inc. • Gelfand, S. A. (2022). *Essentials of audiology* (5th ed.). Thieme. **Unit 2** • Katz, J. (2014). *Handbook of clinical audiology* (7th ed.). Lippincott Williams and Wilkins. • Silman, S., & Silverman, C. A. (1997). *Auditory diagnosis: Principles and applications* (Reissue ed.). Singular Publishing Group. • Kramer, S., & Brown, D. K. (2021). *Audiology: Science to practice* (4th ed.). Plural Publishing. • Stach, B. A., & Ramchandran, V. (2021). *Clinical audiology: An introduction* (3rd ed.). Plural Publishing, Inc.	

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Course: 2.3 (AECC) **Linguistics and Phonetics**		
Objectives	After completing this course, the student will be able to understand: a) Different branches and aspects of linguistics b) Characteristics and functions of language c) Different branches of phonetics, applied linguistics, and phonology, morphology, syntax, semantics, pragmatics d) Acquisition of language and factors affecting it e) Bi/multilingualism and related issues	
Unit 1	**Introduction to Linguistics and Applied Linguistics** a) Introduction to Language- Definition, Characteristics of language, Functions of language. b) Difference between animal communication systems and human language. c) Introduction to Linguistics – Definition, brief introduction to different branches of linguistics such as	**11 Hours**

	Sociolinguistics, Psycholinguistic, Neurolinguistics, Applied Linguistics and Clinical linguistics d) Application of linguistics with special reference to communication disorders.	
Unit 2	**Phonetics and Phonology** a) Introduction to Phonetics and its different branches – articulatory, acoustics and auditory phonetics b) Articulatory classification of sounds – segmentals and supra-segmentals, classification description and recognition of vowels and consonants. c) Transcription systems with special emphasis on International Phonetic Alphabet (IPA) d) Introduction to Phonology, classification of speech sounds on the basis of distinctive features; Phonotactics- Phonotactic patterns of English, and Indian languages such as Kannada and Hindi; Phonemic Analysis- principles and practices of phonemic analysis; Common phonological processes like- assimilation, dissimilation, metathesis, haplology, epinthesis, spoonerism, vowel harmony, nasalisation.	**11 Hours**
Unit 3	**Morphology, Syntax, Semantics and Pragmatics** a) Morphology – concepts of morph, allomorph, morpheme, Types of morphemes - bound and free forms, roots, compound forms - endocentric and exocentric constructions, Morphemic analysis -inflection and derivation. Concept of word, content and function words, Processes of word formation, paradigmatic and syntagmatic relationship. b) Syntax – Concepts of phrases and clauses, sentence and its types, Different methods of syntactic analysis – Immediate Constituent (IC) Analysis, Phrase Structure Grammar, Transformational Generative Grammar, Introduction to the major types of transformations. c) Notions of competence versus performance, deep structure versus surface structure, acceptability versus grammaticality, langue versus parole, Usefulness of morphemic and syntactic analysis in planning speech-language therapy. d) Semantics, semantic relations - homonyms, synonyms and antonyms, Semantic Feature Theory. e) A brief introduction to Pragmatics and discourse	**12 Hours**

Unit 4	**Language acquisition & Bi/multilingualism** a) Issues in first language acquisition; Stages of language development - prelinguistic stage and linguistic stage, acquisition of phonology, acquisition of morphology, acquisition of syntax, acquisition of semantics, acquisition of pragmatics, language and cognition. b) Issues related to second language acquisition; differences between first language acquisition and second language acquisition/learning. Bilingualism/Multilingualism in children-compound, coordinate, simultaneous, successive c) Inter-language theory, Language transfer & Linguistic interference; Factors influencing second language acquisition/ learning d) An introduction to the language families of India. e) Indian writing systems.	**11 Hours**
References	**Unit 1** • Finch, Geoffrey. (2003). How to Study Linguistics. N.Y: Palgrave Macmillan. • Fromkin, V., Rodman, R., and Hyams, N. (2018). An Introduction to Language (11th Edition). USA: Wadsworth Pub Co. • Pinker, Steven (2007). The Language Instinct: How the Mind Creates Language (P.S.). Harper Perennial Modern Classics. • Lyons, J. (2003). Language and Linguistics - An Introduction. Cambridge University Press. • Radford, A., Atkinson, R. M., Britain, D., Clahsen, H., Spencer, A. J. (1999). Linguistics: An Introduction, Cambridge University Press. • O'Grady, William et al. (2017). Contemporary Linguistics: An Introduction (7th ed.). Bedford/St. Martin's. • Verma S.K., Krishnaswamy N. (1997). Modern Linguistics An Introduction. Oxford University Press India. • Yule, G. (2020). The Study of Language (7th Edition). Cambridge: Cambridge University Press. • Gurevich, O., K. and Grindrod, S. E. (2021). Clinical Applications of Linguistics to Speech-Language Pathology: A Guide for Clinicians. Routledge. • Nelson N. W (1998). Childhood Language Disorders in Context – Infancy Through Adolescence. Allyn and Bacon, Boston.	

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	Unit 4 • Abbi, Anvita. (2001). A Manual of Linguistic Field Work and Structures of Indian Languages. München: LINCOM Europa. • Aklujkar, A. (2021). Indo-Aryan Linguistics: Trends and Perspectives. Springer. • Masica, C., P. (1993). The Indo-Aryan Languages. Cambridge University Press. • Nagarajan, H. (2022). The Routledge Companion to Linguistics in India. Routledge. • Jenny, M. and Sidwell, P. (2021). Austroasiatic Languages of South Asia. Routledge. • Krishnamurti, B. (2022). The Dravidian Languages (2nd Edition). Cambridge University Press. • Bhatia, Tej K., and William C. Ritchie (eds.) (2006). Bilingualism in South Asia. In: Handbook of Bilingualism. Oxford: Blackwell Publishing. • Bialystok, E. (2001). Bilingualism in Childhood. Cambridge University Press. • Bühler, G. (2010). On the Origin of the Indian Brahma Alphabet. Kessinger Publishing. • Cook, V. and Singleton, D. (2014). Key Topics in Second Language Acquisition. Bristol: Multilingual Matters. • Cunningham, U. (2011). Growing Up with Two Languages: A Practical Guide. Routledge. • Daniels, P., T. and Bright, W. (1996). The World's Writing Systems. Oxford University Press. • Stevens, J. (2023). Indian Alphabet: Calligraphic History and Mystic Function of the Sacred Letters. Shambhala Publications. • Jain, P.K. (1997). A Contrastive Study of Hindi and English Phonology. Bahri Publications. • Foster-Cohen, S. (2009). Language Acquisition. London: Palgrave Macmillan. • Tomasello, Michael (2003). Constructing a Language: A Usage-Based Theory of Language Acquisition. Cambridge: Harvard University Press. • Jackson, M. B. (2018). Indian Alphabet: Calligraphic History and Mystic Function of the Brahmi Writing System. Green Magic. • Gass, S., M., Behney, J., and Plonsky, L. (2013). Second Language Acquisition: An Introductory Course. Routledge. • Allwright, Dick; Hanks, Judith (2009). The Developing Language Learning: An Introduction to Exploratory Practice. Basingstoke: Palgrave MacMillan.	

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Course: 2.4 (AECC) **Otolaryngology**		
Objectives	After completing this course, the student will be able to understand to: a) Identify the causes and signs/symptoms of different pathological conditions of the ear leading to hearing loss, b) Understand the principles of management of diseases of pathological conditions of the ear leading to hearing loss, c) Identify the causes and signs/symptoms of different pathological conditions of the laryngeal system leading to voice disorders.	
Unit 1	**External and Middle Ear and Their Disorders** a) Congenital anomalies of the ear b) Diseases of the external and middle ear: Inflamamtion, eustachian tube dysfunction, tumors, perforation and ruptures of the tympanic membrane, Cholesteatoma c) Infections of external and middle ear: Acute and chronic Otitis media, d) Otosclerosis e) Trauma to the temporal bone f) Facial nerve and its disorder	**12 Hours**
Unit 2	**Inner Ear and its Disorders** a) Clinical anatomy of inner ear b) Congenital anomalies	**11 Hours**

	c) Meniere's Disorder d) Ototoxicity e) Presbycusis f) Disorders of the vestibular system including vestibular Schwannoma g) Tinnitus and medical line of treatment h) Overview of surgical techniques for restoration and preservation of hearing	
Unit 3	**Oral Cavity, pharynx, esophagus and its Disorders** a) Common disorders of the oral cavity: Malformation and inflammations of lip and oral cavity, Benign, premalignant, and malignant tumors of the oral cavity b) Common disorders of the pharynx: Inflammatory conditions of the pharynx, tonsils and adenoids, Benign, premalignant, and malignant tumors of the pharynx c) Common disorders of esophgus: Congenital and acquired diseases of the esophagus	**11 Hours**
Unit 4	**Larynx and its Disorders** a) Clinical examination of larynx b) Stroboscopy - technique, procedure, interpretation and precautions c) Congenital laryngeal pathologies d) Inflammatory conditions of the larynx f) Benign and malignant tumors of the larynx e) Laryngectomy – overview of surgical procedure f) Phonosurgery and other voice restoration surgeries g) Airway management procedures	**11 Hours**
References	**Recommended Reading** • Clarke, R. W. (2022). Diseases of the Ear, Nose & Throat in Children: An Introduction and Practical Guide. CRC Press. • Dhingra, P. L. & Dhingra, S. (2017). Diseases of Ear, Nose and Throat (Seventh edition). Elsevier. • Maqbool, M., & Maqbool, S. (2013). Textbook of Ear, Nose and Throat Diseases (1st edition). Jaypee Brothers	

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Course: 2.5 (OE) **Basics of Sign Language**		
Objectives	After completing the course, the student should be able to: a) Understand Sign Language as a Complete Language b) Discuss the two manual options with reference to Indian special schools c) Describe manual options in the light of issues like language, culture and identity d) Describe the finger spelling and basic vocabulary of Indian sign language e) Explain the phonology, morpho-syntax of Indian sign language f) Discuss the relevant issues like literacy, training with reference to manual options	
Unit 1	**Understanding Indian Sign Language** a) Sign Language as a Complete Language: Concept, characteristics, and common misunderstandings about sign	**11 Hours**

	language. b) The history of ISL: Its origin, development and relationship with other signed (Indian Signing Systems and other dialectal variations) and spoken languages c) Myths and facts about ISL and ISS d) Basic Awareness of Paradigms of D/Deafness; Communicative challenges / concerns; Deafness with reference to culture, language, identity, minority status, deaf gain, literacy and inclusion e) Various Educational options for deaf in India: Oralism, Total communication and educational bilingualism: Current Scenario, Challenges, Pre-requisites and fulfilling prerequisites f) Deaf communities and sign languages in other countries, in comparison to ISL	
Unit 2	**Indian Sign language and its linguistic structures** a) Fingerspelling of ISL b) Signing basic vocabulary in ISL c) Phonology of ISL: Handshapes, Orientation, Location, Movements and Non-Manual d) Morpho-Syntactic Structures of ISL: Word order, negation, Pronouns, Plurals, Tenses, Questions e) Expression of Suprasegments and Emotions in ISL f) Grammatical differences between Spoken and Indian Sign Language.	**12 Hours**
Unit 3	**ISL in Daily Communication and Skill Development Challenges** a) Need for 'Motherese' (tuning language to suit young children) and age-appropriate discourse with children with appropriate language, b) Developmental Milestones in manual communication (ISL) c) Status of ISL in India d) Role of Deaf Interpreter and Hearing Interpreter e) Challenges in implementing ISL in daily communication f) Legislative Provisions for ISL in India	**11 Hours**

Unit 4	**Method of Teaching, Evaluation and Guidance of Manual Communication in India** a) Developing literacy among Deaf with reference to manual options b) Methods in teaching manual communication (ISS and ISL) for different age groups c) Supporting Manpower for Deaf individuals in mainstream schools d) Monitoring and measuring development of ISL/ ISS in students: Receptive and expressive mode e) Training and guidance for families/teachers for tuning home and mainstream school environments: Current scenario and strategies f) Measures to be taken to while using manual form of communication in one-to-one conversation and in groups: Do's and Dont's g) Sign language in social and other media	**11 Hours**
Practicum	a) Watch the videos and identify at least 50 basic signs in ISL b) Able to sign at least 50 basic signs in ISL c) Use ISL grammar on 5 cases as an augmentation to speech-language therapy d) Learn how to sign 5 English rhymes in English and use it for therapy purposes	
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Course: 2.6 (SEC) **Clinicals in Speech Language Pathology -II**		
	General Considerations After completion of clinical postings in Speech–language pathology, the student will have the concepts (know), ability to apply (know-how), demonstrate skills (a clinical diary/logbook based on clinical reports/recordings) (show) and carry out the following on patients/client contact (do) the following:	
	Know a) Procedures to obtain a speech language sample for speech and language assessment from children of different age groups such as preschoolers, primary school and older age groups. b) The tools to assess language impairment in children (with hearing impairment, specific language impairment/Developmental Language Disorder, Intellectual disabilities, Autism Spectrum Disorders, Specific Learning Disability). c) Document test materials (Indian/ Western) used in the assessment of child language disorders. d) Calculation of percentage of disability for persons with communication disorder as per RPwD, 2016 **Know-how** a) To evaluate components of language in children using informal assessment methods. b) To administer at least two standard tests for childhood language disorders. c) Differentially diagnose SLI/DLD, ASD, ADHD, ACA, HI, SLD and IDD d) Evaluate speech and language characteristics of Acquired Childhood Aphasia using available test tools. **Show**	

	a) Demonstrate on how to perform a detailed interview of children with language disorders and their parents b) Evaluate the speech and language skills of children with delay in speech and language development using standardized test material. c) Diagnose HI, ACA, IDD, ASD and ADHD using a standardized test tool. d) Diagnose Specific Learning disability using an available screening/ diagnostic tool. e) Demonstrate speech- language stimulation techniques and other approaches used for management of child language disorders and discuss its clinical applications. f) Use at least one evidence-based intervention approach/technique (including speech and language stimulation techniques) used for the treatment of children with language disorders in your therapy session and document the outcome. g) Record a conversation sample of toddler (2-3 years), preschool (3-5 years), and school-age (5-6 years) children. Perform a language transcription and analyze for form, content, and use. h) Record mother-child interaction of typically developing children of different age groups. Compare linguistically the outputs from mother and child across the age groups. Make inferences on the socio-cultural influences in these interactions. i) Make a list of loan words in 2 familiar languages based on interaction with typically developing children from 2 to 10 years. Discuss the influence of bilingualism or multilingualism on vocabulary. j) Assessment of pre-linguistic skills-minimum of two children **Do** a) Case history-minimum of three children with speech and language disorders. b) Oral peripheral examination- minimum of three children c) Language evaluation report – minimum of three children d) Evaluate children with language disorders using protocol at your department/ institute and document the same. e) Make a therapy observation report for children with language disorders. f) Make a therapy plan for children with language disorders.	

	g) Plan and prepare a low tech AAC device for children with language disorders	
	Course: 2.7 (SEC) **Clinicals in Audiology -II**	
	General Considerations After completion of clinical postings in Audiology, the student will have the concept (Know), ability to apply (Know-how), demonstrate in a clinical diary/log book (Show), and perform (Do) the following on clinical population.	
	Know a) Methods for subjective calibration of audiometers. b) Materials commonly employed in speech audiometry. c) Calculate pure tone average, % of hearing loss, minimum and maximum masking levels. d) Different types of hearing loss and its common causes e) Functional hearing loss tests for children (Swinging story test, Yes-No, Variable pulse count) and adults (Stenger, Lombard, Yes-No) f) Screening questionnaires/batteries to detect CAPD (SCAP, STAP) **Know-how** a) To obtain detailed case histories from clients or parents/guardians. b) To carry out commonly used tuning fork tests. c) To administer pure tone audiometry, including appropriate masking techniques on adults d) To administer tests to find out speech reception threshold, speech identification scores, and most comfortable and uncomfortable levels in adults. e) To administer a reliable test battery to differentiate between CP and RCP f) To construct a CAPD test battery **Show** a) Plotting of audiograms with different degree and type with appropriate symbols – 2 audiograms per degree	

	and type b) Detailed case history taken and its analysis c) Calculation of degree, type, and percentage of hearing loss on 5 sample conditions d) Plotting the results of tests to differentiate between CP and RCP e) Plotting the results of tests of functional hearing loss in children, Adults f) Tabulate scores of different tests of CAPD **Do** a) Case history on at least 5 adults and 3 children with hearing disorders b) Tuning fork test on at least 5 individuals with conductive and 5 individuals with sensorineural hearing loss c) Pure tone audiometry with appropriate masking on 5 individuals with conductive, 5 individuals with SN hearing loss, and 3 individuals with unilateral/asymmetric hearing loss d) Speech audiometry on 5 individuals with conductive, 5 individuals with SN hearing loss, and 3 individuals with unilateral/asymmetric hearing loss e) Administer tests to differentiate between CP and RCP on at least 5 cases with sensorineural hearing loss f) Administer tests for functional hearing loss in at least two individuals g) Administer a test battery of CAPD tests in at least one child and one adult with CAPD (SPIN, GDT, Dichotic CV/Digit, MLD, Pitch/Duration pattern test)	
Course: 2.8 (AECC) **Language II- English for Work and Career**		
Objectives	After completing this course, the student will be able to: a) Develop skills in the front desk management b) Learn about Business English	
Unit 1	**English for Front Desk Management** a) Greeting, Welcoming b) Dealing with Complaints, Giving Instructions or Directions	

	c) Giving Information: About Various Facilities, Distance, Area, Local Specialities, d) Consultation and Solution of Problems e) Accepting Praises and Criticism, Apologizing	
Unit 2	**Fluency and Etiquettes** a) Polite sentences and Words b) Use of Persuading words c) Intonation and Voice Modulation d) Developing Vocabulary	
Unit 3	**Business Speeches** a) Principles of Effective Speech and Presentations b) Speeches: Introduction, Vote of Thanks, Occasional Speech, Theme Speech c) Use of Audio- Visual Aids in Presentations	
Unit 4	**Cross-Cultural Communication** a) Dealing with Language Differences b) Probing Questions to Get Information c) Etiquettes in Cross-Cultural Communication	
References	• More Effective Communication — J. V. Vilanilam, Sage Publications Pvt. Ltd. • Effective Documentation and Presentation — Rai & Rai, Himalaya Publishing House • Communication Today — Ray Reuben, Himalaya Publishing House • Business Communication — Lesikar & Pettit, AITBS Publishers • Business Communication Today — Sushil Bahl, Response Books, Sage Publications • The Essence of Effective Communication — Ludlow & Panton, PHI • Developing Communication Skills — Krishna Mohan and Meera Banerji, Trinity Press	

	Course: 3.1 (DSC) **Structural Anomalies and Speech Sound Disorders**	
Objectives	After completing this course, the student will be able to: a) Learn about embryology of facial structures and normal speech sound development b) Identify the types of speech sound disorders, cleft lip and palate, structural anomalies related to tongue and mandible c) Carry out comprehensive assessment of individuals with speech sound disorders, cleft lip and palate, and structural anomalies related to tongue and mandible d) Plan appropriate intervention for individuals with speech sound disorders, cleft lip and palate, and structural anomalies related to tongue and mandible	
Unit 1	**Speech Sound Development and its Disorders** a) Speech sound acquisition, basics of Phonology & theories of phonological development b) Fundamentals of articulatory phonetics – phonetic description of vowels and consonants, distinctive features, acoustic theory of speech production, acoustic characteristics of vowels and consonants, coarticulation c) Speech sound disorders - terminologies, Incidence and Prevalence, causes, classification d) Factors related to speech sound disorders – cognitive-linguistic, psychosocial, metalinguistic, oral stereognosis, and associated problems	**15 Hours**
Unit 2	**Assessment and Management of speech sound disorders** a) Speech sound sampling procedures - factors related to single word and connected speech samples; imitation and spontaneous speech samples, contextual testing, recording of speech samples. b) Phonological analysis –Independent and relational, Transcription methods c) Comprehensive assessment of Speech Sound Disorders - OPME, Screening and diagnostic tests (including Indian tools) d) Determining need for intervention, prognosis and factors influencing target selection e) Basic principles and stages in therapy (treatment continuum) – establishment, maintenance, generalization and stabilization	**15 Hours**

	f) Therapy approaches for Speech Sound Disorders - Motor based and cognitive linguistic based therapy approaches – evidence-based approaches – Phonological awareness-based intervention g) Use of technology for SSD assessment and intervention and tele-rehabilitation h) Adapting approaches to individuals from culturally and linguistically diverse backgrounds, Role of family in intervention	
Unit 3	**Structural Anomalies – Introduction, Types, Characteristics and Causes** a) Embryological development of orofacial structures: face, lip, palate, mandible, and tongue b) Types, characteristics and classification - cleft lip and palate, structural anomalies of tongue and mandible c) Causes: Genetic, Environmental, syndromic, and other factors d) Velopharyngeal Mechanism and Dysfunction: Normal Physiology, types of velopharyngeal closure; Velopharyngeal Dysfunction – definition, causes, and classification e) Associated problems in persons with structural anomalies of lip, palate, tongue and mandible: speech, language, feeding, dental and occlusion, hearing, psychological	**15 Hours**
Unit 4	**Assessment and Management of Structural Anomalies** a) Team approach to Assessment and Management of Structural anomalies b) Assessment in structural anomalies: Speech [OPME, subjective assessment (perceptual protocols), speech intelligibility; Objective assessment of resonance and articulatory features], language and other factors including reporting test results using Universal Parameters c) Management of structural anomalies: Early rehabilitation- Surgical and prosthetic management; Techniques and strategies to improve feeding, speech and language. d) Telerehabilitation and AAC for structural anomalies e) Counselling and guidance: Pre-post operative counselling; Rights, privileges and disability certification of individuals with structural anomalies as per RPWD act 2016	**15 Hours**
Practicum	a) Identify the stages of speech sound acquisition by observations from videos of children from birth to 5 years of age.	

	b) List the vowels and consonants in your primary language and provide phonetic and acoustic descriptions for the speech sounds. c) Identify the vowels and consonants of your language on the IPA chart and practice the IPA symbols by transcribing words and running speech. d) Record the speech of one typically developing child from 1-8 years of age (include single word and connected speech samples), transcribe the sample, and perform phonological assessment. e) Collect 03 A/V samples of speech sound disorders, and analyse the errors f) Make a list of minimal pairs in English and in any other language (mother tongue) g) Practice instructions for phonetic placement of selected sounds. h) Develop a home plan with activities for any one speech sound error/phonological error using the therapy techniques. i) Collect therapy samples (pre-post) of speech sound disorder and analyse them j) Identify the different types of cleft lip and palate by looking at illustrations and images and represent the types using striped "Y" classification k) Listen to 10 speech samples of children with cleft lip and palate and rate their nasality/ speech (articulation and cleft type errors) based on universal reporting parameters. l) Identify the type of closure of velopharyngeal port for 5 normal individuals and 5 individuals with cleft lip and palate using videos of nasoendoscopy/ videofluroscopy. m) Perform oral peripheral mechanism examination on 10 individuals (5 adults and 5 children) and document the structure and functions of the articulators. n) Analyse the different types of occlusions in 10 individuals. o) Identify the type of glossectomy by looking at pictures/illustrations. Identify the different types of prosthesis in the management of mandibulectomy.	
References	**Common for Units 1 & 2** • Bernthal, J. E., Bankson, N. W., & Flipsen, P. (2022). Speech sound disorders in children: Articulation & phonological disorders (9th Edition). Paul H. Brookes Publishing Company. • Bowen, C. (2023). Children's speech sound disorders (3rd ed.). Wiley-Blackwell.	

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- Ladefoged & Maddison (2008). The sounds of worlds languages. Cambridge, Blackwood Publisher Inc
- Kent, R.D. & Read, C. (2002). The Acoustic analysis of speech, 2nd Ed. Delmar, Singular Publisher.
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<u>Course: 3.2 (DSC)</u> <u>Diagnostic Audiology – Advanced</u>		
Objectives	After completing this course, the student will be able to	

	a) Explain the concept of immittance and its clinical implications and perform an immittance evaluation. b) Describe the generation and factors affecting OAEs, record OAEs, and identify various auditory disorders based on the findings. c) Describe the various auditory evoked potentials and record them. d) Interpret various AEPs and detect auditory disorders based on the findings.	
Unit 1	**Immittance Evaluation** a) Principle of immittance evaluation: Concept of impedance, admittance, and their components, b) Tympanometry: definition, measurement procedure, response parameters, their measurement and normative, classification of tympanogram, clinical significance of tympanometry; c) Eustachian tube functioning tests of tympanometry: Principle and tests- Valsalva, Toynbee, William's pressure swallow, inflation-deflation test. d) Overview of multicomponent and multi-frequency tympanometry, wide band reflectance, and wideband tympanometry e) Reflexometry: definition, acoustic reflex pathway, measurement procedure, clinical applications of acoustic reflexes, special tests	**18 Hours**
Unit 2	**Otoacoustic Emissions** a) Origin and classification of OAEs b) Principle of instrumentation used for recording OAEs c) Recording and interpretation of OAEs: SOAE, TEOAEs, and DPOAEs d) Clinical applications of OAEs: SOAE, TEOAEs, and DPOAEs e) Contralateral suppression of OAEs and its clinical implications	**12 Hours**
Unit 3	**Auditory Evoked Potentials (AEPs): Auditory Brainstem** a) Introduction and classification of AEPs b) Instrumentation and principles of AEP recording techniques c) Electrocochleography (ECochG)	**18 Hours**

	d) Auditory brainstem response generators e) Protocol and procedure of recording auditory brainstem response f) Factors affecting auditory brainstem responses g) Clinical applications of ABR h) Brainstem responses to speech and other complex signals	
Unit 4	**Overview of other AEPs and their Clinical Applications** a) Auditory Middle Latency Responses (AMLR) b) Auditory Long Latency Responses (Obligatory responses) c) Other long latency potentials such as P300, MMN, P600, N400, T-complex, CNV) d) Auditory Steady State Responses (ASSR)	**12 Hours**
Practicum	a) Measure admittance in the calibration cavities of various volumes and note down the observations b) Calculate Equivalent ear canal volume by measuring static admittance in an uncompensated tympanogram (10 ears) c) Do a tympanogram in the manual mode and measure peak pressure, peak admittance, and ear canal volume manually using the cursor (10 ears). d) Measure the gradient of the tympanogram (10 ears) e) Administer Valsalva, Toynbee, and William's pressure swallow test (5 ears) f) Record acoustic reflex thresholds in the ipsi and contra modes (10 ears) g) Plot Jerger box pattern for various hypothetical conditions that affect acoustic reflexes and interpret the pattern and the corresponding condition. h) Carry out an Acoustic reflex decay test on 5 individuals i) Record TEOAEs and note the amplitude, SNR, noise floor, and reproducibility at the octave and mid-octave frequencies. Note down the stimulus stability and the overall SNR (10 ears). j) Record DPOAEs and note the amplitude, SNR, noise floor, and reproducibility at octave and mid-octave frequencies (10 ears). k) Trace the threshold of ABR (in 5 dB nHL steps near the threshold) for clicks and tone bursts of different	

	frequencies (2 persons) and draw latency intensity function. l) Record ABR using single versus dual channels and note the differences. m) Record ABR at different repetition rates in 10/sec step beginning with 10.1/11.1 per second. Latency-repetition rate function needs to be drawn. n) Record each of the three transducers (HP, insert phones, and bone vibrator) and polarities and draw a comparative table of the same. Students should also record with different transducers without changing the protocol in the instrument and calculate the correction factor required. o) Record ASSR for stimuli of different frequencies and estimate the thresholds	
References	**Unit 1** • Hunter, L., & Shahnaz, N. (2013). Acoustic Immittance Measures: Basic and Advanced Practice (1 edition). San Diego, CA: Plural Publishing. • Katz, J., Chasin, M., English, K., Hood, L.J & Tillery, K.L. (2019). Handbook of Clinical Audiology. (7th edition). Wolters Kluwer. • Stach, B.A., & Ramchandran, V. (2021). Clinical Audiology: An Introduction. (3rd edition). Plural Publishing, Inc. • Gelfand, S. A. (2009). Essentials of Audiology. Thieme • Roeser, R. J., Valente, M., & Hosford-Dunn, H. (2007). Audiology: Diagnosis. Thieme. **Unit 2** • Robinette, M. S., & Glattke, T. J. (Eds.). (2007). Otoacoustic Emissions: Clinical Applications (3rd edition). New York: Thieme. • Hall, J. W. (2000). Handbook of Otoacoustic Emissions. Cengage Learning. • Hall, J. W., & Dhar, S. (2010). Otoacoustic Emissions: Principles, Procedures, and Protocols (1 edition). Plural Publishing Inc. • Robinette, M. S., & Glattke, T. J. (Eds.). (2007). Otoacoustic Emissions: Clinical Applications (3rd edition). New York: Thieme.	

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Course: 3.3 (DSC) **Aural Rehabilitation**		
Objectives	After completing this course, the student will be able to a) explain the impact of hearing impairment on auditory development and spoken language communication b) list various types of communication options available for individuals with hearing impairment c) describe factors that affect acoustic accessibility and strategies to manage them at home and in the classroom d) design activities for auditory training for children with multiple disabilities e) select appropriate management strategies and design activities for auditory training at different levels for children and adults	
Unit 1	**Listening, Spoken Communication, and Acoustic Accessibility** a) Need for early intervention programs: Critical age and sensitivity period b) Overview of the impact of hearing loss and hearing devices on speech perception	**15 Hours**

	c) Rehabilitative methods and techniques for pre-lingual and post-lingual individuals with hearing loss. d) Tools to assess outcome measures with auditory learning/training e) Factors affecting the outcome of auditory learning/training f) Psychological impact of hearing loss g) Impact of hearing loss on quality of life, education, employment, and financial burden	
Unit 2	**Communication Options (Manual Form of Communication and speech reading) for Children with Hearing Loss** a) Manual vs. oral form of communication: Systems that parallel spoken English (Manual alphabet); interactive systems (cued speech: Rochester method); Alternative systems (American sign language and Indian Sign Language), Contrived system (SEE-I, SEE-II, Signed English) b) Total communication: Candidacy for manual form of communication and oral form of communication c) Definitions and need for speech reading d) Visibility of speech sounds: audio-visual perception vs. visual perception e) Overview of speech reading tests, including Indian tests • Analytic vs. synthetic tests • Adults Vs Children • Methods of speech reading training: • Analytical vs synthetic (Adults vs children) • Speech reading activities • Candidacy for speech reading training • Speech tracking • Factors influencing speech reading	**15 Hours**
Unit 3	**Educational placement and optimal listening and learning environments** a) Educational placement of hearing-impaired children: Preschool training, integration, partial integration, segregation, day school vs. residential school, inclusive vs integrated school. b) Criteria for recommending the various educational placements	**15 Hours**

	c) Factors affecting their outcome d) Creating an optimum listening and learning environment e) Modifications of environment for optimal listening for the individuals with hearing impairment (home and school): Acoustic, lighting, class strength, distance, reverberation, personal and group amplification devices f) Educational problems of individuals with hearing impairment and the measures taken to overcome the problems in India g) Individualized Educational Plan (IEP)	
Unit 4	**Management of children with special needs and rehabilitation of older Adults with Hearing Impairment** a) Management of the children with deaf-blind b) Management of other multiple disabilities like hearing loss associated with cognitive problems c) Overview of the management of individuals with auditory neuropathy spectrum disorder d) Overview of the management of children with central auditory processing problems e) Special strategies to rehabilitate older adults with hearing impairment. f) Communication strategies (Anticipatory and Repair strategies) and auditory training for adults with hearing impairment. g) Communication strategies training formal instruction, guided learning, real-world practice h) Computer-based training modules for children and adults with hearing disorders	**15 Hours**
Practicum	a) Watch documentaries such as "Sound and Fury" (2001). Write a reflection of why parents made communication choices for their children b) Follow on links to the above film that shows the status of the children with hearing impairment after a few years. c) Learn at least 50 signs across different categories of Indian sign language. Make a video of you signing 10 sentences. Have a classmate interpret them. d) Interview a parent of a child with hearing impairment on how they adapted their child to wear the hearing aids and /or implant. What were the first responses to sound they observed and how language and speech develop? e) Complete a functional auditory evaluation on one child with hearing loss. Do a speech and language evaluation	

	and also write a report on the child strengths and weakness. f) Design and demonstrate auditory learning activities at the four levels awareness, discrimination, identification and comprehension. Ensure that the activities encompass different skill level and difficulty levels. g) Develop a short audio/film/pamphlet for parents in your local language on one of the following: teaching parent to trouble shooting the hearing aid/cochlear implant, establishing consistent use of listening device, activities to facilitate language across different age groups h) Visit a school for the deaf. Document your observation about the acoustic environment in the class, strategies used by the teacher to promote listening and spoken language i) Listen to the speech recorded using hearing loss simulators (available on internet) and experience the sounds as heard by persons with different degrees of hearing loss. j) Write your observations on the same k) Simulate hearing loss by plugging ears and administer sentence tests of word recognition. Write a report on the performance l) Administer any three self-report questionnaires to three adults who have hearing loss and write a report of the relationship of their hearing loss to performance on the scale m) Administer any three self-report questionnaires to three adults and older adults who have hearing loss and write a report of the relationship of their hearing loss to performance on the scale n) Design a session of aural rehabilitation program (Objectives, activities, outcomes assessment) for adults recently fitted with cochlear implant, group of 4 older adults o) Design an individualized program for an executive using a hearing aid for the first time, and an adult moving from an analog to a digital hearing aid	
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Course: 3.4 (AECC) **Electronics and Acoustics**		
Objectives	After completing this course, the student will be able to: a) Identify the types of power supply for clinics and biomedical instruments, b) Understand the basic aspects of digital signal processing and speech processing, c) State the theoretical basis of acoustics required for audiologists, d) Understand the basic aspects of information technology, and e) Analyze the principles of working of major instruments used in assessment.	
Unit 1	**Introduction to Electronics and Signal processing** a) Basic principle of operation and working of • Variable resistors, digital potentiometers • Capacitors, Inductors, transformers, Diodes, LEDs, • Amplifiers –concept of gain, Frequency response and bandwidth b) Power supply • DC power supply – block diagram description and working	**12 Hours**

	• AC power supply, earthing, isolation transformers • UPS c) Fundamentals of digital signal processing (DSP) • Decimal and Binary number system, conversion of decimal number to binary number, conversion of binary number to decimal number, logic gates, flip flops and counters • Analog signal & digital signal–Representation and comparison, merits and demerits • Converting analog signal to digital signal and digital to analog signal • Basic structure of digital signal processing system • Application of DSP in communication sciences and disorders	
Unit 2	**Introduction to Acoustics** a) Physics of Sound • Nature and Propagation of sound • Frequency, wavelength, amplitude, velocity • Sound pressure level • Loudness, Phon, equal loudness contour b) Sound propagation in closed rooms • Reflection, transmission and absorption, absorption coefficient • Reverberation, reverberation time, Sabine's formula, techniques to reduce reverberation time • Sources of background noise in a room, speech to noise ratio • Acoustically treated rooms – Basic requirements, concept and structure of rooms for hearing testing and sound recording. c) Transducers & Basics of Sound Recording • Microphones- moving coil, condenser, electret, bone vibrators etc. • Loudspeakers, headphones, receivers – moving coil and balanced armature • Representation of sound signal and sound recording - time domain, frequency domain, Spectrogram, system and software for sound recording	**11 Hours**

Unit 3	**Introduction to Information Technology** a) Computer hardware • Processor, mother board, hard disk, RAM • Specification of personal computers and laptops b) Software • Operating systems-Types, comparison and functioning • Application software used in Communication Sciences and disorder • Mobile Apps-concept & functioning c) Computer networking • Structure of internet and worldwide web • Local Area Network –structure and components • Tele diagnosis & Tele rehabilitation	**11 Hours**
Unit 4	**Instrumentation in Speech and Hearing** a) Common elements in instruments • Pre-amplifiers and Power amplifiers • Filters-role in signal processing, different types and their frequency response b) Principle of operation, technology of • Digital hearing aids • Group amplification and Assistive Listening Devices • Audiometers • Middle ear analyzers • Systems for speech and voice analysis c) Calibration of audiometers & immittance meter • Equipment for calibration – sound level meter, artificial ear, artificial mastoid, standard couplers (ANSI, IEC)	**11 Hours**

	• Equipment setup and procedure for output calibration of pure tone audiometer in AC (Headphone, insert receiver, Loudspeaker) and BC mode.	
References	**Unit 1** • Theraja, B. L. (2008). Textbook of Electrical Technology: Chand (S.) & Co Ltd, India. • Godse, A. P., & Bakshi, U. A. (2007). Electronic Devices and Circuits I: Technical Publications. • Mehta.V.K. & Mehta. R (2006): Basic Engineering: S. Chand & Co. • Godse, M. A. P., & Bakshi, M. U. A. (2008). Linear & Digital IC Application: Technical Publications. • Malvino. A., & Bates. D. (2015): Electronics principle (8thed): Mc Graw-Hill education. • Oppenheim & Schafer (1989). Digital signal processing. New Delhi: Prentice Hall of India. **Unit 2** • Understanding Audio: Getting the Most Out of Your Project or Professional Recording Studio: Berklee Press. • Cavanaugh, W. J., Tocci, G. C., & Wilkes, J. A. (2009). Architectural Acoustics: Principles and Practice: Wiley. • Kleiner, M. (2011). Acoustics and Audio Technology, Third Edition (Acoustics: Information and Communication): J. Ross Publishing. • Fahy, F. J. (2000). Foundations of Engineering Acoustics: Academic Press. • Rossing, T. D., Moore, F.R. & Wheeler, P.A (2001): The Science of Sound (3rd ed): Addison-Wesley. • Beranek, L. L., & Mellow, T. (2012). Acoustics: Sound Fields and Transducers: Academic Press. • Katz, J. (2014): Handbook of Clinical Audiology (7th.ed): North American • Sandlin, R.E (2000). Textbook of Hearing aid amplification: Technical and clinical consideration: Cengage Learning. • Haughton, P., & Haughton, P. M. (2002). Acoustics for Audiologists (1st edition.). San Diego, Calif: Emerald Group Publishing Limited. • Speaks, C. E. (1999). Introduction to Sound: Acoustics for the Hearing and Speech Sciences (3 edition.). San Diego: Cengage Learning.	

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	Course: 3.5 (AECC) **Psychology for Speech and Hearing**	
Objectives	After completing this course, the student will be able to: a) Explain the scope of clinical psychology and its significance for speech and hearing b) Apply the concept of normality and abnormality to communication disorders c) Describe the cognitive, motor, emotional and social development d) Apply theories of learning and therapy techniques based on learning principles to communication problems e) Understand the principles of neuropsychological assessment	
Unit 1	**Introduction to Psychology and Clinical Psychology** a) Introduction to psychology: definition, history, schools and branches of psychology b) Introduction to clinical psychology: scope and meaning c) Historical development: modern clinical psychology d) Scope and role of clinical psychology in communication sciences and disorders e) Criteria of normality and abnormality f) Models of mental disorders: biological, psychological, social models	**11 Hours**
Unit 2	**Assessment Procedures in Clinical Psychology** a) Case history b) Clinical interviewing c) Clinical observation d) Psychological testing: definition, types e) Assessment of cognitive functions; adaptive functioning, personality; behavioural assessment; vocational assessment; neuropsychological assessment	**11 Hours**

	f) Classification of abnormal behaviour: history, need and rationale of classification; g) Current classificatory system: DSM 5 TR and ICD 11	
Unit 3	**Developmental Psychology** a) Child and developmental psychology: definition and scope: meaning of growth, development, and maturation b) Principles and stages of development c) Motor development: definition; principles; stages; decline with age; handedness d) Cognitive development: definition; Piaget's theory of cognitive development; evolutionary development of intelligence; decline with age. e) Emotional development: definition; components; characteristics; stages f) Social development: definition; stages; factors influencing social development	**11 Hours**
Unit 4	**Learning, Behaviour Modification and Counselling** a) Learning: definition and characteristics b) Theories of learning: Pavlov's classical conditioning: experiments and principles; Skinner's operant conditioning: experiments and principles; cognitive learning c) Behavioral assessment: problem behavior assessment and skill behaviour assessment. d) Therapeutic techniques based on learning principles: problem behaviour management and skill behaviour management e) Counselling: differences and similarities between guidance, counselling, and psychotherapy f) Types of counselling: Directive & non- directive g) Characteristics of a good counsellor	**12 Hours**
References	**Unit 1** • Morgon C.T., King R.A., Robinson N.M. (2017). Introduction to Psychology. Tata McGraw Hill Publishing Co. • Coleman J.C. (1984). Abnormal psychology and modern life. Taraporevala Sons and Co. **Unit 2**	

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<tr><td colspan="2"><u>Course: 3.6 (SEC)</u>
<u>Clinicals in Speech Language Pathology - III</u></td><td></td></tr>
<tr><td></td><td>General Consideration
a) Clinical work should be primarily linked to the theory courses of the semester.</td><td></td></tr>
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	b) After completion of clinical postings in Speech–Language Pathology, the student will have the concepts (know), ability to apply (know-how), demonstrate skills (a clinical diary/logbook based on clinical reports/recordings) (show) and carry out the following on patients/client contact (do) the following	
	Know a) Age of acquisition of speech sounds and phonological awareness skills in different languages. b) Instruments/test materials/software (objective and subjective) and its purpose and functioning in the diagnosis of Speech Sound Disorders. c) Norms for phonotactics, clusters and phonological patterns in different Indian languages d) Feeding postures and feeding appliances (illustrations and images) used for infants with cleft lip and palate. e) Various types of prosthesis used (with images) in the management of cleft of lip and palate f) Subjective and objective methods for assessment of VPD (Naso-endoscopic procedure on assessment of VPD g) Government programs available for rehabilitation of children with cleft lip and palate h) Calculation of percentage of disability for persons with Maxillofacial anomalies as per RPwD 2016. **Know-how** a) Administer and interpret deep test of articulation in different languages. b) Use software/ instruments used for assessment and management of speech sound disorders and maxillofacial anomalies. c) Differentially diagnose the speech characteristics of articulation disorder and phonological disorder. d) Identify the differences in the type of speech sound errors in children with hearing impairment, cleft lip and palate, childhood apraxia of speech and childhood dysarthria. e) Differences in the speech characteristics of children with cleft of lip, cleft of palate, cleft of lip and palate and submucous cleft. f) Identify various compensatory and obligatory errors in recorded samples of individuals with cleft lip and palate. g) Identify the type of closure of velopharyngeal port for individuals with and without cleft lip and palate from videos of nasoendoscopy/ videofluroscopy. h) Identify the type of glossectomy from images.	

	Show a) Demonstrate how to perform a detailed interview for individuals with speech sound disorders. b) Demonstrate how to perform a detailed interview for individuals with maxillofacial anomalies. c) Demonstrate the procedure for oral peripheral mechanism examination. Compare the differences in typical children, children with speech sound disorders and children with cleft lip and/or palate. d) Perform independent analysis (consonant- vowel inventory, syllable word shapes inventory, and syllable stress patterns inventory) of speech samples of typically developing children of different ages (2-6 years). e) Perform relational analysis of speech samples of typically developing children of different ages (2-6 years). f) Administer and interpret the results of articulation test on children with speech sound disorders. g) Record speech samples of typically developing children in the age group- birth to 1 year, 1-2 years, 2-3 years, 3-4 years and 5 years and document the speech sound errors and phonological patterns present in them. h) Assess oral mechanism, speech sound errors and speech intelligibility in children with speech sound errors and cleft lip and palate. i) Demonstrate techniques for management of speech sound disorders. j) Examine the oral structures of individuals with cleft lip and palate and document the structures using Modified Y-strip classification. k) Rate nasality, speech intelligibility, and document the articulatory errors from speech samples of individuals with cleft lip and palate. l) Use universal parameters to assess and document the speech characteristics of individuals with cleft lip and palate. m) Determine the acoustic characteristics of consonants and vowels using PRAAT and compare the differences in these features across these speech sounds. **Do** a) Case history - minimum of 5 individuals with speech sound disorders and cleft lip and palate b) Record and transcribe speech samples (standardized passage/sentences/ words) of 2 individuals each with speech sound disorders and cleft lip and palate and analyse the speech characteristics using subjective and objective methods.	

	c) Prepare an oromotor kit for oral peripheral mechanism examination. d) Oral peripheral examination on minimum of 2 individuals with speech sound disorders and cleft lip and palate. e) Classify different types of cleft lip & palate at least for 2 individuals using Striped Y system. f) Calculate nasalance using nasometer/ nasal view for individual with R/UCLP using standardized passage/sentences/ words. g) Assess the nasal air emission using Glatzel mirror. h) Plan and provide intervention for children with speech sound disorders and cleft lip and palate. i) Using counselling checklists, counsel at least 1 client each with Speech Sound Disorder and Cleft lip and Palate and prepare a report for the same.	
Course: 3.7 (SEC) **Clinicals in Audiology - III**		
	General Considerations After completion of Audiology clinical postings, the student will have the concepts (know), ability to apply (know-how), demonstrate skills (a clinical diary/logbook based on clinical reports/recordings) (show), and carry out the following on patients/client contact (do) the following:	
	Know a) Different protocols and interpretations in tympanometry and reflexometry. b) Different protocols and interpretations are used in auditory brainstem responses and ASSR c) Protocols for screening and diagnostic otoacoustic emissions and their interpretation **Know-how** a) To administer auditory brainstem responses and ASSR for threshold estimation and ABR for sight of lesion testing b) To administer tympanometry and reflectometry c) To administer multifrequency tympanometry and calculate the resonance frequency d) To administer OAEs	

	Show a) Analysis of ABR waveforms – threshold estimation 5 and site of lesion 5 b) Analysis of immittance audiometry and relating to other tests–5 individuals with conductive and 5 individuals with sensorineural hearing loss c) Analysis of OAEs – record OAEs in 5 normal and 5 hearing impaired subjects **Do** a) Threshold based on ABR 5 adult b) TEOAE and DPOAE on 5 adults c) Immittance evaluation on 5 adults	
Course: 3.8 (OE) **Environmental Studies**		
Objectives	After completing this course, the students should be able to: a) Understand the structure, function, and importance of ecosystems and the multidisciplinary nature of environmental studies. b) Identify and evaluate natural resources and biodiversity, including threats, conservation strategies, and India's ecological richness. c) Examine major environmental issues and pollution types. d) Explore human-environment interactions through different methods.	
Unit 1	**Introduction to environmental studies and Ecosystems** a) Multidisciplinary nature of environmental studies; components of environment- atmosphere, hydrosphere, lithosphere and biosphere b) Scope and importance; concept of sustainability and sustainable development. c) What is an ecosystem? Structure and function of ecosystem; Energy flow in an ecosystem: food chain, food web and ecological succession. Case studies of the following ecosystems:	

	• Forest ecosystem • Grassland ecosystem • Desert ecosystem • Aquatic ecosystem (ponds, streams, lakes, rivers, oceans, estuaries)	
Unit 2	**Natural resources: Renewable & Non-renewable Resources and Biodiversity and Conservation** a) Land resources and land use change; land degradation, soil erosion and desertification. b) Deforestation: causes and impacts due to mining, dam building on environment, forests, biodiversity and tribal populations. c) Water: use and over-exploitation of surface and ground water, floods, droughts, conflicts over water (international & inter-state) d) Heating of earth and circulation of air; air mass formation and precipitation e) Energy resources: Renewable & Non-renewable energy sources, use of alternate energy sources, growing energy needs, case studies. f) Levels of biological diversity: genetic species and ecosystem diversity; biogeography zones of India; biodiversity patterns and global biodiversity hot spots. g) India as a mega-biodiversity nation; endangered and endemic species of India h) Threats to biodiversity: habitat loss, poaching of wildlife, man-wildlife conflicts, biological invasions; conservation of biodiversity: in-situ and ex-suit conservation of biodiversity i) Ecosystem and biodiversity services: ecological, economic, social, ethical, aesthetic and informational value.	
Unit 3	**Environmental Pollution and Environmental Policies & Practices** a) Environmental pollution: types, causes, effects and control; air, water, soil, chemical and noise pollution b) Nuclear hazards and human health risks c) Solid waste management: control measures of urban and industrial waste d) Pollution case studies e) Climate change, global warming, ozone layer depletion, acid rain and impacts on human communities and agriculture. f) Environment laws: environment protection act; air (prevention and control of pollution) act; forest conservation	

	act; international agreements; Montreal and Kyoto protocols and conservation on biological diversity (CBD). The chemical weapons convention (CWC) g) Nature reserves, tribal population and rights, and human, wildlife conflicts in Indian context.	
Unit 4	**Human communities and the environment and Field work** a) Human population and growth: impacts on environment, human health and welfares. b) Carbon foot-print c) Resettlement and rehabilitation of project affected persons; case studies d) Disaster management: floods, earthquakes, cyclones and landslides e) Environmental movements: Chipko, silent valley, Bishnios of Rajasthan f) Environmental ethics: role of indian and other religions and cultures in environmental conservation g) Environmental communication and public awareness, case studies (e.g., CNG vehicles in Delhi) h) Visit to an area to document environment assets; river/forest/flora/fauna, etc i) Visit to local polluted site- urban/rural/industrial/agricultural j) Study of common plants, insects, birds and basic principles of identification k) Study of simple ecosystems- pond, river, Delhi Ridge etc	
Course: 4.1 (DSC) **Voice Disorders and Laryngectomy**		
Objectives	After completing this course, the students should be able to: a) Describe characteristics of good, normal, abnormal and alaryngeal voice and identify voice disorders b) Explain etiology related to voice problems and its prevention c) Assess good, normal and abnormal voice. d) Provide counselling and therapy to individuals with voice disorders and laryngectomy.	
Unit 1	**Basic concepts in voice and its production** a) Review of anatomy of respiratory, laryngeal, resonatory systems and vocal folds (in detail). b) Voice-definition and characteristics. c) Physiology of voice – voice production, Theories of phonation, pitch and loudness change, voice registers,	**15 Hours**

	resonance and voice quality d) Correlates of voice – acoustic, psycho-physical, aerodynamic and physiological correlates e) Changes in voice with age (lifespan) and factors influencing voice development	
Unit 2	**Assessment of Voice and its disorders** a) Assessment of voice: Methods and Protocols (ASHA, ELS) b) Qualitative: pitch, loudness, quality assessment, rating scales, resonance ~~protocols~~ (GRBAS, CAPE-V & others) c) Quantitative-Multi dimensional analysis of voice: Acoustic (such as F0, jitter, shimmer, LTAS, optimum pitch, formant frequencies, H/N and S/N ratio, phonetogram, DSI), aerodynamic (such as vital capacity, MPD, MAFR, Sub-glottal pressure), laryngeal (Glottogram, Inverse filtering), myographic; Measurement of resonance d) Invasive methods: laryngeal endoscopy, videostroboscopy, high speed imaging, and videokymography,. e) Self-evaluation of voice: PROM, VHI, V-DOP, VFI f) Assessment of speech and communication skills of laryngectomee individuals g) Classification systems of voice disorders and their clinical applications; Application of ICF and ICD to voice disorders	**15 Hours**
Unit 3	**Voice Disorders: Etiologies and Characteristics** a) Etiology: Organic, Neurogenic (vocal fold palsies, Spasmodic dysphonia, Essential voice tremor), psychosomatic /Functional, mutational falsetto, Systemic illness, Endocrinal, Laryngeal cancers - causes, signs, symptoms. b) Congenital conditions of larynx- characteristics, signs, symptoms, vocal symptoms: oral and nasal cavities causing voice disorders – stenosis, web, tracheo-laryngomalacia, hypernasality and hyponasality c) Voice problems in transgenders and elderly d) Voice problems in professional voice users: teachers and singers	**15 Hours**

Unit 4	**Management of Voice Disorders** a) Multidisciplinary team in the management of voice disorders b) Voice therapy approaches: Symptomatic (Facilitating techniques), Psychological, Physiological and Eclectic. c) Vocal hygiene and preventive counselling. Professional voice care d) Medical and Surgical Management of voice disorders: Common classes of drugs used and surgical procedures used in treatment of some disorders of voice e) Management of Laryngeal cancer: types of surgery (Including pre- and post operative counseling), Esophageal speech, Tracheoesophageal speech, Artificial larynx and other remedial procedure. f) Tele-rehabilitation for persons with voice disorders g) Rights, privileges and disability certification for persons with voice disorders and laryngectomy as per the RPWD Act 2016	**15 Hours**
Practicum	a) Record phonation and speaking samples (counting numbers) from five children, adult men, adult women, geriatric men and geriatric women. Note recording parameters and differences in material. b) Make inferences on age and sex differences across the samples obtained in the previous experiment using perceptual voice profiling. c) Make a note of differences in pitch, loudness, quality and voice control. Explain how voice reflects one's personality and other social aspects. d) Analyze 5 male and 5 female voice (including your own voice) in terms of acoustic, aerodynamic, laryngeal and psycho-physical aspects, including the measures of MPT and s/z ratio. e) Analyze the phonation samples of supra normal, normal and abnormal voice and generate a voice report based on these findings. Compare findings between men & women. Listen to the voice sample and identify the pitch and confirm the same by instrumental analysis. f) Perform the acoustic analysis (in 4 & 5) using at least one software i.e. Praat, Dr. Speech, MDVP, Vaghmi. g) Observe and document findings from five laryngeal examinations (pre- recorded or live) such as VLS, stroboscopy or any other relevant. h) Administer a PROM on five individuals. i) Prepare a vocal hygiene checklist.	

	j) Demonstrate therapy techniques such as vocal function exercise, resonant voice therapy, digital manipulation, push pull, relaxation exercises. k) Prepare a checklist for post-surgical voice care for benign voice disorders and for laryngectomy. l) Analyse the speech profile of individuals with laryngectomy (minimum 2). m) Identify parts of an artificial larynx and explore its use. n) Prepare a checklist illustrating care of the stoma and T- tubes in vernacular.	
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Course: 4.2 (DSC) **Amplification Devices**		
Objectives	After completing this course, the student will be able to a) identify different types of hearing aids with components tailored to different hearing needs. b) candidacy for hearing aids is assessed using subjective and objective methods to evaluate hearing loss and potential benefit. c) listening needs and selecting an appropriate hearing aid with suitable features for different settings. d) programming digital hearing aids by adjusting amplification parameters like gain, frequency response, and output levels to match the client's audiogram and specific listening requirements. e) perform electro-acoustic measurements to ensure hearing aids meet industry standards.	
Unit 1	**Basics, Classifications, and Types of Hearing Aids** a) Historical development of hearing aids: A brief overview of Mechanical, Analogue, and Digital Hearing aids. b) Classification and Types of hearing aids: • Body level, Ear level (BTE, RIC, RITE, ITE, ITC, CIC, IIC)	**15 Hours**

	• Over-the-counter hearing aids • Binaural, pseudo binaural, monaural • Analog, Programmable, trimmer digital and digital hearing aids • Routing of signals: CROS hearing aids	
Unit 2	**Technological Aspects in Hearing Aids** a) Output limiting and issues related to them: peak clipping, compression b) Concept and use of compression in hearing aids: BILL, TILL, PILL, WDRC, Syllabic Compression, Dual Compression c) Signal processing in hearing aids: Speech enhancing technology, Microphone directionality, Noise reduction algorithms d) Extended low-frequency amplification and frequency-lowering technology (transposition, compression). e) Digital wireless technologies & their application in hearing aids f) Recent advances in hearing aids include artificial intelligence.	**15 Hours**
Unit 3	**Electro-acoustic Measurements for Hearing Aids** a) Need for Electro-acoustic measurements b) Instrumentation of electro-acoustic measurements, Environmental tests c) Purpose and Parameters to be considered: OSPL90, SSPL90, HFA SSPL90, Gain, Full on Gain, HFA Full on Gain, Reference test Gain, Basic Frequency Response, Total Harmonic Distortion, Intermodulation Distortion, Coherence function, Input- Output functions, instrumentation, procedure, d) EAM of digital hearing aids and Variables affecting EAM e) National and International standards for hearing aids: BIS, IEC, and ANSI f) Environmental tests for Hearing aids	**15 Hours**
Unit 4	**Selection and Programming of Hearing Aids and Mechano-acoustic Couplers (Ear molds)** a) Pre-selection factors b) Selecting linear and nonlinear digital hearing aids	**15 Hours**

	c) Hearing aid selection using prescriptive and comparative procedures; d) Programming of hearing aids e) Verification of hearing aids using functional gain, real ear insertion gain: REIG, REUR, REAR, REOR, RESR, REIG, REAG, RECD, REDD f) Use of impedance, OAEs, and AEPs in the verification of hearing aids g) Hearing aid validation/outcome measures, including questionnaires h) Care, maintenance, and troubleshooting of hearing aids i) Counselling and orienting the hearing aid user and significant others j) Different types of Ear molds. k) Procedure for making hard and soft molds l) Laser and 3D Printing applications for ear molds and UV curing methods. m) Special modifications in the ear molds: Vents (diagonal and parallel), deep canal molds, short canal, horns, Libby horn, reverse horn, acoustic modifier n) Effects of mechano-acoustic couplers on the hearing aid output.	
Practicum	a) Listen to the output of different types and classes of hearing aids (monaural, binaural, digital hearing aids) in different settings. b) Troubleshoot hearing aids: Check the continuity of the receiver cord using a multimeter, measure the voltage of different-sized batteries using multimeter, and Check the voltage of batteries of different types and sizes c) Carry out electroacoustic measurements of hearing aids d) Program the hearing aid for different configurations and degrees of hearing loss (at least for 5 different audiograms) using different prescriptive formulae e) Program the hearing aid for different listening situations (at least 3 different situations) f) Vary the compression settings in a digital hearing aid and note down the differences in the output g) Administer a questionnaire to assess the listening needs, expectations, and hearing aid benefits of 2 persons. h) Carry out a role-play activity of counselling a hearing aid user i) Perform real ear insertion measurements using different hearing aids (body level and ear level, hearing aids of different gains)	

	j) Compare speech perception through conventional BTE and RIC hearing aids using a rating scale k) Take impression for the ear mold using different techniques, different methods, and different materials	
References	**Unit 1** • Dillon, H. (2012). *Hearing Aids* (2nd ed.). Thieme Medical and Scientific Publisher. • Fay, R. R., Moore, B. C. J., Popelka, G. R., & Popper, A. N. (Eds.). (2016). *Hearing Aids* (1st ed.). Springer International Publishing. • Kates, J. M. (2008). *Digital Hearing Aids* (1st ed.). Plural Publishing Inc. **Unit 2** • Metz, M. J. (2014). *Sandlin's Textbook of Hearing Aid Amplification: Technical and Clinical Considerations*. Plural Publishing. • Ricketts, T., Bentler, R. A., & Mueller, H. G. (2019). *Essentials of Modern Hearing Aids: Selection, Fitting, and Verification*. Plural Publishing, Inc. • Mueller, H. G., Ricketts, T. A., & Bentler, R. A. (2014). *Modern Hearing Aids: Pre-fitting Testing and Selection Considerations*. Plural Publishing Inc. **Unit 3** • Hall, J. W., & Mueller, H. G. (1998). *Audiologists' Desk Reference: Audiologic Management, Rehabilitation, and Terminology*. Singular Publishing Group. • Taylor, B., & Mueller, H. G. (2021). *Fitting and Dispensing Hearing Aids* (3rd ed.). Plural Publishing Inc. **Unit 4** • Mueller, H. G., Ricketts, T. A., & Bentler, R. A. (2014). *Modern Hearing Aids: Pre-fitting Testing and Selection Considerations*. Plural Publishing Inc. • Taylor, B., & Mueller, H. G. (2021). *Fitting and Dispensing Hearing Aids* (3rd ed.). Plural Publishing Inc. • Ricketts, T., Bentler, R. A., & Mueller, H. G. (2019). *Essentials of Modern Hearing Aids: Selection, Fitting, and*	

	Verification. Plural Publishing, Inc. • Valente, M. (2002). *Hearing Aids: Standards, Options, and Limitations*. Thieme Publishers.	
	Course: 4.3 (AECC) **Neurology**	
Objectives	After completing this course, the student will be able to understand: a) The basic concepts, functional anatomy and physiology of nervous system related to speech and hearing b) Neural organization – different structures and functions of various systems c) Neurosensory and neuromotor controls in speech, language and hearing mechanisms d) Cerebral plasticity and dominance and its relevance for speech, language and hearing disorders e) Various neural diseases, lesions, nutritional and metabolic conditions affecting speech, language and hearing f) Basic principles and assessment procedures used in speech, language and hearing disorders associated with neurological conditions, and g) Basic principles and management procedures used in speech, language and hearing disorders associated with neurological conditions	
Unit 1	**Functional Anatomy and Neurophysiology of Speech, Language and Hearing Processes** a) General introduction to neurological concepts - Scope of Neuroscience and its branches b) Neural structures – applied anatomy and physiology - Transmission of information in neural system – nerve fibers, synaptic transmission, action potential, chemical transmission, excitatory and inhibitory potential & neuromuscular transmission c) Types of neurotransmitters – inhibitory and excitatory d) Organization of the neural system – a. Peripheral nervous system b. Central nervous system – • Different lobes, subcortical structure, cerebellar system and their functions specifically for speech-language and hearing • Cranial nerves and those important for speech, language, hearing and balance	**15 Hours**

	• Spinal cord- structure and functions • Meninges of the brain and spinal cord • Networking of spinal nerves - Classification of spinal nerves their numbers and functions • Central auditory nervous system • Lower and upper motor neuron, Alpha and gamma motor neurons • The pyramidal, extra-pyramidal system. • Swallowing mechanism and neural control e) Cerebral blood supply, nourishment and protection of the brain and spine, Circle of Willis f) Cerebral plasticity and development of neural plasticity and cerebral dominance- lateralization and localization, Synaptogenesis, myelinogenesis, Equipotentiality, Axonogenesis, cerebral arborization	
Unit 2	**Neural Disorders Associated with speech and language disorders** Overview, pathophysiology and general characteristics including speech, language, cognition and swallowing for the following disorders: a) Neural infections – meningitis, encephalitis, b) Epileptic disorders – LKS, c) Hydrocephalus – source and circulation of CSF, types and etiopathogenesis d) Developmental Motor Speech Disorders - UMN lesions, LMN lesions & Mixed lesions e) Cerebrovascular diseases – ischemic brain damage – hypoxic ischemic encephalopathy, cerebral infarction – intracranial hemorrhage – intracranial, subarachnoid f) Trauma to the CNS – subdural hematoma, epidural hematoma, parenchymal brain damages g) Tumors of the CNS – gliomas, embryonal tumors of meninges, metastasis, malignant tumors h) Demyelinating diseases – multiple sclerosis, perivenous encephalomyelitis, Dementia i) Degenerative, disorders – Alzheimer's disease, Parkinsonism, Amyotrophic Lateral Sclerosis (ALS), Huntington diseases, muscular dystrophy, Alcoholic cerebellar degeneration j) Metabolic disorders- Wilson's disease, Phenylketonuria; Adrenoleukodystropy (ALD) k) Nutritional – Hereditary, acquired, neuronal storage disorders, Wernicke's encephalopathy, pellagra,	**15 Hours**

	l) Developmental anomalies – spinal cord defects, syringomalacia and bulbia, Arnold Chiari malformations	
Unit 3	**Neural Disorders Associated with Hearing Disorders** Overview, pathophysiology and general characteristics including auditory and vestibular for the following disorders: a) Auditory Neuropathy/Auditory dys-synchrony/Auditory neuropathy spectrum disorders b) Acoustic neuroma c) Vascular loop syndrome d) Temporal lobe tumor e) Temporoparietal stroke f) Neurofibromatosis-2 (NF-2) g) Vascular loop h) Auditory agnosia i) Vestibular migraine j) Anterior Inferior cerebral artery stroke k) Posterior Inferior cerebral artery stroke l) Effect of degenerative disorders (Multiple sclerosis, Alzheimer's disease) on hearing	**15 Hours**
Unit 4	**General principles in assessment and management of Neural Disorders Associated with Speech, Language and Hearing Disorders** a) Sensory, motor, oral, peripheral and other reflexes examination b) Screening and bedside neurological examination c) Clinical-pathological methods and Neuro-imaging – CT, MRI, fMRI, EEG, PET, SPECT, encephalogram etc., d) General management principles and options for childhood and adult neurogenic speech, language and swallowing disorders e) General management principles and options for childhood and adult neurogenic hearing disorders	**15 Hours**
References	• Andreatta, Richard D., (2020). Neuroscience fundamentals for communication sciences and disorders. San Diego, CA: Plural Publishing.	

- Bhatnagar, C. B. (2013). Essential of Neuroscience for the study of communicative disorders. In Neuroscience for the study of communicative disorders (4th Edition). Lippincott Williams
- Bhatnagar, S.C. (2012). Neuroscience for the Study of Communicative Disorders. Lippincott, Williams & Wilkins
- Blake, Margaret Lehman, Hoepner, Jerry K., (2023). Clinical neuroscience for
- communication disorders: Neuroanatomy and neurophysiology. San Diego, CA: Plural Publishing, Inc.
- Davis, A. G. (2013). Neurological and medical considerations. In Aphasia and related cognitive communicative disorders. New York: university press. (pp: 23-42)
- Duffy, J. R. (2013). Motor Speech Disorders: Substrates, Differential Diagnosis, and Management (3rd Ed.). University of Michigan, Elsevier Mosby.
- Eggermont, J. J. (2019). The auditory brain and age-related hearing impairment. Academic Press.
- Fogle, T. P. (2013). Neurological disorders in adults. In Essentials of communication sciences and Disorders. Delmar: Cengage learning (pp 314-354) Wilkins : Baltimore (pp 1-34)
- Leonard L. LaPointe, (2019). Atlas of Neuroanatomy for Communication Science and Disorders. Thieme Publishers New York.
- Musiek, F. E., Shinn, J. B., Baran, J. A., & Jones, R. O. (2020). Disorders of the auditory system. Plural publishing.
- Robert H. Brookshire; Malcolm R. McNeil, (2014). Introduction to Neurogenic Communication Disorders. Elsevier Mosby.
- Rouse, M. H. (2019). Neuroanatomy for speech-language pathology and audiology. Jones & Bartlett Learning.
- Ryan Splittgerber, (2019) Snell's Clinical Neuroanatomy (8th Ed.). Wolters Kluwer.
- Seikel, John A., Konstantopoulos, Kostas, Drumright, David G., (2020). Neuroanatomy and Neurophysiology for Speech and Hearing Sciences. Plural Publishing, Inc.
- Webb, W. G., & Adler, R. K. (2008). Neurology for the speech-language pathologist (5th ed.). St. Louis, Mo: Mosby/Elsevier.

	Course: 4.4 (AECC) **Research Methods and Statistics**	
Objectives	After completing this course, the student will be able to understand: a) Be able to understand the nature and importance of research in the field of audiology and speech-language pathology b) Be exposed to the basics of design and execution of research, c) Learn the basic statistical tools, and application of these tools in speech and hearing d) To understand the ethical guidelines for conducting research on humans.	
Unit 1	**Introduction to Research Methods** a) Meaning and purpose of research b) Need for research in audiology and speech-language pathology c) Funds/grants for research d) Steps in research: identification, selection e) Formulation of research questions: aims, objectives, statement of problem, hypothesis f) Types of variables; types of sampling procedures (random and non-random); g) Types/methods of data collection and their advantages and disadvantages h) Reliability and validity (internal and external validity)	**15 Hours**
Unit 2	**Research Design in Audiology and Speech-Language Pathology** a) Types of research: survey, ex-post facto research, normative research, standard-group comparison b) Experimental and quasi experimental research: group design & single subject design c) Compare and contrast between groups and repeated measures design d) Basic epidemiologic concepts and principles e) Epidemiologic data sources and measurements f) Epidemiologic methods – questionnaire survey, screening, personal survey, testing g) Media - their advantages and disadvantages h) Incidence and prevalence of hearing, speech, language disorders as per different census (NSSO, WHO)	**15 Hours**

	i) Ethics of research j) Internal and external validity of research k) Documentation of research: scientific report writing, different formats or styles (APA, AMA and MLA)	
Unit 3	**Introduction to Statistics** a) Introduction to Statistics – definition, functions, scope and limitations b) Scales of measurement: nominal, ordinal, interval, ratio c) Introduction to Descriptive and Inferential statistics d) Classification of data: Qualitative, Quantitative, Chronological, Geographical, Conditional e) Types of data: Individual, Discrete, Continuous f) Measures of Central tendency (with numerical illustrations): Mean, Median, Mode g) Measures of variability (with numerical illustrations): Range, Quartile deviation, Standard deviation h) Normal distribution: General properties of normal distribution, numerical illustrations on area under the normal curve 3.9 Variants from the normal distribution: Skewness, Karl Pearson's coefficient of Skewness (with numerical illustrations) and Kurtosis	**15 Hours**
Unit 4	**Application of Statistics in Research Designs** a) Correlation (with numerical illustrations): Meaning, Types, Pearson's Product Moment Correlation Coefficient, Spearman's Rank order correlation coefficient b) Applications of statistics in the field of Audiology and Speech-language pathology. c) Choosing statistics for different research designs d) Concept of standard error e) Statistical inference: Procedure for testing of hypothesis f) Testing the significance of difference between two means (with numerical illustrations); large sample tests (z-test) – Comparison between one sample and one mean, comparison between two independent samples; small sample tests (t-test) – Comparison between one sample and one mean, comparison between two independent samples, two related samples g) Introduction to Analysis of variance	**15 Hours**

	h) Introduction to Non-parametric tests: Wilcoxon Signed Rank test, Mann-Whitney U test i) Introduction to analysis of qualitative data: Item analysis, Chi-square test j) Reliability and validity of test scores	
References	**Recommended Reading** • Hegde, M. N. (2021). Clinical research in communicative disorders: Principles and strategies. (4th Edition), San Diego, CA: Plural Publishing. • Best J. W. & Kahn J. V. (2006). Research in Education. (10th Edition), Singapore: Pearson publication. • Burns, R. B. (2000). Quantitative Methods. In Introduction to Research methods. New Delhi: SAGE publication. • Meline, T. (2010). A research primer for communication sciences and disorders. Singapore: Pearson publication. **Unit 1** • Creswell, J. W. (1994). Research design: Qualitative & quantitative approaches. Sage Publications • Dane F.C. (2011). Sampling and Measurement. In Evaluating research: Methodology for people who need to read research. New Delhi: Sage publication. • Irwin, D. L., Lass, N. J., Pannbacker, M., Koay, M. E. T., & Whited, J. S. (2020). Clinical research methods in speech-language pathology and audiology (3rded.), San Diego, CA: Plural Publishing. • Hesse-Biber, S. N.& Leavy, P. (2011). The Ethics of social research. In the Practice of qualitative research. (2ndEdition), New Delhi: Sage publication. • Hesse-Biber, S. N.& Leavy, P. (2011). Methods of data collection. In the practice of qualitative research (2nd Edition), New Delhi: Sage publication. • Pannbaker, M.H (1994). Introduction to clinical research in communication disorders. San Diego: Singular Publishing Group. • Lauren K. Nelson, Jaimie L. Gilbert (2021). Research in Communication Sciences and Disorders: Methods for Systematic Inquiry (4th Edition), San Diego, CA: Plural Publishing. • Ranjith Kumar, (2014). Research Methodology. A step by step guide for beginners (4th Edition) New Delhi:	

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- Beaudry, J. S., & Miller, L. (2016). Research literacy: A primer for understanding and using research. New York: The Guilford Press.
- Coughlin, S. S., & Beauchamp, T. L. (Eds.). (1996). Ethics and epidemiology. Oxford University Press.
- Hegde M. N. (2024). A course book on Scientific and professional writing for speech language pathology (6thEdition), San Diego, CA: Plural Publishing, Inc.
- Huck, S. W. (2012). Reliability and Validity. In Reading statistics and research (6th Edition). Singapore: Pearson publication.
- Lowe, M. (2007). Beginning research: A guide for foundation degree students. Routledge, Taylor & Francis Group.
- Mitchell, M.L.& Jolley,J. M. (2010).Internal validity. In Research design Explained. Singapore: Wadsworth publication.

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- Argyrous, G. (2014). Statistics for Research. 2nd Ed. New Delhi: SAGE Publications (SA).
- Gupta, K.R. (2014). Statistics. Vol. 1. New Delhi: Atlantic Publishers & Distributors (P) Ltd.
- Gupta, K.R. (2014). Statistics. Vol. 2. New Delhi: Atlantic Publishers & Distributors (P) Ltd.
- Kapur, S.K. (2008). Elements of Practical Statistics. 3rd Ed. New Delhi: Oxford & IBH Publishing Co.
- Maxwell, D.L., & Satake, E. (2006). Research and Statistical Methods in Communication Sciences and Disorders. Canada: Thomson Publications.
- Salkind, N.J. (2000). Statistics for people who (think they) hate statistics. California: SAGE Publications.

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- Argyrous, G. (2014). Statistics for Research. 2nd Ed. New Delhi: SAGE Publications.
- Gupta, K.R. (2014). Statistics. Vol. 1. New Delhi: Atlantic Publishers & Distributors (P) Ltd.
- Gupta, K.R. (2014). Statistics – Vol. 2. New Delhi: Atlantic Publishers & Distributors (P) Ltd.

	• Martin, W.E., & Bridgmon, K.D. (2012). Quantitative and Statistical Research Methods – From Hypothesis to Results. San Francisco: Jossey – Bass. • Kapur, S.K. (2008). Elements of Practical Statistics. 3rd Ed. New Delhi: Oxford & IBH Publishing Co. • Gibbons, J.D. (1993). Non-parametric Statistics: An Introduction. California: Sage Publications • Leach, C. (1979). Introduction to Statistics – A Non-parametric approach for the social sciences. New York: John Wiley & Sons	
Course: 4.5 (AECC) **Vestibular Disorders**		
Objectives	After completing this course, the student will be able to: a) have the basic concepts of the balance system, including vestibular system b) know the causes of various vestibular disorders c) will know the different subjective tests that assess the vestibular disorders d) will have the basic skills of assessment of vestibular disorders using subjective and objective tests	
Unit 1	**Introduction to Balance System and Diseases Affecting the Vestibular System** a) Introduction to various balance systems, including visual, proprioception, and vestibular system b) Overview of VOR and VSR system c) Disorders that affect the peripheral vestibular system • Meniere's disease • BPPV • Labyrinthitis • Vestibular neuritis • Presbystasis • Vestibular schwannoma	**12 Hours**

Unit 2	**Assessment of Vestibular Disorders-Subjective Test** a) Signs and symptoms of vestibular disorders b) Romberg Test, including sensitive and sharpened Romberg test c) Fukuda Stepping test d) Past pointing test e) Tandem gait test Questionnaire to assess the vestibular disorders	**12 Hours**
Unit 3	**Assessment of Vestibular Disorders-Objective test** a) Overview of Videonystagmography test (Saccade, Smooth Pursuit, Optokinetic, spontaneous nystagmus, Gaze test, subjective visual vertical system) b) Overview of Video head impulse test- HIMP and SHIMP c) Overview of Vestibular-evoked myogenic potentials-Cervical and ocular vestibular-evoked myogenic potentials	**10 Hours**
Unit 4	**Management of vestibular disorders** a) Team involved in the management of vestibular disorders b) Overview to VRT c) Overview of Management of BPPV	**11 Hours**
Practicum	a) Conduct Romberg, Fukuda stepping test, Tandem gait test, and past pointing test on five normal subjects. b) Record Videonystagmography test on five normal subjects. c) Record Video head impulse test on five normal subjects d) Record VEMPs on 5 normal subjects.	
References	**Unit 1** • Christopher A. Schutt, Dennis I. Bojrab, Seilesh Babu (2020). Diagnosis and Treatment of Vestibular Disorders. Springer International Publishers.	

	• Devin McCaslin, Gary P Jacobson, Kamran Barin, Kristen Janky, Neil T. Shepard(2021). Balance Function assessment and management. Plural Publishers. • Matthew G. Crowson, Douglas B. Garrison, Kristal M. Riska, Debara L. Tucci, David Kaylie.(2019). Vestibular testing and interpretations. Plural Publishers. **Unit 2 & 3** • Sujeet Sinha, Niraj Kumar Singh & Animesh Barman (2022). Fundamentals of vestibular evoked myogenic potentials. NOVA SCIENCE PUBLISHERS. • Francesco Marines & Pietro Salvago (2021). Dizziness, Prevalence Risk Factors and Management. Nova Science Publishers. • Niraj Kumar Singh & C.S. Vanaja (2018). Evaluation and Management of Vestibular Dysfunction. ISHA Monograph. • Julie Honaker(2020). Diagnostic Vestibular Pocket Guide Evaluation of Dizziness, Vertigo, and Imbalance. Plural Publishers. **Unit 4** • Marianne Dieterich, Michael Strupp, Thomas Brandt (2007). Vertigo and Dizziness Common Complaints. Springer Publishers. • Pedro Luiz Mangabeira Albernaz, Francisco Zuma e Maia, Sergio Carmona, Renato Valério Rodrigues Cal, Guillermo Zalazar (2019). The New Neurotology: A Comprehensive Clinical Guide.Springer International Publishers.	
Course: 4.6 (SEC) **Clinicals in Speech-Language Pathology - IV**		
	General Considerations a) Clinical work should be primarily linked to the theory courses of the semester. b) After completion of clinical postings in Speech–language Pathology, the student will have the concepts (know),	

	ability to apply (know-how), demonstrate skills (a clinical diary/logbook based on clinical reports/recordings) (show) and carry out the following on patients/client contact (do) the following:	
	Know a) Different samples /procedures required to analyze voice production mechanism (acoustic/ aerodynamic methods / visual examination of larynx/ self-evaluation) b) Different perceptual parameters of voice. c) Procedures to assess laryngectomees and provide management options. **Know-how** a) To record a voice sample for acoustic and perceptual analysis. b) To assess the speech parameters of different types of speech in laryngectomee c) To consult with inter-disciplinary medical/rehabilitation team and counsel the individual/ family regarding management options and prognosis. d) To use software / instruments used in the assessment and management of voice disorders. e) To identify various types of voice prostheses, tracheostomy tubes, and artificial larynx and its parts. Document the use of these prostheses in various types of disorders. f) Plan and take therapy for a laryngectomee. **Show** a) Perceptually analyse paediatric, adult, and geriatric voice using a standard test tool and compare the differences across age and gender. b) Perform aerodynamic analysis (spirometry, MPD, s/z ratio) of paediatric, adult, and geriatric voice and compare the differences across age and gender. c) Perform acoustic analysis of paediatric, adult, and geriatric voice using a software/ instrument and compare the differences across age and gender. d) Analyse paediatric, adult, and geriatric voice using electroglottography and compare the differences in various parameters across age and gender.	

	e) Evaluate the voice of individuals with voice disorders using perceptual, acoustic, and aerodynamic analysis and EGG to compare the results across age, gender, and different types of voice disorders. f) Administer and document the findings of the quality-of-life questionnaire/ PROM (VHI, VRQoL, SVHI) on individuals with voice disorders. g) Assess the voice of at least 1 professional voice user. Describe the differences in the procedure for assessment of voice in PVU and non-PVU. h) Prepare a vocal hygiene checklist for individuals with voice disorders. i) Prepare a vocal hygiene checklist for different professional voice users (Singers, teachers, drama artists etc.) and understand the difference. j) Counsel patients with voice disorders. k) Demonstrate voice therapy techniques and document the same. l) Analyze the speech profile of 2 individuals with laryngectomy (pre-recorded/ live samples). m) Prepare a checklist/pamphlet illustrating care of the stoma, T tubes, and prosthesis used by laryngectomee. n) Observe and document the findings from pre-recorded/ live samples of laryngeal examination procedures and compare differences across various voice disorders. **Do** a) Write a baseline report for an individual with voice disorder. b) Write a lesson plan for an individual with voice disorder. c) Plan and take therapy for individuals with voice disorders. d) Document the differences in management across professional and non-professional voice users and various types of disorders.	
Course: 4.7 (SEC) **Clinicals in Audiology - IV**		
	General Considerations	

	After completion of Audiology clinical postings, the student will have the concepts (know), ability to apply (know-how), demonstrate skills (a clinical diary/logbook based on clinical reports/recordings) (show) and carry out the following on patients/client contact (do) the following:	
	Know a) Types of hearing aids b) Procedures/protocol to assess listening needs c) National and international standards on electroacoustic characteristics of hearing aids d) Familiarization with different equipment used for objective calibration of audiometers **Know-how** a) Skills to program digital hearing aids b) Counsel hearing aid user regarding the use and maintenance of hearing aids c) Skills to troubleshoot hearing aids d) Skills to select different types of earmolds depending on the type of hearing aid, client, degree, type, and configuration of hearing loss e) Observation of objective calibration procedure for audiometers as per standards **Show** a) The output of different types and classes of hearing aids (monaural, binaural, analog, digital hearing aids) in different settings. b) Electroacoustic measurement as per BIS standard on at least 2 hearing aids c) How to process hard and soft molds (2 no's) d) How to preselect hearing aid depending on listening needs and audiological findings on at least 5 clinical situations (case files) e) How to select test battery depending on case history and basic audiological information **Do**	

	a) Programming of hearing aids on at least 5 geriatric clients and 3 children b) Troubleshooting and fine-tuning of hearing aids on at least 5 older adults c) Counsel 3 hearing aid users/ caretakers regarding the use, care, and maintenance of hearing aids d) Carry out real-ear insertion gain measurements on 5 clients e) Make Earmolds for at least 3 clients f) using different techniques, different methods, and using different materials g) Assess the benefit of hearing aids/assistive listening devices for 5 clients h) Conduct Romberg, Fukuda stepping test, Tandem gait test, and past pointing test on 5 normal subjects. i) Record Videonystagmography test on 5 normal subjects. j) Record Video head impulse test on 5 normal subjects k) Record VEMPs on 5 normal subjects	
Course: 5.1 (DSC) **Fluency and its Disorders**		
Objectives	After completing this course, the student will be able to a) Identify the normal aspects of fluency, its variability, and factors influencing its development, describe the terminologies, classification, theories, and characteristics of stuttering. b) Assess fluency and dysfluency, and differentiate different variations of fluency disorders (stuttering, neurogenic stuttering, cluttering), c) Plan and serve management strategies for persons with fluency disorders, plan strategies and aspects to prevent development and relapse of stuttering d) Characteristics of other fluency disorders	
Unit 1	**Introduction to Fluency, Stuttering, and Theories of Stuttering** a) Fluency: definition, dimensions, development, factors influencing fluency • Fluency/disfluency/Dysfluency • Stuttering • Definition, epidemiological findings, prevalence and incidence	**20 Hours**

	• Stuttering: characteristics b) Nature of Stuttering • Consistency, adjacency and Lee effect • Situational variability • Stuttering and heredity c) Development of stuttering • Bloodstein's phases, • Van Riper's tracks, • Conture's classification, • Guitar's classification d) Introduction to theories of stuttering – organic vs. functional • Learning and Psychological theories: Diagnosogenic theory, Classical and operant conditioning, Personal Construct Theory, Anticipatory Struggle Hypothesis, Breakdown Hypothesis, Repressed Need Hypothesis • Organic Theories: Cerebral dominance, Genetic basis of Stuttering • Speech Motor Control Theories: Zimmerman's Model, Cyber kinetic or servo system Model, Interhemispheric inference Model, The variability Model, DIVA and GODIVA Model • Psycholinguistic Theories: Covert Repair hypothesis, EXPLAN theory, Fault-line Hypothesis • Multifactorial Models: Demands–capacities model, Neurophysiological Model, CALMS Model, Communication–Emotional model, Dual-diathesis stressor Model	
Unit 2	**Assessment and Differential Diagnosis of Fluency Disorders** a) General History and Speech recording • Case History for Preschool, School-age, adolescents, and adults • Speech sample recording • Speech sample transcription b) Assessment of core and secondary behaviours • Tools for quantification of core and secondary behaviours	**12 Hours**

	• Assessment of Speech naturalness • Assessment of feelings and attitudes accompanying stuttering • Assessment of the impact of stuttering c) Closing interview d) Differential diagnosis of fluency disorders (stuttering, cluttering, neurogenic stuttering and typical dysfluency) e) Mobile applications related to assessment of stuttering	
Unit 3	**Management of Stuttering** a) Counselling, Prevention and early identification of stuttering b) Management of stuttering – approaches and rationale • Management of Children with stuttering: preschool and school-age children (Direct vs. Indirect Approaches • Indirect approaches (Parent-child interaction Therapy) • Direct Approaches (LIDCOMBE Program, Westmead Program, Response Cost, RESTART-DCM • Evidence in Indian context • Analogies c) Management of Adults with stuttering: Treatment goals • Fluency shaping vs stuttering modification approaches • Fluency shaping • Prolonged Speech • Shadowing • Habit rehearsal Techniques • Light Articulatory Contact • Flow and Slow Method / Modified airflow Technique d) Comprehensive Stuttering Program • Camperdown Program • Successful Stuttering Management Program • Cognitive Behavior Therapy	**20 Hours**

	• Group therapy e) Measurement of therapy progress and naturalness rating f) Issues of speech naturalness in stuttering g) Relapse and recovery from stuttering h) Instrumental approaches for the management of stuttering: DAF, mobile applications related to management of stuttering	
Unit 4	**Other Fluency Disorders** a) Cluttering: definition, characteristics, assessment and management. b) Neurogenic stuttering/SAAND: definition, characteristics, assessment and management. c) Psychogenic stuttering: definition, characteristics, assessment and management • Assess the dimensions of fluency and rate of speech in 5 normal adults. • Record and analyse suprasegmental features in typically developing children between 2 and 5 years. • Record audio visual sample of 5 typically developing children for fluency analysis. • Record audio visual sample of 5 typical adults for fluency analysis. • Listen/see samples of normal non fluency and stuttering in children and document the differences. • Identify the types of dysfluencies/secondary behaviours in the recorded samples of adults with stuttering. • Administer SPI on 3 typically developing & 2 children with stuttering. • Administer CALMS rating scale on 3 typically developing & 2 children with stuttering. • Administer SSI 5 typically developing children. • Administer SSI on 5 adults with normal fluency. • Administer OASES – S on 5 children. • Administer OASES – A on 5 adults with normal fluency. • Administer naturalness rating scale on 5 adults with normal fluency and 3 recorded samples of stuttering • Instruct and demonstrate the following techniques: Airflow, prolongation, easy onset and shadowing techniques. • Record 5 speech samples with various delays in auditory feedback and analyze the differences	**08 Hours**

Practicum	a) Record mother-child interaction of one typically developing child each in the age range of 0-1, 1-2, 2-4, 4-6 and 6-8 years of age. Compare linguistically the out puts from the mother and the child across the age groups. Make inferences on sociocultural influences in these interactions. b) Make a list of loan words in two familiar languages based on interaction with 10 typically developing children each in the age range of 2-4, 4-6, 6-8 and 8-10years. Discuss the influence of bi-or multilingualism on vocabulary. c) Make a flier/ Powerpoint/ video for creating awareness on language disorders in children. d) Record a conversation and narration sample from 3 children, one child each who are in preschool, kindergarten, and primary school. Perform a language transcription and analyze for form, content and use. e) Administer 3D LAT, ALD, LPT, ComDEALL checklist on any 2 typically developing children. f) Draft a diagnostic report and referral letter for a child with language disorder. g) Demonstrate general language stimulation techniques and discuss the clinical application. h) Demonstrate specific language stimulation techniques with appropriate materials and discuss its clinical applications. i) Draft Subjective Objective Assessment Plan (SOAP) for a pre-recorded sample of a 45minute session of intervention for a child with language disorder. j) Draft a lesson plan for a child with language disorder. k) Draft a discharge summary report for a child with language disorder	
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Course: 5.2 (DSC) **Motor Speech Disorders - Children**		
Objectives	After completing this course, the student will be able to: a) Identify neuro-developmental processes in speech production b) Explain the terminologies, classification and characteristics of cerebral palsy and other motor speech disorders in children c) Assess motor speech disorders in children and differentiate it from other associated / related disorders, d) Plan management strategies for developmental dysarthria and childhood apraxia of speech, and e) Plan strategies to assess and manage feeding and swallowing problems in children	

Unit 1	**Neuro-developmental processes in speech production and introduction to motor speech disorders** a) Development of neural pathways; Central and peripheral nervous system in speech motor control (motor control by cortical, subcortical structures, centrifugal pathways, brainstem, cerebellum and spinal cord) b) Sensory-motor integration and neuromuscular organization of speech production (Spatial-temporal planning, motor planning, and feedback) c) Cerebral palsy as a cause of developmental dysarthria: Definition, etiology, characteristics, and associated problems d) Childhood Apraxia of Speech (CAS): Definition, etiology, and characteristics. e) Syndromes associated with motor speech disorders (Juvenile progressive bulbar palsy, Congenital supranuclear palsy, Worster-drought syndrome)	**15 Hours**
Unit 2	**Nature of Motor Speech Disorders and Dysphagia in Children** a) Neuromuscular development in typically developing children and cerebral palsy b) Reflex profile (primitive, postural and oro- pharyngeal reflexes) c) Classification of cerebral palsy d) Neuromuscular characteristics of different types of Cerebral Palsy • Disorders of muscle tone – spasticity, rigidity, flaccidity, atonia • Disorders of movement –Ballismus, tremor, tic disorder, myoclonus, athetosis, chorea, dystonia, hypokinesia • Disorders of coordination - Ataxia e) Speech and language characteristics in developmental dysarthria f) Classification of CAS- verbal and nonverbal oral apraxia g) Speech and language characteristics in CAS h) Effect of neuromotor disorders and related syndromes on feeding and swallowing and its clinical manifestations.	**15 Hours**
Unit 3	**Assessment of Motor Speech Disorders and Dysphagia in Children** a) Case history and Language evaluation of Dysarthria; speech motor evaluation – primitive, postural and oro-pharyngeal reflexes, cranial nerve examination, oral peripheral mechanism examination and speech sub-systems	**15 Hours**

	(Both objective and subjective assessments of respiration, phonation, articulation, speech intelligibility, and prosody) b) Assessment of speech in CAS: Case history and Language evaluation • Western and Indian formal protocols to assess CAS • Informal evaluation: Phonetic and phonemic inventory, phonotactics and syllable sequencing, variability of errors, speech intelligibility, and prosody. c) Differential diagnosis of motor speech disorders with other developmental speech disorder d) Feeding and swallowing assessment –clinical swallow examination and instrumental assessment.	
Unit 4	**Management of Motor Speech Disorders and Dysphagia in Children** a) Team approach to rehabilitation b) General principles of motor learning c) Behavioral management of Dysarthria -Non-Speech Oromotor Exercises; speech subsystem management- respiratory, phonatory, resonatory, and articulatory subsystems d) Motor approaches: Neurodevelopmental therapy (NDT) e) Medical and prosthetic management of cerebral palsy f) Behavioural management of CAS • Integral stimulation – dynamic temporal and tactile cueing • Multisensory and tactile cueing techniques (moto kinesthetic speech training, sensory- motor approach, PROMPT, Touch cue method, and speech facilitation) • Gestural cueing techniques (signed target phoneme therapy, adapted cueing techniques, cued speech, visual phonics, and Jordon's gestures) • Cognitive/conceptual/ linguistic /phonological remedial approaches - phonotactics • Other approaches: melodic intonation therapy, multiple phonemic approaches, instrumental feedback, vowel and diphthong remediation techniques, and Nancy Kauffman's speech praxis treatment kit g) AAC in the management of childhood dysarthria and CAS. h) Tele-rehabilitation in motor speech disorders.	**15 Hours**

	i) Feeding and swallowing treatment – Compensatory and Rehabilitative approaches (positioning, bolus modification, oral-sensory motor treatment, and modifications in feeding utensils) j) Case studies: Planning intervention for children with dysarthria, CAS, and dysphagia including language intervention k) Right, privileges and disability certification of individuals with dysarthria and apraxia as per RPWD act 2016	
Practicum	a) With the help of models, charts, and software, identify the motor control centres in the brain. b) Identify and list the characteristics of types of dysarthria in children (spastic, flaccid, athetoid, and ataxia) c) Identify and list the characteristics from the speech and language sample of a child with childhood apraxia of speech d) Perform oro-motor examination in five children and adults and compare e) Demonstrate normal posture and breathing patterns required for varied speech tasks. f) Alter the postures and breathing patterns and document the changes in speech patterns. g) Assess the DDK rate in five typically developing children. h) Rate intelligibility of speech in five typically developing children. Discuss factors that influenced speech intelligibility and their ratings. i) Observe and record (a) physical status, (b) oral sensory motor abilities and vegetative skills, (c) respiration, (d) phonation, (e) resonation, (f) articulation, and (g) language abilities in five typically developing children. Compare these with observations made from children with motor speech disorders. j) Perform oro-motor exercises – isotonic and isometric. Discuss strategies to modify exercises for children. k) Identify the symbols and type of Augmentative Alternative Communication system. l) Design a low-tech AAC system for children with motor speech disorder. m) List various multisensory and tactile cueing techniques used for children with apraxia of speech. n) Identify from the video and list various prosthetic devices used in the treatment of childhood dysarthria. o) Observe and list the signs and symptoms of dysphagia in children p) Observe feeding and swallowing skills in different age groups of children: 1 infant, 1 toddler, and 1 older child. Identify the differences in feeding methods, food consistencies, food texture, and quantity used by these children	

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Course: 5.3 (DSC) **Paediatric Audiology**		
Objectives	After completing this course, the student will be able to: a) To trace out auditory development in children b) To justify, plan, and execute programs for early identification of hearing loss in infants and children c) To administer appropriate test batteries (behavioral and physiological tests) for diagnosis of hearing loss in infants and children, and d) To modify the test protocols/procedures, as appropriate, while testing difficult-to-test population e) To provide rehabilitation, including AVT for children with hearing impairment using hearing aids/cochlear implants	
Unit 1	**Development of Auditory System and Early Identification of Hearing Loss** a) Overview of pediatric audiology and fundamental terminology b) Maturation of the auditory system and neuroplasticity	**15 Hours**

	c) Development of Auditory behavior: prenatal hearing, newborn hearing, hearing in infants and toddlers d) Incidence and prevalence of auditory disorders in children e) Principles of early hearing detection and intervention f) Need for early identification with reference to congenital versus acquired hearing loss, conductive and sensorineural hearing loss, mild hearing losses, sloping hearing losses, fluctuating hearing losses, and unilateral hearing loss	
Unit 2	**Paediatric Hearing Screening** a) Recommendations of the Joint Committee on infant screening- various position statements and the evolution b) Hearing screening in infants and toddlers: Indian and global context • High-risk registers and their utilities in screening, sensitivity and specificity of high-risk registers, relevance in the Indian scenario • Universal newborn hearing screening- concept, history, Indian and global scenario and challenges c) Behavioral screening tests (behavioral observation audiometry), procedures, response recording, and results interpretation. d) Objective screening tests (e.g., Cribogram, auditory cradle, reflex inhibition audiometry, immittance, reflexometry, wide-band reflectance, OAE, evoked potentials - AABR) e) School screening: Indian and global • Pre-schoolers • School-age children • CAPD	**15 Hours**
Unit 3	**Diagnostic Evaluations for Hearing and Balance** a) Behaviour observation audiometry b) Conditioning techniques: CORA, VRA, PIWI, peep show audiometry, TROCA, Conditioned play audiometry c) Modification required while carrying out speech audiometry in children (SDT, SRT, SIS) d) Materials available for speech audiometry in English (PBK, WIPI, NU Chip, Early speech perception test, Ling's six sound tests, auditory number test) and Indian languages e) Balance assessment: needs, behavioral and objective tests in children	**15 Hours**

	f) Objective tests for hearing and balance assessment in children – • Immittance evaluation- including high-frequency probe-tonetympanometry, reflexometry, wide-band reflectance/absorbance • OAEs (TEAOAE & DPOAE) • Evoked potentials (ABR, ASSR & ALLR) g) Test battery for diagnosing severity and type of hearing loss (conductive, cochlear pathology, auditory neuropathy spectrum disorder) h) Factors affecting the assessment of hearing in children	
Unit 4	**Assessment of Special Population and Rehabilitation of Children with Hearing Loss** a) Assessment of hearing in children with multiple problems and additional needs b) Counseling of parents/caregivers regarding diagnosis and management of children with hearing loss c) Rehabilitation of hearing loss in children • Overview of hearing aid/CI fitting in children • Definitions and historical background of auditory training Vs auditory learning • Unisensory vs multisensory approaches • Various methods of auditory training • Methods of learning spoken language through listening (auditory oral vs auditory verbal) • Principles of auditory verbal therapy • Strategies for auditory verbal therapy • Auditory training and learning activities • Different listening levels d) Verbal vs. non-verbal material e) Across different age f) Overview of the preparation of lessons, long-term vs short-term plans and activities, and home training for parents. g) Group vs. individual auditory training	**15 Hours**

Practicum	a) Observe infants with typical hearing abilities in the age range of 0-1 years and 1-2 years in their natural environments. Generate a report detailing their response to auditory stimuli. b) Monitor a child with hearing impairment within the age range of 0-2 years in a natural setting. Compile a report describing the child's responses to auditory stimuli with and without the amplification device. c) Administer HRR on at least three newborns and interpret responses. d) BOA and VRA should be administered to 5 children with typical hearing and 2 children with hearing impairment. Write a report detailing the instrumentation, procedure, and interpretation. e) Carryout immittance evaluation on 5 children with typical hearing and 2 children with hearing impairment and interpret the results f) Record OAE on 5 children with normal hearing and 2 with hearing loss and interpret the results. g) Compare ABR waveforms of children across different age groups, ranging from birth to 24 months. h) Record ABR on 5 children with typical hearing and observe ABR of 2 children with hearing impairment. Write a report detailing the instrumentation, instructions, stimuli, procedure and interpretation. i) Employ role play to illustrate how the outcomes of audiological assessments are communicated to caregivers for children with the following conditions • A child referred for hearing screening with a history of high-risk factors. • A child with chronic middle ear disease. • A child with central auditory processing disorder (CAPD). • A child with severe bilateral hearing impairment j) Design and demonstrate auditory learning activities at the four levels: awareness, discrimination, identification, and comprehension. Ensure that the activities encompass different skill levels and difficulty levels.	
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Course: 5.4 (AECC) **Educational Audiology**		
Objectives	After studying the paper the students are expected to realize the following: a) Effects of hearing loss on development and learning b) To analyse the client scenarios and decide what kind of intervention to be provided to the child with hearing loss in the school c) Become aware of criteria for selection of appropriate educational placement of the child d) To apply principles of effective management in classroom/school settings e) Roles of educational agencies and legal agencies for children with disability in India	

Unit 1	**Importance of Early Identification and Different Approaches for Communication** a) Classification of hearing impairment and its importance in educational placement b) Role and responsibilities of Educational Audiologist and team members c) Early identification and its importance in aural rehabilitation. d) Unisensory vs. multisensory approach e) Manual vs. oral form of communication manual communication systems that parallel English (Manual alphabet); interactive systems (cued speech: Rochester method); Those alternative to English (ASL) Indian Sign Language, Contrived system (SEE-I, SEE-II, Signed English) f) Total communication	**12 Hours**
Unit 2	**Methods of Teaching Language for Children with Hearing Impairment** a) Methods of teaching language to the hearing impaired and its application in Indian languages b) Natural method: maternal reflective method, Groth's method c) Structured method (grammatical method); Fitzgerald key, box technique APPLE TREE, Patterning d) Combined method (Natural and structured) Computer aided method.	**11 Hours**
Unit 3	**Educational Placement** **a)** Educational placement of hearing impaired children: Preschool training, Integration, Partial integration, Segregation: day school vs. residential school, Inclusive vs intergrated school b) Criteria for recommending the various educational placements c) Criteria for selecting the medium of instruction d) Factors affecting their outcome e) Setting-up classrooms and the modifications for the individuals with hearing impairment: Acoustic, lighting, class strength and amplification and personal and group amplification devices f) Educational problems of the individuals with hearing impairment and the measures taken to overcome the problems in India	**11 Hours**
Unit 4	**Educational Problems, Laws and Policies for Educating and Counseling Parents-14 Hrs** a) Educational laws and policies with respect to education for children with disability by government and non-government agencies	**11 Hours**

	b) Recommendations of PWD and UNCRPD for education, Rehabilitation Council of India Act (1992), Persons with Disabilities Act (1995), Right to Education Act (RTE), IEDC Scheme 1992, DPEP scheme, Salamanca statement and Framework for Action on Special Needs Education (1994), Kothari Commission (1992), Rights of disabled, Sarva Siksha Abhiyan c) Education for children with multiple disabilities d) Counseling the parents, teachers and peers regarding the education of the individuals with hearing impairment in India e) Home training – need, preparation of lessons, long term vs short term plans and activities, correspondence programs, follow-up.	
Practicum	a) Prepare schedules for educational placement of 5 children with hearing impairment having different hearing capacities b) Counsel parents regarding educational placement of the hearing impaired. c) To prepare a model of an integrated classroom considering the factors affecting integration d) To visit a school for children with special needs and note down the available facilitates and the steps-to be taken to modify the same	
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Course: 5.5 (AECC) **ASLP in Practice**		
Objectives	After completing this course, the student will be able to: a) Describe the highlights of legislations relating to speech-language and hearing impairment b) Incorporate ethical practices in professional service delivery, provide information on welfare measures, policies of government when needed, describe different preventive strategies to create awareness of speech-language and hearing impairment and programs c) Understanding different clinical practice settings in Audiology and Speech-Language Pathology with	

	reference to their requirement, protocols and role and responsibility of professional and tele-practice d) Role of CBR related to speech-language and hearing disorders	
Unit 1	**Scope, Legislation and Ethics in Audiology and SLP** a) Scope of practice in Audiology and Speech -Language Pathology (National – ISHA & International body – AAA, ASHA) b) Professional ethics (ISHA) c) Legislations and conventions relating to disability: need and historical aspects d) Rehabilitation Council of India Act (1992) and its amendments e) Rights of Persons with Disability Act,1995, 2016 f) National Trust Act (1999) g) Right to Education (2012) h) Biwako Millennium framework (2003) and Salamanca Statement 1994, UNCRPD i) National Education Policy & National Curricular Framework j) Classification of speech-language and hearing impairment and Disability certification k) Concept of barrier free access and universal design relating to individuals with speech, language and hearing impairment	**11 Hours**
Unit 2	**Health and Strategies for Prevention of Speech-Language and Hearing Impairment** a) Epidemiology of speech and hearing disorders b) ICD and ICF c) Levels of prevention: Primary, secondary and tertiary d) National programs such as NPPCD, RBSK, SSA e) Welfare measures by Government f) Camps (planning, purpose, organizing, and providing remedial measures) g) Public education and information (media, radio broadcasts, street plays) h) Prevention programs (hearing help line, dangerous decibels, online hearing tests etc., commemoration of special days)	**11 Hours**

Unit 3	**Audiological and SLP Practice in Different Settings and Tele-practice** a) Setting up a speech-language and hearing centre b) Organization of space, time, personnel and audiometric rooms. c) Financial management (Budgeting & Purchase formalities) d) Recruiting personnel – rules and salary e) Leave rules and other benefits for professionals and personnel f) Documents and record keeping – different types g) Audiological and SLP- Private practice h) Audiological and SLP- Practice in a hospital based set-up (ENT, Pediatric / neonatology, Neurology, Oncology) i) Hearing aid dispensing center / hearing aid industry j) Rehabilitation centers- such as DRC/CRCs, Multiple handicap habilitation center, and others k) Schools for the hearing impaired, multiple disabilities, inclusive schools l) Cochlear implant clinics m) Introduction to tele-health: definition, history of tele-health, terminology (tele-health, tele medicine, tele practice) n) Methods of tele-practice (store and forward and real time) o) Ethics and Regulations for tele-audiology and SLP p) Requirements/Technology for tele- audiology and SLP: Connectivity: internet, satellite, mobile data, Web based platforms, Video conferencing, infrastructure, Manpower at remote end and audiologist end, training assistants for tele-audiology and SLP, new born hearing screening, school screening, community screening, counseling for speech-language & hearing disorders q) Diagnostic audiological and SLP services using tele-technology r) Tele-rehabilitation of speech and language and hearing disorders.	**12 Hours**
Unit 4	**CBR related to Speech-Language and Hearing Disorders** a) Definition and Principles of CBR b) Role of governmental and non-governmental organizations in CBR	**11 Hours**

	c) Role of preparing community for CBR • Awareness and Advocacy programs • Focus group discussion • CBR related to education, vocational training, and employment d) Application of CBR in identification and management of speech and hearing disorders	
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Course: 5.6 (SEC)

Clinicals in Speech Language Pathology - V

Know

a) Study normative data (Indian / Western) relating to fluency and prosody, and relate them to clinical population.
b) How to take case history & detailed evaluation on clients with Fluency Disorder.
c) Diagnostic criteria for stuttering, cluttering, normal non-fluency and neurogenic stuttering using standardized tools and instruments

	d) Differential diagnosis of motor speech disorders in children e) Different samples /procedures required to analyze speech production mechanism in children with motor speech disorders **Know-how** a) Use software/ applications/ instruments used for assessment and management of individuals with fluency disorders. b) To assess posture and breathing for speech in children with motor speech disorders. c) Consult with inter-disciplinary medical/rehabilitation team for developing rehabilitation plan for children with MSD d) Typical development of feeding and swallowing skills from birth to 3 years. e) Summary of tests (including introduction to the test, instructions, details of the test stimuli, norms and interpretation): Frenchay dysarthria assessment, Apraxia Battery for Adults, Protocol for appraisal of verbal praxis, Screening test for Developmental Apraxia of Speech (STDAS) **Show** a) Differentiate the speech characteristics between normal non-fluency and developmental stuttering by observing audio-video samples. b) Differentiate the speech characteristics between developmental, neurogenic, psychogenic stuttering and cluttering by observing audio-video samples. c) Differentiate the speech characteristics between developmental stuttering and cluttering by observing audio-video samples d) Observe and document the results of assessment of speech fluency through standardized tests, e) Observe and learn counseling of at least three children and adults with fluency disorders f) Observe management / therapeutic procedures with children and adults with fluency disorders g) Oro-motor reflex assessment in children with and without MSD. h) Assessment of language, posture, respiration, phonation, resonation, and articulation in a child with motor speech disorder using standardized test and procedures	

	i) Observe feeding session for a typical new-born, infant, toddler, and older child. Identify the differences in feeding methods, food consistencies, texture, quantity, feeding habits, feeding appliances, meal time duration and interaction j) Evaluate feeding skills in a child with motor speech disorders and prepare a plan of action to improve this skill. k) Counsel the family with a child with MSD regarding management options and prognosis. **Do** a) Case history of a minimum of four persons with stuttering. b) Assess the rate of speech in 5 normal adults. c) Record speech sample from 2 typically developing children between 2 and 5 years. Assess (a) supra segmental features, (b) disfluency (c) rate of speech. d) Record speech sample from 2 individuals with stuttering and assess (a) supra segmental features, (b) dysfluency (c) rate of speech e) Record speech samples from 2 neurotypical individuals using different delays in auditory feedback and analyse the differences. f) Administer SSI-4 on 2 typically developing children and 2 children/adults with stuttering. g) Administer and interpret the results of self rating questionnaires (attitudes & feelings, and quality-of-life questionnaire) on 2 individuals with stuttering. h) Instruct and demonstrate the following techniques: Prolonged speech techniques, Modified Airflow, Pause and talk, Easy onset, Light articulatory contacts, GILCU, and others. i) Perform oral peripheral mechanism examination (OPME) using ComDEALL checklist in 2 children with motor speech disorders. j) Assess oral motor reflexes in 2 children with risk of motor speech disorder. k) Prepare a developmental chart for feeding skills from birth to 3 years. l) Evaluate the DDK, and percentage speech intelligibility, rate of speech and speech naturlness in a child with motor speech disorders. m) Administer Motor Speech profile (MSP) on a child with MSD n) Counsel any one family with a child diagnosed with MSD	

	o) Take therapy for 1 child with CP/Dysarthria/ Apraxia and prepare a comprehensive pre-therapy, lesson plan, home training program	
	Course: 5.7 (SEC) **Clinicals in Audiology - V**	
	General Considerations After completion of clinical postings in Audiology, the student will have the concepts (know), ability to apply (know-how), demonstrate skills (a clinical diary/logbook based on clinical reports/recordings) (show) and carry out the following on patients/client contact (do) the following:	
	Know a) Different protocols and interpretation in tympanometry and reflexometry in pediatric population. b) Different protocols used and interpretation in auditory brainstem responses and ASSR pediatric population. c) Protocols for screening and diagnostic otoacoustic emissions and their interpretation in pediatric population. d) Tests to assess the vestibular system of the pediatric population. e) Various speech stimulation and auditory training techniques. f) Recommend appropriate treatment options such as speech reading, auditory training and combined approaches. **Know-how** a) To administer auditory brainstem responses and ASSR for the purpose of threshold estimation and ABR for sight of lesion testing in pediatric population. b) To administer tympanometry and reflexometry in pediatric population. c) To administer multifrequency tympanometry and calculate resonance frequency in pediatric population. To administer high risk register d) To modify the given environment to suit the needs of hearing impairment **Show** a) Analysis of ABR waveforms pediatric population– threshold estimation 5 and site of lesion 5	

	b) Analysis of immittance audiometry and relating to other tests – 5 children with conductive and 5 children with sensori-neural hearing loss c) How to formulate select appropriate auditory training technique based on audiological evaluation d) Auditory learning activities at the four levels awareness, discrimination, identification and comprehension. Ensure that the activities encompass different skill level and difficulty levels. **Do** a) Threshold estimation on 5 infants (< 2 years) b) TEOAE and DPOAE on 5 infants (<2 years) c) Immittance evaluation on 3 children d) BOA on 5 infants (<2 years) e) VRA on 2 infants (6 months – 3 years) f) Conditioned play audiometry – 5 children (3-6 years) g) Appropriate auditory training on 5 children with hearing loss h) Hearing aid fitment on 1 infant (< 3 years) 2 children (3-6 years) i) Test battery report of hearing assessment for 3 children and 3 adults j) Listening training using AVT strategies on at least 3 children with hearing impairment k) At least one activity for different stages involved in auditory training	
Course: 6.1 (DSC) **Adult Language Disorders**		
Objectives	After completing the course, the student will be able to: a) identify the characteristics of language disorders in adults b) decipher the causes of language disorders in adults, c) evaluate and diagnose speech-language characteristics in adults with of language disorders d) plan strategies to manage speech-language and related errors in adults with of language disorders e) counsel and provide guidance to caregivers on the management of language disorders f) understand the concept of cognitive communication disorders in adults, and	

	g) initiate advocacy programs for adults with language disorders	
Unit 1	**Neurosciences of Aphasia and Other Adult Language Disorders with Cognitive Communication Disorders** a) Neuroanatomical, neurophysiological and neurochemical correlates for language function b) Neurolinguistic models and language processes – connectionists, hierarchical, global, process and computational models c) Historical aspects of aphasia d) Language Processing in Right Hemisphere e) Language processing in bi/ multilingual population	**15 Hours**
Unit 2	**Language Disorders in Adults** a) Definitions of language disorder in adults (aphasia) b) Causes of language disorder in adults c) Different classifications of aphasia d) Types of aphasia and their speech, language, behavioral and cognitive characteristics e) Comorbidities in individuals with aphasia f) Overview of Speech, language characteristics in • TBI (Traumatic Brain Injury) • RHD (Right Hemisphere Damage) • Dementia • PPA (Primary Progressive Aphasia) • Schizophrenia • Metabolic disorders • Alcohol induced disorders	**15 Hours**
Unit 3	**Assessment of Aphasia** a) Types and importance of different forms of language assessment of adults.	**15 Hours**

	b) Types of tests and tools for assessment of language in adults c) Description of tools and test for assessment and diagnosis of language in adults (Rationale, Administration, Scoring, and Interpretation) WAB, BDAE, Token test, Revised Token Test, –BST, WAB, RTT, BAT, LPT. d) Tools and tests adapted/ developed across languages in India for assessment of language in adults (Rationale, Administration, Scoring, and Interpretation). e) Overview of tests and tools for assessment of speech, language, linguistic, and cognition of adults with non-aphasic cognitive communication disorders (e.g ACE, BTHI, MMSE, ABCD, CLAP, CLQT, CCABI, FCP) f) Reflections on approaches to assessment in bi/multilingual situation g) Factors influencing the assessment and management of language in persons who are preliterate, illiterate and literate. h) Age related influence in adults with language disorders i) Importance of assessment of quality of life of adults with language disorders	
Unit 4	**Management of Language Disorders in Adults** a) Principles of language intervention b) Concepts of Spontaneous recovery, reorganization and retraining in aphasia and other cognitive-communication disorders c) Approaches and techniques for management of aphasia - Deblocking, VCIU, LOT, PACE, Stimulation Facilitation Approach, RET, VAT, Semantic Feature Analysis, TAP, TUF, MIT, TWA, Contingency naming training and others. d) Considerations of co morbidities in planning and implementation of therapy for individuals with aphasia. e) Generalization and maintenance issues in adults with language disorders f) Introduction to AAC and its role in rehabilitation of adults with aphasia. g) Team approach in rehabilitation of adult language disorders h) Importance and role of caregivers/ family members in rehabilitation of persons with aphasia: Counseling and importance for aphasia and other cognitive- communication disorders i) Tele-rehabilitation in for persons with Adult language disorders j) 4.10 Rights, privileges and disability certification for persons with aphasia as per the RPWD Act 2016	**15 Hours**

Practicum	a) Identify different areas of the brain (cortical and subcortical) by looking at a model/ image and label the language areas. b) List the language characteristics of persons from video samples (atleast 5) and identify the most likely type of aphasias. c) Administer case history and WAB (English) or BDAE (English) on two normal adults, do the scoring and write the interpretation. d) Observe administration of case history and any one complete language test for adult with stroke. Do the scoring and interpretation. Write a complete diagnostic report (with informal observations and formal test findings). e) Demonstrate (through role play in class) various therapy techniques for in the management of aphasia. f) Discuss in class and formulate therapy plans (including activities) based on assessment reports of two persons with aphasia. g) Demonstrate counseling of caregivers/ family members by role play for a given profile of an individual with adult language disorder (one each). h) Prepare a flier/ video/ powerpoint for awareness of role of speech language pathologist for rehabilitation of individuals with aphasia.	
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Course: 6.2 (DSC)

	Motor Speech Disorders - Adults	
Objectives	After completing this course, the student will be able to: a) Explain the process of acquisition of language and factors that influence its development in children, b) Identify and assess language delay and deviance in children, c) Select appropriate strategies for intervention, d) Counsel and provide guidance to parents/caregivers of children with language disorders, and e) Initiate advocacy programs for children with language disorders	
Unit 1	**Dysarthria, Apraxia: Anatomical basis, Etiology and Speech Characteristics; Dysphagia** a) Speech Motor System b) Definition and classification of dysarthria c) Etiology: Common causes leading to any of the dysarthria and apraxia: Traumatic brain injury (TBI), Cerebrovascular accident (CVA), Infections such as meningitis, encephalitis, and HIV, Neoplasms, Toxic agents. d) Types of dysarthria • Flaccid dysarthria: Speech characteristics and etiological conditions (Muscular dystrophy, polymyositis, myasthenia gravis, poliomyelitis, polyneuritis, Guillian-Barre syndrome) • Ataxic dysarthria: Speech characteristics and conditions (Ataxic telangiectasia, Von-Hippel Lindau disease, Freidrich's ataxia) • Hypokinetic dysarthria: Speech characteristics of Parkinson's disease • Hyperkinetic dysarthria: Speech characteristics and conditions (Tardive dyskinesia, Huntington's and Syndenham's chorea, Meige syndrome, Tourette's syndrome). • Mixed dysarthria: Speech characteristics and conditions (Motor neurone disease [Amyotrophic multiple sclerosis (ALS), Primary lateral sclerosis (PLS), Progressive bulbar and pseudobulbar palsy], Corticobasal Degeneration (CBD), Wilson's disease, Neurosyphilis) e) Definition, and classification of acquired apraxia in adults – Nonverbal apraxia's and verbal apraxia / AOS; Anatomical and physiological substrates and etiologies of AOS; Characteristics of nonverbal apraxia & verbal apraxia	**18 Hours**

	f) Causes of dysphagia (ALS, Parkinson's disease, Huntington's disease, multiple sclerosis) g) Characteristic signs and symptoms of dysphagia	
Unit 2	**Assessment and Diagnosis of Dysarthria, Apraxia, and Dysphagia** a) Perceptual analysis of speech subsystems in dysarthria: description of tasks, observations and measures - Respiratory subsystem; Phonatory Subsystem; Resonatory subsystem; --Articulatory subsystem - Speech intelligibility and prosody - Formal/standard protocols for assessment of dysarthria (e.g., FDA, speech intelligibility assessment scales) b) Behavioral assessment of apraxia of speech – Tasks, observations and measures related to an assessment protocol; Formal assessment batteries/scales (e.g., ABA) and protocols for assessment c) Instrumental assessment of dysarthria and apraxia: Acoustic, and physiological assessment d) Advantages and disadvantages of behavioural and instrumental assessment e) Differential Diagnosis among dysarthrias; differential diagnosis of dysarthria from Apraxia of Speech and Aphasia. f) Subjective and instrumental evaluation of swallowing	**16 Hours**
Unit 3	**Management of Dysarthria** a) Principles for behavioral intervention including principles of motor learning for dysarthria b) Behavioral management of speech subsystems - Respiratory subsystem; Phonatory subsystem; Resonatory subsystem; Articulatory subsystem- Prosody including rate of speech c) Facilitative approach: Non speech oromotor exercises d) Brief overview of medical (pharmacological and surgical) and prosthetic intervention for dysarthria	**13 Hours**
Unit 4	**Management of Apraxia of Speech (AOS) and Dysphagia** a) Management of apraxia of speech (Principles of motor learning, different behavioral management approaches including articulatory kinematic approaches, rate and /or rhythm approaches)	**13 Hours**

	b) Application of Augmentative and Alternative Communication (AAC) systems for motor speech disorders (MSDs) –assessment for AAC candidacy, choosing an appropriate system and technique, training communication partners, generalization of learning and effective use of AAC. c) Facilitatory and compensatory techniques in treatment of dysphagia d) Certification for MSDs, Telerehabilitation of MSDs. Right, privileges and disability certification of individuals with dysarthria and apraxia as per RPWD act 2016	
Practicum	a) Identify the cranial nerves and mention their origin and insertion in a picture or model. b) Demonstrate methods to assess the cranial nerves using non-speech and speech tasks. c) Perform Frenchay's Dysarthria Assessment (FDA) on any two neurotypical adults. Identify the tasks that assess the different cranial nerves and subsystems of speech from the battery of tasks in FDA. d) Complete a table based on different neurological disorders or etiologies of motor speech disorders. Note the pathophysiology, natural course, type of dysarthria, and other concomitant issues. e) View videos of persons with various neurological conditions resulting in dysarthria and document the clinical signs and symptoms of the neurological conditions as appropriate. f) Identify the signs of UMN and LMN based on video samples of persons with dysarthria. g) Perform assessments of the respiratory system using speech and non-speech tasks in 10 neurotypical adults. h) Record different types of speech samples (sustained phonation, continuous speech, etc.) from 10 neurotypical adults and perform perceptual assessment of speech and acoustic analysis on the appropriate samples. i) Perform a complete perceptual assessment of different speech subsystems on the audio and video recordings of 10 neurotypical adults. Administer Duffy's intelligibility rating scale j) Compare the perceptual assessments with the recorded speech samples of 3 persons with dysarthria k) Prepare an informal list of speech stimuli in any Indian language for assessment of speech-motor programming. l) Demonstrate strategies for AOS management. m) Prepare a low-tech AAC for functional communication to be used by an individual with apraxia of speech or persons with dysarthria. n) Perform a clinical swallow assessment on 5 healthy individuals. o) Demonstrate strategies for dysphagia management.	

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Course: 6.3 (DSC) **Implantable Hearing Devices and ALDs**		
Objectives	After completing this course, the students will be able to: a) know about the selection and verification of ALDs b) assess candidacy for bone-anchored hearing devices, middle ear implants, cochlear implants, and ABI c) select the appropriate device depending on the audiological and non-audiological findings d) assess the benefit derived from implantation and counsel the parents/caregivers during different stages of implantation	
Unit 1	**ALD Fitting and Need for Implantable Hearing Devices** a) Assistive Listening Devices (ALD): Need, Classification and types b) Selection and verification of ALD c) Limitation of hearing aids and assistive listening devices d) Need for implantable Hearing Devices	**15 Hours**

	e) Team involved in the selection of different implantable devices	
Unit 2	**Cochlear Implant and Auditory Brainstem Implants** a) Types of cochlear implants (CI) and speech processors, components & features based on technology and design, electrode types b) Bilateral vs Unilateral CI, Bi-modal stimulation, electro-acoustic stimulation c) Candidacy Evaluation for CI: Audiological and Non-audiological d) Pre-implant counseling and informed consent for children and adults e) Overview of Auditory brainstem implant (ABI), Need and candidacy for ABI	**15 Hours**
Unit 3	**CI Surgery, Mapping of CI and ABI** a) Overview of surgical approaches, complications b) Sound coding strategies in CI c) Objective measures for intra-op monitoring and post-op management d) ESRT, ECAP, EABR, aided cortical potentials, ECochG e) Mapping of CI, MAP verification f) Overview of the mapping of CI and ABI, and assessment of benefit	**15 Hours**
Unit 4	**Bone Conduction Hearing Implants, Middle Ear Implants, and Counseling** a) Overview of bone conduction hearing aids vs bone conduction implantable devices and middle ear implants b) Active and passive types and components c) Candidacy assessment for bone conduction hearing implants and middle ear implants d) Surgical Considerations, approaches and techniques, risk and complications e) Intra-op monitoring and post-op fitting f) Post-implant counseling for parents/caretakers of children using CI g) Post-implant counseling for adults using CI and significant others h) Care and maintenance of implantable devices i) Measuring the outcome of implantable devices, including assessment of the benefit	**15 Hours**

Practicum	a) Know about the selection of ALDS and fitting b) Watch videos working on BAHA, middle ear implants, cochlear implant c) List down the technological differences across different models of cochlear implants from different companies, their cost d) Watch a video on cochlear implant surgery e) Create hypothetical cases (at least 5 different cases) who are candidates for cochlear implantation. f) Know about the protocol for recording eCAP, eSRT and eABR g) Observation of mapping of CI and programming of other implantable devices	
References	**Unit 1** • Atcherson, S. R., Franklin, C. A., Smith-Olinde, L. (2015). Hearing Assistive and Access Technology. United States: Plural Publishing, Incorporated. • Hersh, M. A., & Johnson, M. A. (Eds.). (2003). Assistive technology for the hearing-impaired, deaf, and deaf-blind. Springer. • Dillon, H. (2012) Hearing Aids. NY: Thieme. • Michael J. Metz (2014). Sandlin's Textbook of Hearing Aid Amplification: Technical and Clinical Considerations. United States: Plural Publishing, Incorporated. **Unit 2** • Gifford, R. H. (2020). Cochlear implant patient assessment: evaluation of candidacy, performance and outcomes. 2nd Ed. UK: Plural Publishing • Niparko, J.K. (2009). Cochlear implants: Principles and practices. Second Edn. Philadelphia: Lippincott Williams & Wilkins. • Michael J. Ruckenstein (2012). Cochlear Implants and Other Implantable Hearing Devices • Wolfe, J. (2020). Cochlear implants: audiologic management and considerations for implantable hearing devices. UK: Plural Publishing.	

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Course: 6.4 (DSC) **Audiology in Practice**		
Objectives	After completing this course, the student will be able to: a) Assess the effects of noise exposure using advanced instrumentation and develop prevention strategies for both occupational and non-occupational settings. b) Design and implement hearing conservation programs in industrial and community environments.	

	c) Perform comprehensive assessments for tinnitus and hyperacusis using validated tests, questionnaires, and clinical tools. d) Integrate audiological practices with public health strategies to address age-related hearing loss, noise-induced hearing loss, and other auditory health concerns. e) Advocate for and apply legislation and ethical practices related to noise exposure, hearing conservation, and disability rights within the scope of audiology.	
Unit 1	**Public Health Perspectives in Audiology** a) Age-related hearing loss, noise-induced hearing loss (NIHL), and tinnitus as emerging public health concern – prevalence of age-related hearing loss, NIHL, and Tinnitus b) Age-related hearing loss- the effect of aging on the anatomy and physiology of the auditory system, types of presbycusis, and hearing loss associated with systemic diseases. c) Assessment of tinnitus - Pitch matching, loudness matching, residual inhibition, Feldman masking curves d) Assessment of hyperacusis, misophonia, and related disorders: questionnaires, Johnson Hyperacusis Dynamic Range Quotient e) Management of tinnitus, hyperacusis, misophonia, and related disorders	**15 Hours**
Unit 2	**Noise and its Effect on Human Health** a) Introduction to noise, types b) Sources of noise in the industry and community c) Effects of noise in the auditory system (outer, middle, and inner ear) d) Temporary threshold shift, permanent threshold shift, factors increasing the risk of NIHL e) Non-auditory effects of noise (physiological, psychological, stress, sleep, job productivity, and accidents) f) Audiological tests for baseline assessment and monitoring of noise-induced effects	**15 Hours**
Unit 3	**Hearing Conservation in Industry and Community** a) Legislation related to noise, permissible noise exposure levels, worker's compensation, OSHA standards, Indian legislation related to noise	**15 Hours**

	b) Instrumentation, measurement, and procedure for measuring noise in the industry c) Instrumentation, measurement, and procedure for measuring noise in the community d) Instrumentation and measurement techniques for an individual's noise exposure e) Hearing conservation program (HCP), steps, record keeping, hearing protective devices (Single number ratings, fitting, and verification) f) Noise control and hearing conservation in non-occupational settings	
Unit 4	**Legal and Operational Frameworks in Audiology** a) Medico-legal aspects of audiology- Forensic audiology, audiologist as an expert witness, report writing b) Insurance against malpractice c) Marketing, business fundraising in audiological practice d) Auditing Processes in different audiological setups- method to audit, goals to be achieved	**15 Hours**
Practicum	a) Attend camps, seminars, workshops, conferences, school screening,and community-based screening. b) Undertake the activities such as 'Dangerous decibel' program (www.dangerousdecibels.org) c) Visit a speech pathologist/audiologist in different practice settings andprovide a report d) Administer ICF protocols for patients with different disorders e) Explore websites of various institutions, hearing aid companies, and NGOs working with the disabled and describe the accessibility features and informationprovided f) Develop one pamphlet/poster/ in the local language that would address someaspect of speech and hearing practice. g) Perform accessibility ability of your institute/center and prepare a report h) Estimate the pitch and loudness of tinnitus in 2 persons with tinnitus (undersupervision). Assess the residual inhibition in them. i) Plot Feldman masking curves for a hypothetical case. j) Administer Johnson Hyperacusis Dynamic Range Quotient on any 2 of theindividuals and note down the scores	

References	**Unit 1** • Katz, J., Chasin, M., English, K. M., Hood, L. J., & Tillery, K. L. (2015). Handbook of Clinical Audiology. Wolters Kluwer Health. https://books.google.co.in/books?id=aOXnoAEACAAJ • Jarach CM, Lugo A, Scala M, et al. Global Prevalence and Incidence of Tinnitus: A Systematic Review and Meta-analysis. JAMA Neurol. 2022;79(9):888–900. doi:10.1001/jamaneurol.2022.2189 • World Health Organization. (2018). Addressing The Rising Prevalence of Hearing Loss. • In World Health Organization: Geneva, Switzerland (Issue 02). • https://apps.who.int/iris/bitstream/handle/10665/260336/9789241550260-eng.pdf?sequence=1&ua=1%0Ahttp://www.hear-it.org/multimedia/Hear_It_Report_October_2006.pdf%0Afile:///C:/Users/E6530/ • Downloads/9789240685215_eng.pdf%0Ahttp://dx.doi.org/10.1016/j.ijporl • World Health Organization. (2021). World Report 2012: World Report. In Human Rights • Watch. https://www.hrw.org/world-report/2019/country-chapters/cambodia%0Ahttps://www.hrw.org/world-report/2019/country-chapters/bangladesh • Baguley, D., Andersson, G., McFerran, D., & McKenna, L. (2013). Hyperacusis. Tinnitus: A multidisciplinary approach, 133-147. • Jastreboff. P.J & Hazell. J.W.P (2004). Tinnitus retraining therapy-implementing the Neurophysiological model. United Kingdom; Cambridge University Press **Unit 2** • Rawool, V. W. (2012). Hearing conservation in occupational, recreational, educational, and home settings. Thieme: New York • Prell, C. G. L., Henderson, D., Fay, R. R., & Popper, A. N. (2011). Noise-Induced Hearing Loss: Scientific Advances. Springer, New York. https://books.google.co.in/books?id=Jr-Fnr0Qc_wC **Unit 3** • Rawool, V. W. (2012). Hearing conservation in occupational, recreational, educational, and home	

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Course: 6.5 (AECC) **RCI Course**		
Objectives		
Unit 1		
Unit 2		
Unit 3		
Unit 4		
Practicum		

References		
	Course: 6.6 (SEC) **Clinicals in Speech Language Pathology - VI**	
	General Considerations a) Clinical work should be primarily linked to the theory courses of the semester. b) After completion of clinical postings in Speech–language diagnostics, the student will have the concepts (know), ability to apply (know-how), demonstrate skills (a clinical diary/logbook based on clinical reports/recordings) (show) and carry out the following on patients/client contact (do) the following:	
	Know a) Identify the cortical and subcortical language areas from the diagram/ model of the brain. b) Identify the cranial nerves involved in speech and swallowing mechanism, their origin, and insertion from an image/ model. Also, document the function of these nerves. c) Prepare a table of involvement of speech subsystems and higher order processes for speech production. d) Prepare a list of linguistic and non-linguistic characteristics of different types of aphasia. e) Explore software used for the management of motor speech disorders and adult language disorders. f) Procedures to use specific tests to assess motor speech disorders in adults and make a summary report of few standardized tests: g) Differential diagnosis of motor speech disorders in adults. h) Procedures to assess individuals with adult language disorders, and other related conditions and make a summary report of few standardized tests **Know-how** a) Differentially diagnose speech and language characteristics in various types of aphasia. b) Differentially diagnose speech and language characteristics in aphasia and right hemisphere damage. c) Administer bilingual aphasia test on individuals with aphasia. d) Identify the signs of UMN and LMN lesion from video samples. e) Using 'Darley, Aronson, and Brown's (1969 a, b) speech clusters for different	

	dysarthria', prepare a profile of speech characteristics of 1 adult/ geriatric with dysarthria. f) Use MAAT- K/ MANAT-K/ MAFAT- K for the treatment of individuals with aphasia. g) Assess posture, breathing, phonatory, resonatory, articulatory and swallowing in adults with motor speech disorders. h) To record a sample for analysis of language and speech skills in adults with cognitive communication disorders. i) To consult with inter-disciplinary medical/ rehabilitation team and counsel the individual/family regarding management options and prognosis. **Show** a) Perform bedside screening for individuals with stroke/ TBI/ other neurological disorders. b) Perform bedside screening for individuals with dysphagia. c) Assess speech and language characteristics of individuals with aphasia using a standardised test tool (for e.g., WAB). d) Assess speech characteristics of individuals with motor speech disorders using a standardized test tool (Include respiration, pitch, loudness, voice quality, resonance, articulation, prosody, DDK, intelligibility, and any other features) e) Assess cognitive-linguistic skills of neurotypical individuals and individuals with cognitive-communication disorders using a screening/ diagnostic tool (for e.g., MoCA/CLQT/CLAP) and compare the differences in characteristics of these individuals. f) Assess the quality of life of an individual with adult language disorder using a standard test tool (eg. SAQOL). g) Demonstrate one technique (based on EBP) for the treatment of individuals with aphasia. h) Counsel family members of an individual with aphasia/ dysarthria (Prepare a counselling checklist /guideline). i) Perform various Non-Speech Oral Motor Exercises (NSOMEs) used for the treatment of dysarthria	

	j) Dysphagia assessment –minimum of 2 children and adults. k) Goals and activities for therapy (including AAC) based on assessment/ test results for adults with neuro-communication disorders. **Do** a) Prepare a low-tech AAC for functional communication of individuals with aphasia/ apraxia or any other neurogenic communication disorders. b) Perform OPME, cranial nerve examination, and examination of reflexes on adults/ geriatrics with motor speech disorders. c) Compare between neurotypical adults and adults with neurological deficit (Check for strength, speed, accuracy, range, steadiness & tone of oral muscles) d) Calculate DDK, Speech Intelligibility, and rate of Speech & Naturalness on a client with Dysarthria and Apraxia of Speech. e) Instrumental evaluation (Motor speech profile-MSP) on a client with Dysarthria and Apraxia of Speech. f) Bed side evaluation of individuals with cognitive communication disorders –Minimum of 2 individuals. g) Should administer the following tests on typical and disordered population and maintain the documents for few standardized tests: h) Plan and give therapy for individuals with motor speech disorder. i) Plan and give therapy for individuals with adult language disorder. j) Using the counselling checklists, counsel any one client with Dysarthria and Apraxia of Speech, aphasia and dementia. k) Should observe/ take therapy for 1 client with Dysarthria, and Apraxia (Use audio visual library if there are no cases available) l) Go through the following model reports related to Dysarthria and Apraxia: • A comprehensive (Pre-therapy) report • Long term therapy plan • Home training program	

	m) Perform non-speech oro-motor exercises as a role play activity and submit a report n) Observe feeding and swallowing skill management in individuals with Dysarthria and Apraxia of Speech o) Should observe/ take therapy for at least 2 persons with Aphasia and maintain the following documents • A comprehensive (Pre-therapy) report • Long term therapy plan • Activities for Home Training program (Use audio visual library in cases of non-availability of patients)	
	Course: 6.7 (SEC) **Clinicals in Audiology - VI**	
	General considerations After completion of clinical postings in Audiology, the student will have the concept (Know), ability to apply (Know-how), demonstrate in a clinical diary/log book (Show), and perform (Do) the following on clinical population.	
	Know a) National and international standards related to noise exposure. b) Selection and fitting of ALDs c) Working of Implantable hearing devices d) Know about protocol for recording eCAP, eSRT and eABR e) Protocols for screening and diagnosis of tinnitus and hyperacusis **Know-how** a) Carryout noise survey in Industry and community b) To identify the candidates for different implantable hearing devices c) Observation of mapping of CI and programming of other implantable devices d) Troubleshooting of cochlear implant e) To administer tinnitus and hyperacusis questionnaire **Show**	

	a) Analysis of objective responses like eCAP, stapedial reflexes b) Comprehensive hearing conservation program for at least 1 situation c) Analysis of tinnitus and hyperacusis questionnaires **Do** a) Complete audiological report for 2 children and 2 adults with hearing loss and counsel the client/caretaker about hearing loss and further recommendations b) Carryout basic candidacy assessment for Implantable Hearing Devices c) Administer tinnitus questionnaires on 5 normal and 5 individuals with tinnitus	
Course: 7.1 (SEC) **Clinicals in Speech-Language Pathology and Audiology (Internship)**		
	Audiology Clinical internship aims to provide clinical exposure and experience in different set ups. The students would not only carry out greater quantum of work, but also work with varied clinical populations and in different contexts. Internship will provide greater opportunity for the students to liaise with professionals from allied fields. The intern is expected to demonstrate that the objectives of the B.ASLP program have been achieved and show competence and independence in carrying out the following, among others: a) Carry out screening for hearing and balance problems across life span b) Assess and diagnose hearing disorders across life span. c) Prepare audiological report, counsel and make appropriate referrals. d) Plan and execute intervention and rehabilitation programs for persons with hearing disorders e) Document records related to persons with hearing disorders f) Engage in community related services such as camps, awareness programs specifically, and community-based rehabilitation activities, in general. g) Make appropriate referrals and liaise with professionals from related fields. h) Be able to establish Audiology clinics in different set-ups i) Advise on the welfare measures available for their clinical client and their families.	

	j) Advise and fit appropriate aids and devices for their clinical population.	
	Speech Language Pathology Clinical internship provides clinical exposure to varied clinical population and experience in different set ups. The students would not only carry out greater quantum of work, but also work varied clinical populations and in different contexts. Internship will also provide greater opportunity for the students to liaise with professionals from allied fields. The intern is expected to demonstrate competence and independence in carrying out the following, among others: a) Diagnosis and management of speech, language, and swallowing disorders across the life span. b) Report evaluation findings, counsel, make appropriate referrals and liaise with professionals from related fields. c) Plan and execute intervention and rehabilitation programs for persons with speech language, communication, and swallowing disorders. d) Develop and maintain clinical documentation related to persons with speechlanguage, communication, and swallowing disorders e) Engage in community-related services such as camps, awareness programs specifically, and community-based rehabilitation activities, in general. f) Gain experience in different set-ups and be able to establish speech centers in different set-ups g) Advise on the welfare measures available for their clinical clientele and their families. h) Advise and fit appropriate aids and devices for the clinical population. i) Administer quality of life questionnaires on persons with communication disorders. Make appropriate referrals and liaise with professionals from related fields. j) Gain experience in different clinical set ups and be able to establish speech-language centers. k) Advise on the welfare measures available for their clinical clientele and their families.	
Course: 8.1 (SEC) **Clinicals in Speech Language Pathology and Audiology (Internship)**		
	Audiology Clinical internship aims to provide clinical exposure and experience in different set ups. The students would not only carry out greater quantum of work, but also work with varied clinical populations and in different contexts. Internship	

	will provide greater opportunity for the students to liaise with professionals from allied fields. The intern is expected to demonstrate that the objectives of the B.ASLP program have been achieved and show competence and independence in carrying out the following, among others: a) Carry out screening for hearing and balance problems across life span b) Assess and diagnose hearing disorders across life span. c) Prepare audiological report, counsel and make appropriate referrals. d) Plan and execute intervention and rehabilitation programs for persons with hearing disorders e) Document records related to persons with hearing disorders f) Engage in community related services such as camps, awareness programs specifically, and community-based rehabilitation activities, in general. g) Make appropriate referrals and liaise with professionals from related fields. h) Be able to establish Audiology clinics in different set-ups i) Advise on the welfare measures available for their clinical client and their families. j) Advise and fit appropriate aids and devices for their clinical population.	
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	f) Gain experience in different set-ups and be able to establish speech centers in different set-ups g) Advise on the welfare measures available for their clinical clientele and their families. h) Advise and fit appropriate aids and devices for the clinical population. i) Administer quality of life questionnaires on persons with communication disorders. Make appropriate referrals and liaise with professionals from related fields. j) Gain experience in different clinical set ups and be able to establish speech-language centers. k) Advise on the welfare measures available for their clinical clientele and their families.	

All India Institute of Speech and Hearing
(An autonomous Institute under the
Ministry of Health and Family Welfare, Govt. of India)
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ISO 9001:2015 Implemented Institute
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ಅಖಿಲ ಭಾರತ ವಾಕ್ ಮತ್ತು ಶ್ರವಣ ಸಂಸ್ಥೆ
ಮಾನಸಗಂಗೋತ್ರಿ, ಮೈಸೂರು–570006

अखिल भारतीय वाक् श्रवण संस्थान
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SH/ACA/UOM.BOS(S&H)/2025-26 22.05.2025

The Registrar
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Sub: Proceedings of Board of Studies in Speech & Hearing (CB) meeting – reg.

Madam,

With reference to the above, please find enclosed hard copy the proceedings of the Board of Studies in Studies in Studies in Speech & Hearing (CB) held at the institute on 15.05.2025.

Kindly acknowledge the receipt.

Thanking you,

Sincerely yours,

M. Pushpavathi

Dr. M Pushpavathi
Chairperson - BOS in S&H (CB)

Encl: As above.

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